The purpose of this study was to identify alternatives to a comprehensive investigation of the factors which significantly influence the rate of dropout or withdrawal from adult education programs. Previous research concerning withdrawal has been concerned chiefly with factual data about participants. An assumption underlying this study is that the attitudes of students towards certain attitude objects, for example, age, number of children, size of class, location of school, etc., might be more important than the factual objects themselves. Data were gathered by administering a questionnaire including 39 attitude items and 27 factual data items to 189 dropouts from the Wellesley, Massachusetts Adult Education Program. The primary conclusion of this study was that there are differences in some initial attitudes of students who complete and of students who drop out of adult education programs, and that these differences are significant. Suggestions for further research include a need for a study to determine whether it is the attitudes of students or circumstances indicated by factual data that is the more important predictor of withdrawal. (CH)
DIFFERENCES IN SOME INITIAL ATTITUDES OF STUDENTS WHO COMPLETE AND STUDENTS WHO DROP OUT IN THE WELLESLEY, MASSACHUSETTS ADULT EDUCATION PROGRAM

January 1968

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Bureau of Research
DIFFERENCES IN SOME INITIAL ATTITUDES
OF
STUDENTS WHO COMPLETE AND STUDENTS WHO DROP OUT IN
THE WELLESLEY, MASSACHUSETTS ADULT EDUCATION PROGRAM

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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BACKGROUND

It may be assumed that the improvement of society might be accelerated by a better educated adult population. However, if in an attempt to acquire further education the adult is faced with factors and situations which in some way cause him to withdraw from further education, all of society shares his loss. It was the general purpose of this study to help reduce this loss.

A comprehensive investigation leading to control of the overall problem of withdrawal would necessarily be concerned with adult education in all its aspects: public school programs—urban and suburban, adult centers, correspondence schools, university extension, evening colleges, etc. Personal and situational factors connected with each aspect would need to be identified and studied. Finally, for each situation, some measure of controlling the flow of dropouts would need to be devised. However, more limited approaches to the problem might cumulatively produce the same result, and it is toward that end that this investigation was directed.

Previous research concerning withdrawal has been concerned chiefly with factual data about participants, and the results have been somewhat inconsistent. It
was an assumption of the investigator that the attitudes of students toward certain attitude objects (the factual data) might be more important than the objects themselves—age, number of children, size of class, location of school, etc. Furthermore, it was felt that by limiting the study of attitudes to those experienced at the very beginning of the program—initial attitudes—some valuable information could be gained that might lead to the prevention of withdrawal, especially early withdrawal. Research in initial attitudes might enable informative literature and publicity to be improved, orinetation programs to be planned, predictive instruments to be designed to identify potential dropouts and make possible effective group guidance or individual counseling, and physical conditions to be improved. In other words, to Verner and Davis' suggestion that adult education adopt registration procedures that collect socio-economic data systematically before discontinuance occurs and thus avoid some of the weaknesses in de post facto research, this study proposed to investigate the possible worth of also collecting data concerning attitudes at approximately that time.

The public school program of adult education
at Wellesley, Massachusetts was chosen for the study. The students in this program are similar to the typical adult student described by John Johnstone...

"enjoys an above-average income. .lives in an urban-ized area, and more likely in the suburbs than a large city..." Wellesley is a suburb of Boston, Massachusetts, has a population of 26,071, and has an average yearly per capita income of $13,000--$14,000.

Withdrawal is a problem for Wellesley, as it is for other public school programs, because:
1. It creates a morale problem. Withdrawal seems to lead to more withdrawal.
2. Some courses must, of necessity, have a maximum enrollment. When that maximum is reached, no more students may enroll in them. Thus the enrollees who are destined to be dropouts are, in effect, preventing other students from enrolling in the course that term.
3. Courses which are started with barely adequate enrollment (usually twelve to fifteen students insures the start of a course) must often be cancelled after some withdrawal has occurred. The students in those courses must then wait until the cancelled course is
offered again or be absorbed by their second or third choice course already in progress. The latter often results in more withdrawal because of lack of sufficient motivation or inability to catch up with the other students.

4. State aid for vocational courses (and more recently for basic education) is based on attendance. This involves over one-third of the courses offered.

DEFINITION OF TERMS

For the purpose of this study the terms used were defined as follows:

**Significant differences:** Deviations of the parameters of groups of data that cannot be attributed to chance with any reasonable degree of probability.

**Initial attitudes:** "Emotionalized tendencies, organized through experience, to react positively or negatively toward psychological objects" presented on the first evening of class.

**Completers:** Students who finished the term having had at no time more than two consecutive absences and who were present for at least one of the last two class meetings.

**Dropouts:** Students who discontinued attendance—the third consecutive absence marking the point at which a
student was "dropped"—and students who were not present at either of the last two class meetings.

**Wellesley Adult Education Program:** The approximately fifty-five courses offered by the Wellesley School System for ten weeks each term, two terms per year. This study is concerned with the September to December 1966 term.

**METHOD**

The first step toward collecting data concerning initial attitudes was to answer the question: Attitudes toward what? Since this was to be a study of students who complete and students who drop out, it was obvious that the attitude objects chosen should be those that might be of greatest significance with relation to completion and withdrawal. Based on the personal experiences of the writer both as a teacher and as a student in various adult programs and upon an extensive study of the literature pertaining to participation and attrition, a list was drawn up of attitude objects which seemed relevant. Then a survey was conducted among eleven psychologists, sociologists, and adult program directors and leaders. They were asked to rate the items on the list as to degree of importance as possible predictors of withdrawal
in adult education programs and to add to the list if possible. Items in the "important" range were used as a basis for the questions on the final instrument.

The size of the population and the fact that the data had to be collected in a short span of time—after registration, yet before instruction was given—necessitated the use of a questionnaire. There were 39 attitude questions, each with four possible answer choices. As well as being applicable to statistical analysis, this form of questioning represented an attempt to obtain an answer which might identify the respondent as having, to some degree, either positive or negative feelings toward an attitude object. The four answer choices ranged from what might be termed a "positive" (completer) attitude to a "negative" (dropout) attitude, although it was realized that reordering might occur in several instances. The answer choices for the attitude questions were presented randomly, rather than in any sort of progression, so that the respondent would be encouraged to choose carefully and not fall into an answer pattern.

Of the 66 questionnaire items, 27 were factual
items. Each had from two to five possible answer choices, allowing for an adequate range of response. These questions were not intended to be analyzed individually but were to be used only in connection with the attitude questions. Thus in many cases the information requested paralleled that requested in attitude questions. For example, students were asked, factually, to indicate their age range. One of the attitude questions which paralleled this asked the student how he thought his age would affect his success in the course. Those in any given range could be used as a sub-population especially in cases where the analysis of a particular attitude question showed no differences between dropouts and completers based on the entire population.

At the end of the fall term attendance sheets for each course were checked. Those students who had missed three classes consecutively or who had not been present at either of the last two class sessions were designated, for the purposes of this study, as dropouts. Their identification numbers were ascertained from the Questionnaire Identification Form and were recorded on a Withdrawal Form. A checkmark was placed in a column called Early.
Dropout if the first of the three consecutive absences occurred during the first five class sessions. At this point a late dropout group was defined in order to identify other than early dropouts.

Telephone calls were made to all dropouts within a few weeks after the end of the fall term. They were requested to give the reason they had discontinued and were assured that this information would be considered confidential. The various reasons given for dropping out were listed on the Withdrawal Form.

The next step was the production of IBM cards from the standard answer sheets. This was accomplished with the use of an optical scanner, which produced a single card for each answer sheet. The cards were then processed using a single column distribution (SCD) program that allowed each column to be distributed with up to five columns used as controls. The printouts were in matrix form for each question. The row and column headings designated attendance status and answer choices respectively. Individual cells contained the frequency with which a choice was made by a particular group. In addition, the SCD program provided printouts of the percentages.
of each frequency to the row subtotal. These percentages proved to be quite useful in selecting particular questions for statistical analysis.

RESULTS AND DISCUSSION

On the basis of the first run it was discovered that there was the following distribution of students by withdrawal status:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completers</td>
<td>406</td>
</tr>
<tr>
<td>Late dropouts</td>
<td>122</td>
</tr>
<tr>
<td>Early dropouts</td>
<td>56</td>
</tr>
<tr>
<td>Dropouts for reasons of illness</td>
<td>11</td>
</tr>
<tr>
<td>Total dropouts of all types</td>
<td>189</td>
</tr>
</tbody>
</table>

Total number of cards processed: 595

Before the next run, the cards of those who withdrew because of illness were removed from the sample since their attitudes would not necessarily be related to their withdrawal.

Each of the attitude questions was based upon a null hypothesis which assumed that the responses to the question would not be related to withdrawal. Many of the questions showed such relationships, but a formal test of significance was required to insure beyond a reasonable doubt that the relationships or associations were not accidental. The $\chi^2$
test was chosen and tables of observed frequencies were compared with tables of frequencies that were to be expected on the basis of the null hypotheses. Columns in the expected tables containing cells with frequencies of less than five were dropped.

The first runs were made with only dropout status controlled to determine if any of the attitude questions showed significance for the entire population. After the calculation of $\chi^2$ values, there were seven questions which were significant at the 5 percent level or better. The remainder of the runs were made with one factual question used as an additional control. As a result of these procedures, a total of 27 of the 39 attitude questions were found to be significantly related to withdrawal. The results are summarized in TABLE I. The column labeled "dropout direction" refers to the manner in which dropouts responded as compared to the completer group. Since space does not permit a listing of the exact choices for each question, only extremes are indicated. In many cases, however, the bulk of responses reached neither extreme.
<table>
<thead>
<tr>
<th>Attitude Object</th>
<th>Dropout Direction</th>
<th>Control</th>
<th>$\chi^2$</th>
<th>Matrix</th>
<th>Confidence Level</th>
<th>Dropout Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectation of success in course</td>
<td>H - 0</td>
<td>None</td>
<td>8.20</td>
<td>2 x 4</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Guilt concerning absence from home</td>
<td>Y - 0</td>
<td>None</td>
<td>10.32</td>
<td>2 x 3</td>
<td>1%</td>
<td>All</td>
</tr>
<tr>
<td>Interest in open house participation</td>
<td>H - 0</td>
<td>None</td>
<td>15.35</td>
<td>2 x 4</td>
<td>1%</td>
<td>Early</td>
</tr>
<tr>
<td>Degree of teacher skill</td>
<td>H - 0</td>
<td>None</td>
<td>6.23</td>
<td>2 x 3</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Previous school experience</td>
<td>G - 0</td>
<td>None</td>
<td>14.38</td>
<td>2 x 4</td>
<td>1%</td>
<td>All</td>
</tr>
<tr>
<td>Value placed on education</td>
<td>H - 0</td>
<td>None</td>
<td>11.01</td>
<td>2 x 4</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Expectation of course difficulty</td>
<td>H - L</td>
<td>None</td>
<td>17.40</td>
<td>2 x 4</td>
<td>1%</td>
<td>All</td>
</tr>
<tr>
<td>Preparedness for course</td>
<td>H - 0</td>
<td>Age 21-30</td>
<td>6.11</td>
<td>2 x 2</td>
<td>5%</td>
<td>Early</td>
</tr>
<tr>
<td>Expectation of social contacts</td>
<td>H - 0</td>
<td>Age over 50</td>
<td>8.07</td>
<td>2 x 3</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Transportation difficulties</td>
<td>Y - N</td>
<td>Age 41-50</td>
<td>5.86</td>
<td>2 x 2</td>
<td>5%</td>
<td>Late</td>
</tr>
<tr>
<td>Location of school</td>
<td>G - 0</td>
<td>Age over 50</td>
<td>9.24</td>
<td>2 x 2</td>
<td>1%</td>
<td>Late</td>
</tr>
<tr>
<td>Distribution of ages in course</td>
<td>G - 0</td>
<td>Age 31-40</td>
<td>6.98</td>
<td>2 x 2</td>
<td>1%</td>
<td>All</td>
</tr>
<tr>
<td>Expectation of gain from course</td>
<td>H - 1</td>
<td>Former ad. ed. student at Wellesley</td>
<td>4.06</td>
<td>2 x 2</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Reputation of school</td>
<td>G - 1</td>
<td>Former ad. ed. student at Wellesley</td>
<td>4.20</td>
<td>2 x 2</td>
<td>5%</td>
<td>Late</td>
</tr>
<tr>
<td>Sureness in choice of course</td>
<td>H - L</td>
<td>Housewife</td>
<td>4.11</td>
<td>2 x 2</td>
<td>5%</td>
<td>Late</td>
</tr>
<tr>
<td>Category</td>
<td>Code</td>
<td>Description</td>
<td>Mean</td>
<td>df</td>
<td>p-value</td>
<td>Early/Late</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
<td>--------------------------------------------------</td>
<td>------</td>
<td>----</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>Foregoing activities outside the home</td>
<td>E - D</td>
<td>Not active in community affairs</td>
<td>8.06</td>
<td>2 x 3</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Parking situation at school</td>
<td>G - B</td>
<td>Somewhat active in community affairs</td>
<td>4.98</td>
<td>2 x 2</td>
<td>5%</td>
<td>Late</td>
</tr>
<tr>
<td>Impression of instructor</td>
<td>F - U</td>
<td>Not active in community affairs</td>
<td>10.36</td>
<td>2 x 2</td>
<td>1%</td>
<td>All</td>
</tr>
<tr>
<td>Time of day course is offered</td>
<td>G - B</td>
<td>Active in community affairs</td>
<td>8.47</td>
<td>2 x 3</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Impression of others in course</td>
<td>F - U</td>
<td>Not active in community affairs</td>
<td>4.72</td>
<td>2 x 2</td>
<td>5%</td>
<td>All</td>
</tr>
<tr>
<td>Satisfaction with arrangement for child care</td>
<td>H - L</td>
<td>Live 1-6 mi. from school</td>
<td>4.53</td>
<td>2 x 2</td>
<td>5%</td>
<td>Early</td>
</tr>
<tr>
<td>Burden placed on spouse or family</td>
<td>H - L</td>
<td>Live 4-6 mi. from school</td>
<td>7.34</td>
<td>2 x 2</td>
<td>1%</td>
<td>All</td>
</tr>
<tr>
<td>Changes in living routine because of school</td>
<td>Y - R</td>
<td>5 or more in family</td>
<td>6.07</td>
<td>2 x 2</td>
<td>5%</td>
<td>Early</td>
</tr>
<tr>
<td>Foregoing television</td>
<td>E - D</td>
<td>Males</td>
<td>5.50</td>
<td>2 x 2</td>
<td>5%</td>
<td>Late</td>
</tr>
<tr>
<td>Distribution of sexes in course</td>
<td>G - B</td>
<td>Females</td>
<td>10.38</td>
<td>2 x 4</td>
<td>5%</td>
<td>Early</td>
</tr>
<tr>
<td>Impression of classroom</td>
<td>F - U</td>
<td>4 yrs. of college</td>
<td>5.85</td>
<td>2 x 2</td>
<td>5%</td>
<td>Late</td>
</tr>
<tr>
<td>Willingness to do homework</td>
<td>H - L</td>
<td>&quot;Always&quot; interested in subject matter</td>
<td>6.09</td>
<td>2 x 3</td>
<td>5%</td>
<td>All</td>
</tr>
</tbody>
</table>

**Dropout Direction - Key**

- **H - L**: High - Low
- **Y - N**: Yes - No
- **G - B**: Good - Bad
- **E - D**: Easy - Difficult
- **F - U**: Favorable - Unfavorable
It seemed of value to determine whether certain categories of questions contained greater percentages of significant questions than others. Table 2, below, lists eight categories and the number and percentages of significant questions in each.

**TABLE 2.**

**QUESTION CATEGORIES**

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions Regarding:</th>
<th>No. of Questions</th>
<th>% of Significant Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course</td>
<td>8</td>
<td>87%</td>
</tr>
<tr>
<td>2</td>
<td>Personal factors</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>Competing factors</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>4</td>
<td>Instructor/other students</td>
<td>7</td>
<td>71%</td>
</tr>
<tr>
<td>5</td>
<td>Environmental factors</td>
<td>8</td>
<td>63%</td>
</tr>
<tr>
<td>6</td>
<td>Prestige</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>7</td>
<td>Home and family</td>
<td>5</td>
<td>80%</td>
</tr>
<tr>
<td>8</td>
<td>Education</td>
<td>3</td>
<td>67%</td>
</tr>
</tbody>
</table>

From TABLE 2 it can be seen that categories 1, 3, 4, 7, and 8 contain high percentages of significant questions. It is interesting to note that, except for category 3, the subjects of the categories mentioned above could not easily be studied by asking factual
questions. This is a further indication that attitudes are independently related to withdrawal. It can also be seen, however, that category 2 (personal factors) contained no significant questions. Thus, although attitudes have generally been shown to correlate with withdrawal, the choice of attitude objects must be made with care. In this case, the results, at least to some extent, bear out the jury rating of the attitude objects in this category, which tended to be lower than for many of the other attitude objects.

The response patterns to the question in category 7 (home and family) are also notable. In each of the significant questions, the completer group had a higher-than-expected frequency of responses which the investigator had assumed would be characteristic of the dropout group. In each case the members of the completer group displayed some concern about the possible adverse effect of school on the normal family routine.

CONCLUSIONS AND APPLICATIONS

The primary conclusion of this study is that there are differences in some initial attitudes of students who complete and students who drop out
in the Wellesley Adult Education Program and that these differences are statistically significant. Specifically, seven attitudes out of thirty-nine were significant at the 5 percent or 1 percent level of confidence when no other control was used except that of attendance status. Twenty were significant at those levels when one factual question was used as an additional control. This would indicate that attempts to reinforce desirable attitudes and to change or eliminate undesirable ones might indeed be rewarded by a reduction in attrition. This result might be accomplished by:

1. Informative literature and publicity materials concerning not only the program—course descriptions, time and place of meetings, etc.—but also the people in it, the teachers, facilities (particularly any special ones for adults), the preparation required or not required, and the general differences in the way the program is run for adults as opposed to previous "formal" schooling adults have had.

2. Orientation programs, designed especially for the particular adult institution or situation, possibly even for the particular segments or courses
thereof. Perhaps the fact that in most adult situations there is no set pace in terms of amount of material that must be covered or mastered to "pass" and no grades given to students could be emphasized. This might serve to convince some tense students that what they are undertaking does not need to be regarded as "difficult" in the sense that anything will be expected of them over and beyond what they expect of themselves.

3. Reliable predictive instruments, based on research in initial attitudes and geared to individual situations, to aid in the identification of potential dropouts at the very beginning of the program.

4. Early group guidance or individual counseling involving those students identified as having the attitudes of potential dropouts. A realistic idea of what might be gained from the course, a recognition of negative attitudes toward others and a desire to change them, an acknowledgment of home problems that could occur as the result of a change in routine necessitated by attending school—all are possible outcomes of such guidance and counseling.
5. Changing physical conditions, whenever possible, which may cause undesirable initial attitudes. For example, courses which tend to be popular with students over 50 years of age who, as in this study, express less desirable attitudes toward school location than younger students, might be given at a location other than the school. The new location that is chosen—that is, the entire atmosphere of the physical facility, its furnishings, etc.—might also be one conducive to social contacts, which seems to be another need expressed by this group.

6. Changing a program, either in content or in set, when indications are given that it may be too imitative of previous school experience.

7. Cooperation, rather than competition, with other community organizations in terms of content, time, place of meeting, and, when possible, financing.

8. A change in the assumptions which the particular adult agency, in this case the public school, holds concerning adults as learners, curriculum design for adults, etc., in relation to changing social needs. This is perhaps the most important
of all, and certainly basic to all other attempts at changing student attitudes.

Categories, or areas of significance, may be even more helpful in terms of program planning than analysis of attitudes toward individual attitude objects. They may enable the planner to see the forest in spite of the trees and to know which general directions to follow. This study, for instance, indicates that in Wellesley attention to the five areas mentioned previously might be of more benefit than attention to "personal factors"—effect of age, physical well-being, etc., "environmental factors"—so often given over-riding attention in adult education literature, or "prestige."

SUGGESTIONS FOR FURTHER RESEARCH

Considering the results and conclusions of the study, the investigator suggests the following recommendations as possibilities for further research:

1. Conduct a similar study in a situation where it is usual that there are many early dropouts to determine whether more questions are significant for them than for the entire dropout group.

2. Conduct a study to determine whether it is the attitudes of students or the factual data about
them that is the more important predictor of withdrawal.

3. Corroborate this study by determining whether the same questions are significant in other like situations—public school programs similar to Wellesley’s.

4. Conduct a similar study where there is a larger dropout population so that more controls can be applied.

5. Develop instruments that could be reliably used in public schools or other adult education programs to identify potential dropouts.

6. Develop instruments that could be used in public schools where the socio-economic status is different from Wellesley.

7. Refine the list of attitude objects by having adult students—completers and dropouts—rate them and add to them at the conclusion of a course or adult program of any sort. (This might be especially valuable if done as preliminary work in the same situation for which it is intended that a predictive instrument will be devised later.)

8. Analyze the questions on the instrument to determine whether some particular way of asking a
question might lead to significant results.

9. Conduct a similar study to determine whether initial attitudes vary depending on type of course or program the student is enrolled in and the implications thereof.

10. Based on a previous analysis of initial attitudes, improve the publicity and literature of a program; then test the effect.

11. Experiment with orientation programs (dropout-preventative and/or morale building) designed especially for adults in public schools or other situations, based on what is learned in an analysis of initial attitudes.

12. Experiment with group guidance of adults and with methods of counseling adults who have been identified as potential dropouts using a variety of techniques:

a) Supportive and constructive only
b) Non-supportive and/or non-constructive (non-directive)
c) Regressive-reconstructive

13. Devise ways of creating conditions which will facilitate the unfreezing, changing, and refreezing of attitudes. In attempting to do this, it would seem
profitable to examine the change model developed by
Kurt Lewin⁴ and interpreted by Edgar H. Schein.⁶

..."all educators need to pay more atten-
tion to the psychology which deals with
changes in attitudes even at the expense
of learning more about how knowledge is
acquired and abilities are improved.

"Somehow or other we adult educators need
to learn how we can become more effec-
tive in influencing and changir_ ; attitudes.
Especially those attitudes which prevent
individuals from benefiting from the self-
improvement programs we offer."¹


Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program (Final Report)

Hurvamp, Rosemary C. (Principal Investigator: Malcolm S. Knowl)

Boston University, Boston, Massachusetts

The purpose of the study was to determine whether there were differences in initial attitudes of students who completed and students who dropped out in a public school adult education program. A list of attitude objects was drawn up and submitted to psychologists, sociologists, and adult education leaders for rating. This survey formed the basis for a questionnaire, which was administered to 595 students in the Wellesley, Massachusetts program. The questionnaire consisted of 39 questions assessing initial attitudes and 22 questions concerning related factual data about the respondents. Comparisons of completers and dropouts were made, and those which indicated possible significance were tested using the chi-square method. Twenty-seven attitude questions were significant with no more than one control applied.