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AUTHOR Fayne, Harriet; Woodson, Nancy  
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## ABSTRACT

This paper presents the results of a study concerning the impact of changing demographic on curriculum and instruction in higher education and specifically, the impact of the adult student population on Otterbein College, Ohio. The study discusses gender and age considerations in its exploration of the school's student attitudes, teaching practices, goals, and outcomes. The purposes of the study were: (1) to evaluate existing academic services for adult students in terms of their effectiveness, need, and availability as compared with services provided traditional students; (2) to sensitize faculty to existing conditions and encourage careful consideration of instructional alternatives; and (3) to determine the applicability of the project findings to other institutions. The report discusses results obtained from a student survey in the areas of what students perceived to be significant learning experiences, the learning styles of males versus females, what impact adult students had on the instructional setting, and whether adults were more participatory in mixed-aged classrooms. Results from a faculty questionnaire are also presented, and the educational implications of the findings are discussed. Contains 5 references. (GLR)

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Harriet Fayne, Ph.D.  
Nancy Woodson, Ph.D.  
Otterbein College  
Westerville, Ohio

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# **The Impact of Changing Demographics on Curriculum and Instruction in Higher Education: An Institutional Self-Portrait**

**Harriet Fayne, Ph.D.  
Nancy Woodson, Ph.D.  
Otterbein College**

Institutions of higher education have been faced with changes in the composition of their student populations. Out of approximately twelve million student attending colleges and universities in pursuit of an undergraduate degree, more than 50% are women and over 40% are twenty-five years of age or older. (Fact file: Fall 1987 Enrollment in U.S. Colleges and Universities, 1989) Since women are now the majority and adult students are a sizable minority, it is important to reassess curriculum and instruction in light of changing demographics.

The authors received a grant from the Consortium for the Advancement of Private Higher Education with matching gifts from the Columbus and Yassenoff Foundations as well as individual and corporate donors for 1989-91. The focus of the grant is to study the impact of the adult student population on the College. The three specific objectives for the assessment study are: 1) to evaluate existing academic services for adult students in terms of their effectiveness, need, and availability as compared with services provided traditional students; 2) to sensitize faculty to existing conditions and encourage careful consideration of instructional alternatives; and 3) to determine the applicability of the project findings to other institutions.

Because women constitute over 75% of the adult population at Otterbein College, it seemed appropriate to consider gender as well as age when we studied attitudes, learning styles, teaching practices, goals, and outcomes. Therefore, as we enter the final phase of our research

project, we find ourselves with intriguing questions and some tentative conclusions about challenges which must be met in order to serve well the students who currently populate college classrooms.

### Theoretical Framework

Five assumptions have shaped the direction of our research: 1) the decision to return to school should be considered within a total life context (Ross, 1988); 2) the life context is best articulated by the participants themselves in their own "voices" (Belenky, et al., 1986); 3) individuals who possess post-formal operational capabilities demonstrate thought processes quantitatively and qualitatively different from formal operational thinkers (Commons, Richards and Armon, 1984); 4) active participation enhances higher order thinking (Resnick, 1987); and 5) expansions/contractions in cognitive capabilities paired with the intrinsic value of integrating varied life experiences into instruction should lead to the conclusion that adult and traditional students can profit from one another.

### Techniques and Data Sources

Questionnaires were administered to faculty, adult students and traditional students. Items tapped attitudes about the different student groups, curriculum and instruction in three academic delivery systems (day, evening, and weekend college classes), instructional preferences and learning styles. Questionnaire analysis (descriptive in nature) helped to shape the direction of qualitative research activities. These included: interviews with faculty and students, classroom observations, and writing samples.

### Results

During the Spring Quarter, 1989, 370 students (104 males, 266 females) completed a survey which addressed curricular, instructional, and cognitive themes. Of the 104 males in the sample, 38% were adult students. Fifty-three percent of the females were adult students.

Table 1 gives frequencies and percentages broken down by age and gender for items tapping reactions to instructional variables. Females tended to classify themselves as intuitive learners, while males viewed themselves as analytic. Over 50% of older students and 40% of younger males were most comfortable in lecture classes; responses of younger females, on the other hand, did not demonstrate a preference for lectures. There appeared to be a relationship between age and instructional format choice even within the adult group. Analysis of adult responses on a separate item tapping reactions to various class formats revealed that in the 23-29 age category 39.7% preferred lectures, while in the 30-39 and 40+ categories 43.8% and 50.0%, respectively, chose lectures over small groups, independent study, laboratory, or tutorials. All student groups voiced discomfort when asked to speak in large group situations. Older students felt that past experience aided them most in discussions; younger students felt that past experience was most useful for written assignments.

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Insert Table 1 about here  
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What do students perceive to be significant learning experiences? Are academic experiences particularly salient to males versus females, to younger students versus older students? Writing samples were collected on students (30 traditional-age males, 47 traditional females, and 60 adult females). One of the interview questions from Belenky, Clinchy, Goldberger, and Tarule (1986) was used as a prompt: "Discuss the most powerful learning experience you have had either in or out of school including reasons for your selection of this experience and its significance to your life." A review of the writing samples indicated that 55 of the adult women respondents and 42 of traditional females listed events other than educational as their most important learning experiences. All of the males discussed educational or work connections as the most powerful learning experiences.

A common theme underlying adult female responses was: "I have learned what I know in life through my own experiences the hard way, through trial-and-error, and I don't intend to

give up any hard-won territory." Traditional females also shared a common theme in their writings: "If I could just find out what the secret is to survival, learning might become a priority." Significant relationships were seen as educative by both female populations. Males, on the other hand, were more likely to mention school (n=22) or work-related (n=8) experiences. In addition, they frequently linked these directly and pragmatically to future careers and life goals. College taught them "to work hard, to learn to get along with others, to receive and pass along information"; college was also an important source of "contacts for the future."

What impact do adult students have on the instructional setting? A large number of traditional students surveyed during Spring Quarter, 1989, perceived adults as "demanding" (see Table 2). More than one-third of these same students felt that instructors favored adult learners. Despite these reactions, traditional students did not prefer age-segregated classes. While adults generally regarded traditional students as a group in a neutral fashion ("It depends on the particular student"), a sizable minority (42.3%) preferred adult-only sections.

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Insert Table 2 about here  
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Were adults more participatory in mixed-aged classrooms? Fourteen classes composed of traditional and adult learners were observed during 1989-90 and 1990-91. In 10 out of 14 classes, adults were overrepresented in frequency counts on verbalizations made during class sessions. In none of the classes were adults particularly underrepresented. Even in classes with only one non-traditional student, the sole adult was likely to make his or her presence felt. Observations confirmed impressions of traditional students; adults did speak more than their numbers would predict. However, not all adults were talkative. In Class #13 (see Table 3), for example, the English instructor invited student interpretation of various poems. Three adults in a class composed of 23 adults and four traditional students made 30 content-related responses, over half the total made by all of the adults in the class.



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Insert Table 3 about here  
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### Interview Data

Interviews with adult students yielded interesting findings. Adults shared concerns over group assignments and student-directed learning. The more traditional format was easier to control. The student follows the syllabus, does the assignments, and attends class. Group assignments or student-centered formats may require extra time, force the student to depend on others, and lack a clear focus.

Adults, particularly adult females, may also have been taking an adaptive stance when they responded as they did to questionnaire items related to instructional preferences. Several adult females, when queried about why they liked lectures, indicated that they did not necessarily like them, but they seemed to be the preferred teaching style of the Otterbein faculty, so it was "easier to accept it than fight it." These same individuals held middle-management positions and were quick to recognize and to accept "establishment" policies in work situations.

Faculty interviewed indicated that adults were more likely to voice concerns, to ask for clarification of directions, and to make sure that instructor expectations were articulated than were traditional classmates. Adults needed to make sure that they are "on the right track." One instructor described adults as class "housekeepers."

### Faculty Questionnaire

While adult learners may serve an important function within classroom settings, the majority of faculty surveyed at the beginning of Autumn Quarter, 1989, did not capitalize on their presence. When asked to assess their teaching strategies by responding to a series of "I" statements in a Likert response format, only 14.4% of the faculty indicated that they made a significant effort to facilitate adult-traditional student interactions; approximately 40% did encourage adult-traditional student collaboration. Generally, the faculty viewed themselves as

both subject- and student-centered. About one-half of the sample felt strongly that they challenged students and allowed them to express their own ideas. Only about one-third saw themselves as teacher-centered, yet collaborative and facilitative "I" statements received Agree ratings from one-third or less of the respondents (see Table 4).

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Insert Table 4 about here  
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### Educational Implications

Kasworm (1990) highlighted a theme in the adult learner literature which focuses on the lack of fit between adults and the traditional college setting. Data from the present study does not provide evidence of a mismatch. While a sizable minority of traditional respondents viewed adults as "demanding" in classrooms, the majority found them to be a neutral or positive element. The 18-22 year olds did not have a preference for age-segregated classes; neither did the majority of adults.

Faculty responses indicated that an age mix was stimulating; adults at Otterbein brought diversity to the classroom. Unfortunately, the majority of faculty did not appear to be capitalizing on this diversity by consciously fostering adult/traditional student interactions. Because adult students are sparsely represented in day classes and traditional students are similarly underrepresented in evening classes and unable to participate in weekend sections because of College policy, faculty may not have felt that they had ample opportunity to create circumstances which prompted fruitful interactions between these two populations.

Attitude surveys revealed more similarities than differences between the two populations. Listening to a professor lecture appeared to be the most comfortable instructional mode. Participation was more likely in small group settings; however, adults voiced concerns about group assignments. Findings indicated that the traditional roles of teacher as the source of information and student as the receiver of knowledge are still salient in the minds of faculty and students regardless of age.



While these conclusions are based on quantitative and qualitative data collected at only one institution, there is reason to reflect on the evidence and to consider how instructional change is most likely to take place in an effective manner. Adult learners would not be sole beneficiaries of instructional innovation which integrated strategies that encouraged active, "connected," collaborative learning. However, very deliberate efforts would need to be made to ensure that learners were re-socialized and allowed to become comfortable with an alternative definition for the student role. So, too, would faculty need to revisit their basic assumptions about teacher as well as student roles and the ways that learning takes place. Perhaps changing demographics will force higher education to take a careful look at instructional practices. The present study suggests that change will require major paradigm shifts which are carefully and consciously introduced in a gradual fashion. Both student orientation and faculty development programs would be central to the mission of revitalizing instruction. All stake holders will need to develop a tolerance for the uncharted course which would result from major changes in the collegiate teaching/learning enterprise.

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TABLE 1

**INSTRUCTION/COGNITIVE VARIABLES: FREQUENCIES AND PERCENTAGES  
BROKEN DOWN BY AGE AND GENDER**

	ADULT STUDENTS (23+)		TRADITIONAL STUDENTS (17-22)	
	Males (N=40)	Females (N=140)	Males (N=64)	Females (N=126)
<b>Apply Experiences to Coursework</b>				
Always	1 (2.5)	12 (8.6)	5 (7.8)	9 (7.1)
Frequently	15 (37.5)	58 (41.4)	30 (46.9)	69 (54.8)
Occasionally	18 (45.0)	58 (41.4)	21 (32.8)	49 (38.9)
Rarely	3 (7.5)	6 (4.3)	4 (6.3)	6 (4.8)
Never	0 (0.0)	1 (0.7)	1 (1.6)	0 (0.0)
<b>Past Experience <u>Most</u> Useful For:</b>				
Discussions	17 (42.5)	68 (48.6)	18 (28.1)	34 (27.0)
Written Assignments	7 (17.5)	38 (27.1)	29 (45.3)	64 (51.6)
Reading/Learning New Information	12 (30.0)	26 (18.6)	9 (14.1)	26 (20.6)
None of the Above	1 (2.5)	8 (5.7)	6 (9.4)	9 (7.1)
<b>Past Experience <u>Least</u> Useful For:</b>				
Discussions	2 (5.0)	16 (11.4)	15 (23.4)	31 (24.6)
Written Assignments	11 (27.5)	30 (21.4)	4 (6.3)	26 (20.6)
Reading/Learning New Material	21 (52.5)	72 (51.4)	34 (53.1)	63 (50.0)
None of the Above	1 (2.5)	5 (3.6)	8 (12.5)	11 (8.7)
<b><u>Most</u> Comfortable In Class When:</b>				
Listening to Professor	21 (52.5)	75 (53.6)	26 (40.6)	33 (26.2)
Listening to Classmate in Large Group	8 (20.0)	24 (17.1)	8 (12.5)	44 (34.9)
Talking in Large Group	4 (10.0)	15 (10.7)	17 (26.6)	24 (19.0)
Working in Small Group	4 (10.0)	19 (13.6)	11 (17.2)	32 (25.4)
<b><u>Least</u> Comfortable In Class When:</b>				
Listening to Professor	5 (12.5)	12 (8.6)	20 (31.3)	35 (27.8)
Listening to Classmate in Large Group	3 (7.5)	13 (9.3)	12 (18.8)	8 (6.3)
Talking in Large Group	19 (47.5)	68 (48.6)	21 (32.8)	72 (57.1)
Working in Small Group	10 (25.0)	37 (26.4)	7 (10.8)	18 (14.3)
<b>Self-Assessment: Cognitive Style</b>				
Intuitive	6 (15.0)	80 (57.1)	29 (45.3)	95 (75.4)
Analytic	31 (77.5)	50 (35.7)	31 (48.4)	37 (29.4)

NOTE: Numbers in parentheses are percentages.

TABLE 2

## GENERAL PERCEPTIONS OF ACADEMIC PROGRAMS AT OTTERBEIN COLLEGE

	EVENING/WEEKEND STUDENTS (N=175)	DAY STUDENTS (N=195)	FACULTY (N=103)
Work Load (evening)			
same	29.7	11.3	50.5
less	5.1	9.2	11.6
more	9.1	6.7	4.2
no opinion	50.3	70.3	33.7
Work Load (weekend)			
same	11.4	3.1	11.8
less	6.3	1.5	8.6
more	17.7	3.6	4.3
no opinion	58.9	89.2	75.3
Content (evening)			
same	33.7	17.9	49.5
different	13.7	8.7	16.8
no opinion	46.8	70.8	33.7
Content (weekend)			
same	20.6	5.1	14.1
different	14.9	4.1	12.0
no opinion	58.9	88.2	73.9
Appropriate Content			
very-moderate	94.9	96.4	100.0
inappropriate	1.1	1.0	0.0
Ideal Class Composition			
separate adult sections	42.3	12.3	15.8
mixed aged sections	25.7	31.3	40.0
no preference	26.9	53.8	44.2
Traditional Students' View of Adults			
stimulating	12.6	14.9	20.4
neutral	53.7	9.7	46.2
threatening	14.7	11.8	25.3
demanding	6.9	61.0	2.2
Adult Students' View of Traditional Students			
serious	2.9	4.6	4.3
neutral	60.6	65.1	62.0
hostile	2.3	5.1	4.3
immature	26.9	20.5	29.3
Favoritism on Part of Instructor			
toward adults	25.7	37.9	21.9
toward traditional	4.0	3.6	2.1

NOTE: Numbers are percentages.

**TABLE 3**  
**CLASSROOM OBSERVATION DATA: 14 CLASSES**

Class	Representation in Class		General Participation Levels		Breakdown by Type of Participation			
	Adults	Traditional Age	Adults	Traditional Age	Procedural <sup>1</sup>		Substantive <sup>2</sup>	
					Adults	Traditional Age	Adults	Traditional Age
1	7 (26%)	20 (74%)	16 (42%) Range 0-6	22 (58%) Range 0-5	0	0	16 (42%)	22 (58%)
2	9 (31%)	20 (69%)	5 (31%) Range 0-2	11 (69%) Range 0-4	0	0	5 (31%)	11 (69%)
3	10 (34%)	19 (66%)	8 (50%) Range 0-3	8 (50%) Range 0-5	3 (100%)	0 (0%)	5 (38%)	8 (62%)
4	9 (35%)	19 (65%)	12 (27%) Range 0-3	32 (73%) Range 0-4	1 (33%)	2 (67%)	10 (25%)	30 (75%)
5	7 (23%)	23 (77%)	6 (30%) Range 0-2	14 (70%) Range 0-2	3 (75%)	1 (25%)	3 (19%)	13 (81%)
6	4 (40%)	6 (60%)	32 (60%) Range 0-4	21 (40%) Range 0-4	4 (57%)	3 (43%)	28 (61%)	18 (39%)
7	4 (36%)	7 (64%)	17 (35%) Range 2-5	31 (65%) Range 2-5	0	0	17 (35%)	31 (65%)
8	4 (25%)	12 (75%)	19 (52%) Range 2-9	17 (48%) Range 0-5	3 (75%)	1 (25%)	16 (50%)	16 (50%)
9	2 (11%)	16 (89%)	8 (38%) Range 2-6	13 (62%) Range 2-3	3 (50%)	3 (50%)	5 (33%)	10 (67%)
10	1 (7%)	14 (93%)	10 (12%)	75 (88%) Range 2-12	3 (27%)	8 (73%)	7 (9%)	67 (91%)
11	1 (3%)	30 (97%)	3 (21%)	11 (79%) Range 1-2	3 (21%)	11 (79%)	0	0
12	10 (40%)	15 (60%)	10 (77%) Range 0-4	3 (23%) Range 0-3	1 (100%)	0 (0%)	9 (75%)	3 (25%)
13	23 (85%)	4 (15%)	57 (86%) Range 0-13	9 (14%) Range 0-4	6 (100%)	0 (0%)	57 (86%)	9 (14%)
14	1 (10%)	10 (90%)	8 (14%)	50 (86%) Range 0-14	0	0	8 (14%)	50 (86%)

- 1 Procedural = comments/responses/questions about due dates, test requirements, directions, schedule  
2 Substantive = content-related comments/responses/questions

TABLE 4

**DISTRIBUTION OF RESPONSES ON SELF-ASSESSMENT  
ITEMS ON FACULTY QUESTIONNAIRE (N=103)**

	AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	DISAGREE
Communicate Interest in Subject	95.1	3.9	0.0	0.0	1.0
Communicate Interest in Student	74.5	21.6	2.9	0.0	1.0
Challenge Students	52.0	40.0	5.0	2.0	1.0
Use Variety of Methods	36.6	48.5	4.0	9.9	1.0
Students Can Express Ideas	51.0	32.4	13.7	2.0	1.0
Students Make Decisions	14.9	46.5	15.8	15.8	6.9
Students Collaborate	31.6	34.7	17.3	8.2	8.2
Adult-Traditional Collaborate	39.8	25.5	23.5	6.1	5.1
Facilitate Adult-Traditional Interaction	14.4	36.1	29.9	8.2	11.3
Teacher Plays Leadership Role	34.5	51.0	8.0	6.0	1.0
Teacher Viewed as Authority	32.0	45.0	18.0	4.0	1.0

**NOTE:** Numbers are percentages.