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ABSTRACT

The object of the research reported in this paper is to prepare guidelines for methods for the more efficient education of adult students in Sweden engaged in planned programs leading to comprehensive, vocational or secondary school competence or to corresponding degrees of competence required for further vocational education. this first stage consists of a survey of the clientele, concentrated on evening and adult secondary school classes, county colleges and correspondence schools. The survey undertaken was concerned with variables related to social background, aptitude, and personality. Analysis of the findings, and of the comparison between those who dropped out of the schools and those who remained, is included. These findings are to be used as the basis for further research on methodology in teaching adults. (MF)

# SCHOOL RESEARCH

December 1969

Current Project

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Project title:

Adult Education: Recruitment and Methods

Conducted by:

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Uppsala

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## Background and Aim

According to the Swedish Covernment bill No. 85 of 1967, the main object of adult education is to improve the possibilities of the individual to participate in education and studies. Of the working population between the ages of 20 and 65, about 80 % at present have spent only 6-7 years at school. The need of a more extensive basic education for this category is clearly established. It is of vital importance both from the point of view of the community and that of the individual that all who study should receive an effective education suitable for adults and demanding a minimum of time and cost.

In the bill (3.4.1) the term "adult education" is defined as "a collective concept which has come to include educational and instructional activities in many different forms and dedicated to a variety of purposes". It is further noted that "the engagement of the community has been primarly concentrated on three principal fields, namely vocational training adapted to the needs of the labour market, presecondary and secondary school courses and general education". The present project is intended to include pre-secondary and secondary

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school education. In this particular case the term adult education applies to such planned education as is provided after previously completed or interrupted basic education and is intended to lead up to comprehensive, vocational or secondary school competence or corresponding degrees of competence required for further vocational education. The project is thereby restricted to studies designed to confer competence, for which the community is primarly and mainly responsible.

The object of the research is to prepare lines of guidance and methods for a more efficient education of pupils engaged in studies of the type referred to above. The first stage consists of a survey of the clientele, concentrated on evening and adult secondary school classes, county colleges and correspondence schools. The task implicit in this stock-taking is to lay the foundation for methodological-didactic investigation which will form the main part of the project.

## Description of the Testing Apparatus

The survey of the pupil material (beginners) at evening secondary school classes, adult secondary schools, county colleges and Hermods Correspondence School is concerned with the following variables:

- A. Social background variables
- B. Aptitude variables

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C. Personality variables

#### Social Background Variables

The social background variables are measured with the aid of "Adult Pupil 1968", a questionnaire specially constructed for this investigation. The questionnaire was drawn up during the Autumn Term of 1967 and so formulated that it could be used for all the categories of pupils and types of schools mentioned above. The questionnaire contains 117 questions and statements and is intended to give as exhaustive as possible a description of the pupil's background.

An experimental version of the questionnaire was tried out on pupil's attending the evening secondary school classes at Uppsala and students

of the first year at the Wik county college (n=57).

#### Aptitude Variables

The group intelligence test chosen as a component of the investigation was Westrin's intelligence group test (WIT III). This group test is a factor test intended to give highly reliable results of levels of intelligence. The abiblities measured by this test have previously been related in a large number of investigations to progress in studies, among other things, and are included in the conventional concept of all-round aptitude (Manual, WIT III).

## Component Tests

The following component tests are given:

## Analogies

The test is intended to measure inductive capacity with regard to verbal material.

B Opposites

The test is intended to measure verbal comprehension.

C Numerical Combinations

The test is intended to measure the capacity to think in terms of relationships with regard to numerical material.

D Puzzle

The test measures spatial capacity.

### Personality Variables

The personality instruments used in the investigation are:

## Eysenck Personality Inventory

This instrument is a further development of Maudsley Personality Inventory and has been translated and factor-analyzed by Ann Bederoff-Petersson and Jan Åström (Eysenck Personality Inventory, EPI; Den svenska versionen - Testdata och synpunkter. Stencilled Research Report. Psychiatric Clinic, Linköping).

A. Extroversion (E-Scale). According to Eysenck, the typical extrovert is an impulsive, optimistic individual with outward interests who is dependent on company.

Introversion. The introvert is described by Eysenck as a reserved, uncommunicate and pessimistic individual who plans his life carefully.

B. <u>Neuroticism</u> (N-Scale). According to Eysenck, who attempts to base his personality dimensions on the results of research in experimental and theoretical psychology, the factor of neuroticism is relatively closely associated with the congenital degree of lability in the autonomous nervous system.

#### The SPA Scale

A brief description of the content of each of the six variables. High marks in the respective variables imply:

- A Nervousness
- To feel nervous often; to feel anxious often; to suffer from insomnia; to have difficulties in concentrating.
- B Insecurity
  To feel incompetent and a failure; to lack self-confidence; to doubt one's ability to deal with various matters.
- C Emotional Instability

  Frequent and swift changes of mood; to be reduced to tears easily;

  to become exhibarated and lively without difficulty.

### D Need of Contact

To turn to others for help; to be inclined to discuss personal problems with others; to feel a need for consolation and support when in difficulty.

## E Suspicion

To find it difficult to rely on other; to feel that one is being deceived by others; to doubt whether others without ulterior motives can be honest, sincere or helpful.

## F Autonomy

To detest established rules and standards; to wish to be independent; to find it difficult to take orders.

## New Norm Groups

The instruments used for the pupil investigation have norm groups of varying character. With the object of obtaining increased possibiblities of making comparisons between groups with different educational backgrounds and sexes, test norms for the following material have been collected.

#### Men, 20 years old

Thanks to collaboration with the Institute of Military Psychology (MPI), norm data for the three instruments in question have been collected for 780 national servicemen, selected so as to form a sample representative of the country as a whole. The sampling was carried out by MPI. The tests were held by school psychologists or psychologists under training in each of the centres chosen for the test. All tests were carried out as group tests.

## Women, 20 years old

A nationally representative sample of 200 women born in 1948 was taken from the registers of the county councils. A type of two-stage choice was thereby effected.

The basis of the calculations was taken from Population and Housing Statistics, Part III, for 1965 and the Statistical Year Book for 1967.

The tests were carried out as a group test except in those cases when individuals could only be contacted by means of individual tests. The tests were carried out mainly by senior students who were undertaking work on norms as part of their work for <u>laudatur</u> in their degree examinations.

## Drop-out in the Pupil Investigation

## Secondary School Evening Classes

Those pupils who were absent from instruction on account of illness or other cause on the occasion of the test (ordinary class hours) are treated as drop-out for the purposes of the investigation.

over whether the drop-out or absente groups differed in one or more respects from the pupils who had been present at the test the social questionnaire "Adult Pupil 1968" (SF) was sent to every pupil who had been absent on the occasion of the test. After certain pupils had been reminded three times to answer the questionnaire 376 replies (21 % of the total sample) were received. The remainder of the absentee group (10 %) was investigated by carrying out a check of the class lists, which also showed that 5 % were no longer active pupils at the time of the test. These pupils had broken off their studies during the period of the test (Jan.-March) or had never commenced their studies. A further 5 % (85 pupils) could not be reached by means of the social questionnaire (SF).

The reasons for the drop-out affecting the 5 % are listed as follows.

#### Reason

## Number of Pupils

1. Questionnaire not delivered by post (questionnaire returned by post)

17

2. Refused, on the occasion of the test at school

2

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3. Discontinued studies at the time of the drop-out investigation (postal questionnaire) 12

4. Did not wish or could not be bothered to reply

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In a paper for <u>laudatur</u> in a degree examination (Gemstedt, Clarie: Analys av bortfallet vid elevundersökning avseende studerande vid kvällsgymnasium, University of Uppsala, The Institute of Education, Autumn Term 1969) research has been carried out as to whether the absent pupils (drop-out) who filled up the questionnaire differed in any respects from those pupils who were present with regard to the social variables and whether these potential differences are systematic. The analysis has been made with the aid of chi tests in such questions in the social questionnaire in which there was a percentage difference of 5 % between the group of students present and that of the absentees in the same answer alternative. This analysis has been termed "The analysis of the absentee group".

and of the group of pupils who could not be contacted for the purposes of the drop-out investigation (5%). This group has been checked with regard to sex, geographical region and the size of the town, village, etc., where the students were pursuing their studies.

# Summary of the Drop-out Analysis of the Drop-out Group

The drop-out (21 % of the sample) has been compared with the group of those present with regard to the variables in the social question-naire, where the difference in terms of percentage in various alternative answers has amounted to about 5 %. Chi<sup>2</sup>-tests have been used to determine whether the differences were significant at the 1 % level. In the case of 17 questions out of 117, the drop-out group differed significantly from the group of those present.

Examples of variables in which there occurred a significant difference on the 1 % level are given below.

In the drop-out group there were differences with regard to:

Educational background. More members of the drop-out group had a higher education. The average age was lower. More were unmarried. Fewer had children at home. More had external interests. Brothers and sisters had a higher school education. More attend evening classes to supplement their earlier education. More have recently begun to earn their living.

It seems reasonable to suppose that certain systematic differences may exist between the drop-out (absentee group) and the group of those present, when 17 out of 117 social variables revealed significant differences.

The absentee group who replied to the postal questionnaire "Adult Pupil 1968" in connection with the drop-out investigation are naturally included in the data processing of the evening class material (secondary school).

On the other hand we lack essential information on the social side for 5 % of the pupils. Even assuming that the differences already identified had existed to the same extent in this group, the total result would not have been noticeably affected even if this group had been subjected to data processing.

A more detailed analysis of the actual drop-out (5%) devoted to the variables sex, geographical region and size of the town, etc., where the pupils pursued their studies, showed no significant differences as between these variables and those of the sample as a whole.

The analysis of willingness to answer revealed no significant differences between those who replied immediately to the SF and those who had to be reminded once or twice (the latter were treated as one group).

# The Effect of the Drop-out on the Intellectual and Personality

## Variables in the Secondary School Evening Class Group

The drop-out among those who were to take aptitude and personality tests in addition to the social questionnaire amounted to 27 %. This is the reason that social data exists for certain pupils (obtained in connection with the drop-out investigation) while other test data are lacking.

Based on the analysis of the social data, there is reason to believe that the drop-out may be systematic. The 27 % for whom we lack aptitude and personality data can therefore be considered as likely to affect the results of the intellectual and personality variables.

We have observed that the basic education of the absentee group is on the average higher than that of the group of those present. Education has a positive connection with intelligence and in the investigation we have noted that the younger pupils are somewhat weaker from the point of view of aptitude compared with the older categories. If these factors are borne in mind, it seems probable that the drop-out group are at least as well intellectually equipped as the group of those present.

As far as the personality aspect is concerned, it is more difficult to draw conclusions regarding the effect of drop-out on the results obtained from the personality questionnaire.

The fact that the average age of the drop-out group is less than that of the group of those present should be noted when interpreting the personality data.

#### Adult Seconday Schools

ERIC

The drop-out (absent from instruction) at the two schools at Norr-köping and Härnösand amounted to 49 pupils or 13,2% of the sample. At the Härnösand school one group was free from instruction on the day of the investigation. Owing to a misunderstanding as to the

premises where the test was to take place, the majority of the members of this group did not attend the test. This group contributed largely to the percentage of absentees, and the probability of a systematic drop-out in the adult secondary schools is consequently very small.

#### County Colleges

The drop-out (absence from instruction) in the county colleges amounted to 106 students or 9,3 %.

This figure is regarded by the Principals consulted as fairly normal.

#### Hermods

ERIC

Classification of the Hermods students who did not fill up the social questionnaire distributed by post.

(Drop-out group, n = 72)

Number

a) Following telephone conversations with certain
pupils and information supplied by Hermods, Malmö,
a number of students discontinued their studies
during the Spring Term, 1969, and did not therefore
reply to the social questionnaire

43

b) An interview by telephone in which students
replied to Questions Nos. 1, 3, 6, 22-25, 36,
37, 40, 41, 44, 46, 82-84, 86, 87, 89 in the
social questionnaire

16

c) Students who could not be contacted. No telephone.

Have not replied to the social questionnaire in spite

of three postal reminders.

13

Total number of students

Of the 407 pupils in the Hermods group 13 must be classified as drop-out from the investigation, as one pupil, according to information supplied by Hermods, is still registered as an active

student, though the student has not replied to the postal questionnaire or been reached by telephone. The actual drop-out in this group thus amounts to 3,2 %.

The 16 pupils interviewed on the telephone have not been included in the data processing. When comparing data from the interviews by telephone and the frequency of answers given by the groups investigated similar tendencies ere mainly encountered.

Drop-out in the Hermods Group which participated in the Aptitude and Personality Tests

The drop-out in the test group (n = 105) consisted of 16 pupils or 15,2%. Great efforts were made to reduce the drop-out percentage. Nevertheless the limitations imposed by factors of time and economy prevented us from sacrificing more time and money on tracing, among others, the four students reported as unavailable.

#### A Brief Summary of the Results of the Investigation

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The adult pupils (n = 3279) who participated in this pupil investigation during the Spring Term of 1968 represent a selection of beginners at comprehensive and secondary school levels made from all the evening class secondary schools (33) in existence during the Spring Term of 1968. In addition 25 county colleges out of a total of 105 were represented by pupils from the first year course. The two state secondary schools for adults in Norrköping and Härnösand are included with beginners on both educational levels, as well as all pupils of Hermods Correspondence School who applied during a certain period in 1967 for complete courses leading to comprehensive or secondary school qualifications.

These pupils have been described with regard to certain social background variables, general aptitude. Consideration has also been given to a number of personality variables.

## The Social Rackground Variables. A Short Summary

The median age of the adult pupils varies from 22.02 years (Co.Colls) to 26.90 (Evg Cl.).

Division by sexes shows a somewhat larger proportion of women than men on the evening classes and county colleges. In the case of the evening classes there is a strong representation of women in the oldest age category, whereas this state of affairs in the case of the county colleges applies to the youngest age group. In the adult secondary school and Hermods men predominate. Unmarried pupils predominate with the exception of the pupil structure in the evening classes.

Married pupils are represented to a somewhat greater extent by women than by men.

The adult pupil group as a whole claims a basic education at the time of commencing adult studies which in 70 % of the cases lies above primary school level. The form of school initially sought after by those with less education is the county college.

The adult pubils (total number) in our investigation belong for the most part to the medium high or lower income levels. A contributory cause of this state of affairs would seem to be the large percentile proportion of women and young students in these income groups.

As far as housing conditions are concerned, it appears that the younger adult students (under 21), with the exception of county college students, live for the most part with their parents. 10 % live in lodgings. In the higher age categories the predominant housing alternative is separate flats.

To the quest, on vocational education we find throughout a low frequency of reply. As a general tendency may be noted, however, a comparative modest vocational education consisting of courses of varying duration occurs for the most part among the adult students attending the adult secondary schools, county colleges and Hermods.

Pupils attending the secondary school evening classes refer mainly to training in business, offices and communications. In addition, a considerable proportion, approx. 18 %, state other forms of training, implying courses of varying duration, etc.

Pupils attending the secondary school evening classes, the adult secondary school and Hermods claim for the most part to belong the <u>field of employment</u> which includes technical, scientific, humanistic and artistic work. In this case, however, we are concerned with forms of employment requiring modest vocational training only. Fiscal and office-technical work is also well represented.

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To a considerable extent the county college students have not stated to which vocational sphere they belong (45 %). It is probable that this group has had less time to establish itself in any particular vocations.

With regard to pleasure derived from work, there are tendencies indicating that somewhat more than 20 % of the students attending the adult secondary school and about 15 % of those attending other forms of school are not particularly happy in their work. The majority of these pupils wish to change to fields of employment which include technical, scientific, humanistic and artistic work.

When we investigated from which environment the adult pupils came with regard to the father's education and employment, it transpired that to a great extent the pupils attending all forms of school came from homes where the father had received a primary school education.

The father's employment at the end of the pupils' primary or comprehensive school education was reported by pupils attending all the forms of school concerned as belonging for the most part to the category of employment concerned with "production, manufacture", technical, scientific, social-scientific, humanistic and artistic work as well as "farming, forestry, fishery and mining work", with the accent on farming. The older the students, the greater the percentage of fathers with a primary school education only. The proportion of fathers active in "farming, forestry, fishery and mining work" also increases with the age of adult students.

As far as the basic education of marital partner is concerned, the most common alternative stated is the primary school.

Slightly more than one-third of the pupils attending the secondary school evening classes state that they have children at home. The proportion of students with children at home attending the adult secondary schools or taking Hermods courses is somewhat lower (27%). County college students report children at home in approx. 9% of the cases.

With regard to the number of children, the alternative "2 children" predominates among those attending the secondary school evening classes and the adult secondary schools. In the majority of cases county college and Hermods students report "1 child".

The adult pupils report a low frequency of long periods of sickness. It does not appear from the data that our investigated clientele have postponed their studies until adult age on account of inadequate physical or mental conditions.

The majority of the adult pupils state that, before commencing their studies, they were engaged in gainful employment. Among the older pupils this applied to about 80 % and among the younger to about 60 %. Students studying for Hermods or attending the adult secondary schools or secondary school evening classes remain so employed to a considerable extent and thereby finance their studies. County college students, on the other hand, are compelled to give up their gainful employment and are obliged to finance their studies by means of scholarships, savings, state grants and - frequently - help from home.

The forms of school which mainly recruit pupils who have grown up in towns are the secondary school evening classes (59,2%) and the corresponding figures for the adult secondary school and the county college are 49,2 and 38,2% respectively. The largest proportion of students who have grown up in rural districts is to be found in the county college (42,4%) and the adult secondary school (32,9%). The proportion of pupils from rural districts attending the secondary school evening classes and correspondence school is about 26%.

The majority of the adult pupils have attended secondary schools or lower grammar schools in their home towns or districts, while 25 % have not enjoyed this possibility of studying at a higher level. In this category, however, about 70 % have lived within 30 kilometres of a lower secondary school and about 50 % within the same distance of a secondary school. The poorest possibilities of studying are reported by pupils at county colleges and many of the older pupils.

Discontinued studies are reported by about 15 % of the adult pupils and the reasons given include boredom with school, pregnancy and lack of money.

Among the adult pupils about 60 % state that they did not commence their studies immediately after primary or comprehensive school. The principal reasons for not studying immediately after leaving school are given as financial and boredom with school. About 90 % state that their parents adopted a positive attitude towards further study.

About 50 % of the adult pupils themselves believe that it would have been better if they could have carried on their present studies in immediate connection with their earlier school attendance. About 37 % are of the opinion that a pause in their studies was in fact beneficial.

The adult pupils study in order to fulfil various aims. We can distinguish four major categories, whose percentile proportions vary from one school form to another. The category which states that the intention is to change employment is most common in the county college, where there is also a large proportion of students who are reading to improve their education and thereby qualify for further studies.

The category which states that the aim is to advance within their chosen field of employment occurs in all forms of school and this applies also to the category interested in studying to satisfy their keenness in studying for the sake of studying.

The category stating that the intention is to undertake studies at university level at a later date is most numerous at Hermods (29,3%) but is to be found also at the adult secondary school (24,2%) and the secondary school evening classes (21,1%) as well as to a more limited extent at the county colleges.

With regard to leisure interests, the investigation draws a picture of an adult pupil suggesting active interest in newspapers, literature, theatre, debates and open-air life, while the cinema, weekly journals, TV and radio broadcasts are of subordinate interest.

We may observe that about 40 % state that they are <u>not</u> interested in dancing and that about 70 % state that they are <u>not</u> interested in going to Church.

The adult pupils' views of methods of teaching reveal that large groups favour conventional methods and large groups welcome the idea of changes.

Most pupils are agreed that there should be more educational means, more instruction by radio and TV and more time should be available for discussion in various subjects.

The majority consider that extra teaching and advisory facilities are desirable and that it would be a sound practice to divide the students into instructional units based on their previous knowledge.

Adult pupils have different ideas as to suitable rates of studying. Their wishes vary in relation to the purpose of their studies and also, to some extent, with their methods of study. Pupils who intend to change their employment or at a later date to take up studies at university level prefer to a great extent a rapid rate of studying, while those engaged in reading in order to satisfy the demands of their current work or who are interested in studying for the sake of studying prefer a more leisurely rate.

Pupils who are exclusively concerned with studying or are engaged in part-time employment prefer a more rapid rate while those who are working full time or looking after a home prefer a more leisurely rate of study.

# A Brief of Summary of the Results of the Aptitude and Personality Tests

The adult pupils have obtained results which tend to coincide with or to surpass the average values of the norm groups for the four component tests of aptitude.

The pupils have obtained results in the verbal tests which are particularly superior to the average values of the norm groups.

More detailed statistical analysis of the tests results of general aptitude will be included in the final report.

The average values found and the dimensions of spread in the personality variables differ very little from the values obtained in our investigations of norms. This means that adult pupils as a group correspond in regard to personality variables to a crossection of Swedish youth in their twenties. In studying the distribution graph with regard to age and form of school, we find in certain pupil categories to a greater extent than might be expected pupils suffering from a neurotic disposition, nervous troubles or lack of self-confidence. For want of a thorough statistic treatment and analysis, no definite statement can be made on general abnormalities. In this respect reference is made to future work on this aspect of the subject to be included in the final report.

## Plan of the Project

## Phases of the Project

Investigation of clientele		Didactic investigation		
67-68	68-69	69-70	70-71 71-72	72-73
Planning Preparatory tests	Calculations Writing of reports	Planning of didactic experiments	Didactic experiments	Calculations Writing of reports
Field work				

The data collected in connection with the investigation of the clientele are compiled in a report: Vuxenstuderande 1968. Social bakgrund, begavning, personlighet. Preliminär rapport 1969, (Adult Pupil 1968. Social background, aptitude, personality. Preliminary Report 1969). The results of this pupil investigation are intended to serve as the basis of future work within the project.

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