The Graying of the College Classroom

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This study is concerned with the effects of having people older than 60 years of age participate as peers in the college classroom with college-age students. We were particularly interested in changes in attitudes of the younger participants toward their own aging, older people, and intergenerational classes, and in changes in attitudes of the older students toward intergenerational classes, young people, and studying in a college class.

Although little is known about the attitudes of older people toward youth (Powell & Arquitt, 1978), the attitudes of youth toward older people have been studied extensively. A number of the latter studies have focused on interventions meant to change attitudes. Rosencrantz and McNevin (1969) found that, the more frequent the contact with older people the more favorable the attitude of college students, but Drake (1957) and Thorson (1975), who defined contact as having a living grandparent, failed to find such an effect. Seefeldt et al. (1977) and Glass and associates (Glass & Trent, 1978, 1980; Glass et al., 1977; Trent et al., 1979) designed educational experiences that led to more positive attitudes toward older people on the part of children and adolescents. Trent and others, for example, found positive change after a seminar series on aging, interaction with older adults, and a combination of the two.

Although studies of changes in attitude of people of college age have been mildly contradictory, the research suggests that courses in gerontology alone fail to cause positive changes in attitude (Fletcher et al., 1971; Troll & Schlossberg, 1970; Tuckman & Lorge, 1954) whereas contact with older people (Holzman et al., 1978; Porter & O'Connor, 1978) does cause positive changes in attitude. Gordon and Hallauer (1976) found that an adult development course alone led to positive changes in attitude toward the aged while the course plus visits to the elderly led to even greater positive change.

Our study shares some features with that of Gordon and Hallauer in that our experimental groups included (1) students in a course whose theme was aging and (2) students in the same course who had contact with older persons. Our study differs from Gordon and Hallauer's in two ways: (1) the course was not an informational course on aging, and (2) younger students interacted with older persons as peers in the classroom rather than as people to visit.

Two different kinds of research suggest that this would lead to changes in attitude. First, interaction between generations in special academic programs has led to better attitudes on the part of both groups (Powell & Arquitt, 1978; Steichen & Arquitt, 1975). Second, the greatest attitude change has occurred when subjects are forced to join a group not of their own choosing but with which they become psychologically involved (Siegel & Siegel, 1957). We hoped that the intergenerational class would comprise such a group. As far as we know, our study of attitudes is unique in having elderly students as peers with college-age students in the college classroom.

We conducted the study in two phases. In the first phase we developed a questionnaire to measure attitudes toward aging. In the second phase we used this questionnaire and other measures to assess the effects of having elderly students in the classroom and to assess the effects of using the theme of aging in freshman English.

Development of Student Opinion Questionnaire

We composed two versions of a Student opinion Questionnaire (SOQ), each having the same questions but with wording appropriate to the age of the respondent group. We developed scales that we thought would measure the following attitudes: (1) younger students' attitude toward their own aging process, (2) younger students' attitude toward older people, (3) younger and older students' attitudes toward intergenerational classes, (4) older students' attitude toward younger people, and (5) older students' attitude toward their capacity for succeeding in a college classroom. With the exception of six

\*We thank the AARP Andrus Foundation for funding this study. We also thank Kathleen A. Daigle, Roy C. Herrenkohl, and Patricia Horton for their generous help and advice during the research and Diane Hyland for helpful comments on earlier drafts of this paper. A copy of the Student Opinion Questionnaire is available, for the cost of duplication and handling from the authors upon request.

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items borrowed from Kogan's O.P. Scale (1961), all SOQ items were original to this study. Each item consisted of a statement with four possible responses: agree, mildly agree, mildly disagree, and disagree.

In a test of the validity of the SOQ, 129 male and female sophomores and juniors from a Lehigh University introductory psychology class completed the questionnaire as part of a course requirement. The correlation of each item with the scale from which it was drawn was significant beyond .001. The correlations among the five scales, shown in Table 1, are sufficiently low to assure us that the scales are measuring attitudes along different dimensions. Since Cronbach's alphas for the scales were .88, .58, .79, .47, and .61, respectively, the scales have good internal consistency. The final version of the SOQ consisted of 67 items.

The Intergenerational Classroom

All subjects in the actual study of the intergenerational classroom were male and female students in Lehigh University's English 2, a second-semester freshman course in which students learn writing skills while studying literature of various genres. The younger participants were 90 freshmen haphazardly assigned to five groups because of the vagaries of registration: Group IGF, 14 freshmen assigned to a class which had as an implicit theme the "life cycle" in terms of growth, mortality, and continuity and which also included the 10 older students described below; Group LC, 21 freshmen assigned to a class which had the same life cycle theme as IGF; and Control Groups C1, C2, and C3, with 19, 19, and 17 students, respectively, students assigned to three other sections of English 2 in which the life cycle theme was not used. The 10 older participants, assigned to the class with Group IGF, were drawn from 25 applicants responding to a newspaper article offering tuition scholarships for freshman English to persons aged 60 and over. They were chosen so that their level of formal education and their writing skills were equivalent to those of the younger students. Nine of the older students were in their sixties and one was 79. The two experimental classes, IGF and LC, were taught by the second author and three control classes by other members of the English Department (all of whom also happened to be women). All students, young and old, took the course for credit and completed the same work.

The experiment was conducted in the spring semester of 1981. The course was held in two 75-minute classes per week for 14 weeks. The SOQ was administered twice, once during the first class session and once during the final exam. During every 15-minute period of every 75-minute session for the two experimental classes, the fourth author unobtrusively recorded the frequency of the following behaviors: Talking Aloud (Participation), Eye Contact, Whispering, and Laughter. The observer distinguished among interactions between two older students, between two younger students, between old- and completed the same work.

Table 1. Correlations among the five scales of the Student Opinion Questionnaire after removal of items with low correlations.

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
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<tr>
<td>1</td>
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<td>3</td>
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<td>4</td>
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or younger students and the class, and between students of different generations. In addition, an independent observer recorded data from five sessions of each of the two experimental classes in order to check the inter-observer reliability of these measures.

A panel of three independent graders, blind to the purpose of the experiment and blind to the experimental manipulations, assigned grades to the first and last essays written by freshmen from Groups IGF and LC.

Results and Discussion

Unless otherwise stated, all statistical tests utilized the .05 level of significance.

Student Opinion Questionnaire. — The scores on Scales 1, 2, and 3 of the SOQ for the first administration for the 90 freshmen from the five groups were submitted to separate one-way analyses of variance, one for each of the three scales. No significant differences were found among the groups on any of the three scales. Thus the five groups of freshmen had equivalent attitudes, as assessed by the SOQ, at the beginning of the semester.

The SOQ scores for Scales 1, 2, and 3 for the students from Groups C1, C2, and C3 were submitted to separate two (time of administration) × 3 (class teacher) analyses of variance. No effect was significant for any scale. This suggests that the teacher had no effect on changes in student attitudes toward the old and aging and that, in general, participation in English 2 did not change these attitudes.

For Scales 1, 2, and 3 the change scores (score on second administration minus the score on first administration) for the freshmen were submitted to separate analyses of variance with planned comparisons to test whether the change in either experimental group differed from the change in the control groups. On Scales 1 and 3 Group IGF increased more than the control groups (t(85) = 1.97, and t(85) = 2.54), and no other difference was significant. Thus the students of Group IGF had more positive attitudes toward their own aging (Scale 1) and toward intergenerational classes (Scale 3), not toward older people (Scale 2).

The change in SOQ scores on Scales 3, 4, and 5 for the older students was analyzed via paired t tests. No change was significant.

Incidental to the purpose of this phase of the study, the 55 students from the three control groups
provided data that allowed us to assess the test-retest reliability of the SOQ. Each of the five scales is highly reliable (r = .86, .38, .61, .55, and .67, respectively, n = 55, p < .01 in all cases). The results from both phases of the study demonstrate the reliability and validity of the SOQ. It has good internal consistency and good test-retest reliability and is sensitive to the manipulations meant to change the attitudes it purports to measure. Scale 1, a measure of the younger students’ attitude toward their own aging, fares remarkably well, having very good internal consistency (Cronbach’s alpha = .88) and very high test-retest reliability (r = .86).

**Classroom observations.** — For each category of behavior 25 pairs of scores were produced during the five 15-minute periods of the five sessions when two observers were present. The correlations among these scores ranged from r(23) = .87 to r(23) = .99. Thus the inter-observer reliability was quite high, and we can trust the observations of the fourth author. The mean amounts of Participation, Whispering, and Laughter per student per class session for the two experimental classes were compared using matched t-tests, where the matching factor was the day of the class session. Eye Contact without whispering occurred too infrequently to analyze. The scores, presented in Table 2, were higher on all these measures in the intergenerational classroom (t(19) = 5.41, p < .01 for Participation, t(19) = 4.22, p < .01, for Whispering, and t(19) = 3.17, p < .01, for Laughter). Although these data must be treated cautiously because the three t-tests are dependent and the observer was not blind to the experimental conditions, they suggest that the intergenerational classroom was livelier than the all-freshmen classroom.

To learn whether differences existed in amounts of activity of freshmen only, we repeated the above analyses for the two experimental classes, excluding the data from the older students. None of the three paired t-tests was significant. Apparently, the activity of the older people increased the total activity in the class, but not at the expense of suppressing that of the younger students.

**Younger students’ performance on essays.** — We note that the average verbal SAT score was 535 for Group IGF and 537 for Group LC, a negligible difference requiring no further analysis. The freshmen in the experimental classes had apparently equivalent verbal skills.

As can be seen from Table 3, the mean grades on the last essay were better than those on the first essay for both groups (matched t(11) = 2.33, p < .05, for Group IGF, and matched t(20) = 2.89, p < .01, for Group LC), and the increase was the same for both groups (t(31) = .50, p > .10). Thus we can happily conclude that the students actually learned something in English 2 and that their improvement, demonstrated by their performance on the final essays, was nearly identical for both groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Participation</th>
<th>Whispering</th>
<th>Laughter</th>
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<tbody>
<tr>
<td>Intergenerational Class (IGF)</td>
<td>5.50</td>
<td>1.80</td>
<td>27.5</td>
</tr>
<tr>
<td>All-freshmen Class (LC)</td>
<td>4.00</td>
<td>1.15</td>
<td>17.5</td>
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**General Discussion**

For a number of reasons, we must be cautious in generalizing the results of this study. Lehigh is a particular kind of university with a particular kind of student, and English 2 is a particular kind of course. Furthermore, the older students were chosen in a particular way from a particular population. Finally, the teacher of the two experimental classes had expectations for the outcome of the study which may have had an effect despite her attempts to suppress these expectations when teaching the course. On the other hand, we believe that it is impossible to choose a representative college, a representative course, a representative sample of older students, or a representative teacher. Thus, at the very least, the study serves as a demonstration that the intergenerational classroom can be successful in several important ways.

After studying together with people of their parents’ and grandparents’ ages, the young students in the mixed class gained more positive attitudes toward their own aging and toward intergenerational learning. We believe that these attitude changes signal two kinds of learning which are seldom measured: an increase in awareness of one’s own potential, and a broadening of the definition of one’s peers. Because the younger and older students were, in fact, peers in terms of their preparedness for this course, the young students could learn to feel more comfortable studying alongside older students and came to look upon them as academic peers. And, because they could identify with their older classmates as peers in the classroom, they extended this identification into their own future: their anticipation of aging was modified to the point where they saw themselves in the future as capable, energetic, and admired older adults. To the extent that people fulfill their own prophecies, such a change in attitude could make for more successful aging.

That the amount of activity in the intergenerational class was greater than that in the all-freshmen class indicates high interest. The instructor “felt” that this class was livelier and therefore easier to teach, and the data actually show significantly more of the kinds...
of activity that make a discussion class successful: direct interaction among the students during discussion, student comments that add to what other students have said, the simple answering of questions, and laughter. Instructors who use a discussion format should welcome older students; they seem to stimulate productive interaction.

Evidence from this study appears to rebuke the myth that older students will somehow take away learning opportunity from younger students. Younger students in the intergenerational class participated at the same rate as their counterparts in the all-freshmen class. Indeed, although the differences were not statistically significant, the students in the mixed class added to discussion and interacted more, per student, than did the students in the all-freshmen class. In addition, that freshmen in the intergenerational class improved their performance on written essays at least as much as their fellow freshmen shows that they were not harmed by the experiment in any tangible way. These results have important implications for the highly competitive college students of the 1980s, who would balk at any situation that compromised their chances of achieving.

Even those measures that fail to show significant change are important to note. In the pretest, the younger students’ attitude toward older people as a group was more positive than expected; their failure to change may indicate that a high regard for older people was reinforced. Likewise, the older students’ attitudes toward intergenerational classes, younger people as a group, and their own capacity for learning were positive at the beginning of the course and did not change. This implies that older and younger students alike may be more favorably disposed to studying together than is often assumed. And, finally, the highly respectable grades earned by the older students indicate that they performed as capably as their younger classmates.

The findings of this study should provide a challenge to educators. Although certain courses designed especially for older adults are probably necessary, we need to think more of older people as part of the clientele for regular college classes, particularly those in which discussion is the primary teaching technique. The exchange between generations does more than help older and younger students understand each other; it provides a stimulating atmosphere for learning in which the benefits accrue not only to the older but to the younger students as well.

References
Thorson, J. A. Attitudes toward the aged as a function of selected personality characteristics. Unpublished doctoral dissertation, University of Georgia, Athens, 1975.