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AUTHOR Cornelisse, Martine; And Others
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ABSTRACT

This report describes an experimental day care program in Amsterdam, begun in 1969 to investigate how a day care center could contribute towards the favorable development of children under four from unskilled and semiskilled families. Because it is only recently that day care for children under four has been used to any extent, this is the first project in the Netherlands that is collecting psychometric data on young children which will form the basis for further research. Included in the report is information concerning: (1) the Dutch educational system; (2) objectives, organization, and evaluation (instruments and testing schedules) of the project; (3) the child care workers, with comments on current and future selection and training techniques; (4) the children's daily schedule and the special attention given to problem children; (5) parents' involvement in the program, with special comment on the development of a room in which parents can meet informally with each other and the social worker; and (6) six major limitations on evaluating the project statistically. (ED)

PROEFKRECHE '70

A DAY CARE CENTER FOR VERY YOUNG CHILDREN IN AMSTERDAM

(written Summer 1974)

Authors in alphabetic order

Martine Cornelisse	psychologist
Dolf Kohnstamm	professor of developmental psychology, Leiden University project leader
Truus van der Lem	psychologist director of the center

CONTENTS

1. SOCIAL SECURITY AND EDUCATIONAL BACKGROUND OF THE NETHERLANDS

1.1 Social Security

There is a long history of Dutch social security; provisions on an overall national basis go back to the turn of the century. The principle is now established that adequate and comprehensive legal social security provisions must be maintained to cover the entire population, or at least all residents. The history, organization, financing and operations of the component schemes are quite complex. But briefly we can state that adequate security is provided against incapacity for work, children and sickness expenses, unemployment and old age retirement, and for widows and orphans.

In The Netherlands the term "deprived" can only apply to people with poor housing, little education and low wages. However, their material wealth is often superior to that of most deprived groups in, for instance, the United States.

1.2 Educational System

In The Netherlands school attendance now is compulsory for children aged from 6 to 15. All public education for children in this age group is basically free.
Primary education takes 6 years, after which the child may choose from various different types of secondary education, which take 3 to 6 years.
All education for children aged 16 and older is not free, but lower income groups may obtain grants, so that - theoretically speaking - no one need to be excluded from higher education for financial reasons.

1.3 Pre-school System

Children aged 4 to 6 years may attend kindergartens. These facilities are widely used; about 84% of all Dutch 4 year olds and about 96% of all 5 year olds attend a kindergarten. Parents are required to pay small fee (Dfl. 40 per year, about $ 16) and are free in their choice of a kindergarten (Catholic, Protestant or no specific church affiliation).
The Ministry of Education subsidizes all Dutch kindergartens even private ones, if they meet certain requirements such as minimum entrance age, teacher training, pupil-teacher ratio, content and duration of the daily schedule, sanitary and hygenic conditions in the building, etc. In 1971 the average number of pupils in each class was 30. Generally the kindergartens follow loosely structured programmes which exhibit the influence of Froebel, Montessori and Dutch educationalists.
On a smaller scale experiments with compensatory programmes for lower-class children have been conducted.

1.4 History of Day Care

At the beginning of this century there were various day-care centers in the larger cities, attended, in particular, by children from lower-class families. Until the sixties, it was generally thought that a child should stay at home with his mother until the age of 4 and, consequently, the number of day-care centers remained limited. Moreover, there were less working mothers in the Netherlands than in other West European countries. It is estimated that no more than 20% of the mothers with a child or children under five have a paid job outside the home. However, during the last few years there has been a marked increase in the number of morning day-care centers for 2 - 4 year olds, in which the mothers take turns in assisting the child-care worker. Also, the traditional day-care centers are now being attended increasingly by children from middle-class and upper-class families.

Most morning day-care centers and regular day-care centers (about 2000 facilities) have united in a co-ordinating organization, called: Werkgemeenschap Kindercentra Nederland - W.K.N. The Government is drafting a set of legal requirements for day-care of children up to 4 years old; at present, each municipality has its own policy, regulations and subsidies. Day-care workers do not yet require a specific training in the Netherlands. There are approximately 10 different types of secondary education which have some relation to training on child-care.

The salaries and status of child-care workers are low as compared with those of kindergarten teachers.

At present, various factors are subject to discussion, such as the desirability of day-care centers, the possibility of making this type of "education" free of charge, the standards that should apply to day-care in general, the introduction of special day-care for special children, etc.

2. OBJECTIVES, ORGANIZATION AND EVALUATION OF THE PROJECT

2.1 Inception and Objectives

The project Proefkreche'70 was started in 1969 at the request of the Dutch Ministry of Cultural and Social Work to investigate how a day-care center could contribute towards the favorable development of children under 4 from unskilled or semi-skilled families.

Although the majority of the children in the project were to come from this background, it was considered desirable to include a smaller group of children whose parents had at least 12 years of schooling, in order to compare the development of both groups.

The project also aims to design, evaluate and propagate programmes and activities suitable for children of this age group. Besides this, it aims to contribute towards the improvement of the quality of Dutch day-care in general.

2.2 Accomodation, Location, Children and Staff

2.2.1 Accomodation, Location

The day-care center is established in a renovated office building on one of the main roads in Amsterdam. It is situated near one of the working-class quarters of the city and it takes about 10 minutes for the parents to bring their children to the center.
Two floors are available for the children, each devided into two rooms separated by a door. The first floor is about 30 square metres and the second about 40 square metres. The adjoining observation rooms are equipped with one-way screens and headphones which can be used for listening in to the children. The children can also play in the corridors and in the garden behind the building. The building contains a reception room for the administration, a testing room, a room for the research staff, a kitchen and a room for the children's parents, which also holds a "toy-library".

2.2.2 Children

The maximum capacity of the center is 40 children, half of whom attend whole days and half only during the morning. Most children are brought between 8.00 and 9.00 hours. Morning-children are collected between 12.00 and 13.00 hours; day-children between 16.00 and 17.30 hours. About 75% of the children between 16.00 and 17.30 hours. About 75% of the children are of unskilled parents. Although a child may enter the project after his first birthday, most children start attending when they are two years old. The minimum length of participation in the project is 9 months; the maximum is 3 years. All the children leave the project when they are four years old, to attend one of the kindergartens in Amsterdam.
The children are grouped according to age: there are two groups of children from about 1.0 to about 2.6 years and four groups of older children. The former groups "juniors" each consist of 4 (maximum 5) children and the latter groups "seniors" each consists of 7 children. Groups intermingle quite often during the day. Every group has its own child-care worker.

2.2.3 Staff

The people on charge of the groups are called "kinderverzorgsters' for which "child-care workers" is the best translation. Neither "nurse" nor "teacher" would be an adequate term, since the job entails more teaching than that of a nurse and more nursing than that of a teacher. There is a total of 8 child-care workers. Their schooling varies from 9 to 10 years. Ages range from 22 to 30 years. The day-care center is headed by Truus van der Lem, a psychologist. Two other half-time psychologists work on the project, who with 4 part-time research assistants are responsible for the collection of research data. The research assistants are students of the Psychology Faculty at the two Universities of Amsterdam.

Another part-time co-worker (who is a Pedagogy-student) provides play therapy with problem children (see section 4.2). There are two part-time social workers, one of whom makes the first contacts with the parents and, after the child's admission, provides individual help in the problems the parents may have concerning their child. The other part-time social worker is working with the parents in group activities (see section 5). Also working at the project are two part-time secretaries, a kitchen supervisor and various trainees.
The project was initiated by Dolf Kohnstamm.

2.3 Evaluation

2.3.1 Instruments

The following tests are used for measuring general and cognitive development: the Bayley developmental scale, the Stutsman Merrill-Palmer scale, the Stanford-Binet intelligence scale and the AKIT for ages 4 - 6 years.
Only the AKIT has standardized norms for Dutch children.
Two Dutch tests are used to measure the children's vocabulary, one of which has been standardized on a large sample of the population of Utrecht. All tests are administered under standardized conditions in the presence of the child's mother or father. Standardized interviews are held with the parents (every 6 months) and with the kindergarten teachers of the schools attended by the children after they have left the project. Finally, standard progress reports are gathered from regular meetings at which individual children are discussed.

2.3.2 Testing Scheme

Children may join the project at different ages. Those joining ages between 1.0 (one year) and 1.6 (one year six months) are tested for the first time with the Bayley scale. However, the majority begin with the Stutsman, as most children join the project at an age too high for the Bayley.

The testing scheme for a child joining at 1.0 is as dollows:

approximate age	instrument
1.2	Bayley
2.2	Stutsman
2.3	Vocabulary test (PKW)
3.0	Stutsman
3.1	Vocabulary test (PKW)
3.10	Stanford Binet
3.11	Vocabulary test (UTANT)
4.11	Intelligence scale (AKIT)
4.11	Vocabulary test (UTANT)
5.11	Intelligence scale (AKIT)
	Stanford Binet
	Vocabulary test (UTANT)

Tests below the dotted line are administered when the children are in kindergarten

2.3.3 Group of Children for Comparison

Since children could not be assigned to experimental and control groups in a random manner, the research design is not a true experimental one. However, a comparison group was formed, consisting of children not attending any kind of day care center but raised exclusively at home. The comparison group was chosen from about 400 families, obtained mostly via municipal medical services for babies and infants.

By comparing these children with the project group for a number of factors (parent's education and occupation, sex, age, and order of birth) the comparison group was selected consisting of children similar to those of the project group.

All comparison children are tested on the same basis, at about the same ages, in the presence of the mother or father.

When the project children enter kindergarten (i.e. leave the day-care center), two new comparison children are selected from the class the child joins. The children in kindergarten (both ex-project-children and the comparison children) are tested in school.

3. THE CHILD-CARE WORKERS

3.1 Education and background

As described in section 2.2.2 there are day-children and morning-children. For the day-children there are 5 child-care workers: one attends a full week of 40 hours, two attend 30 hours a week and two attend 20 hours a week. For the morning-children there are three part-time child-care workers, attending 30 hours a week.

All of our child-care workers have had a training directed at care of children in institutions. The number of years of experience in this particular kind of day-care work varies from 0 to 14 years.

3.2 Personal and vocational development in the project

Working with children in our center implies that one must have the intention and the capacity:

- to develop a warm and affectionate relationship with children
- to recognize different needs and feelings of the children and react adequately to these needs and feelings
- to present educational materials and activities in a basically relaxed and versatile manner
- to respect the individuality of each child
- to stimulate all children in their development
- to work actively at a good co-operation with parents and with the other workers
- to co-operate in a team with representants of different disciplines in order to diagnose, draw up a plan and a strategy for a child and evaluate it all.

The prior training and experience of the workers has not prepared them for this complex task. The greatest difference seems to be that in their previous experience there was no demand to consider explicitly what one was doing and why.

During prior training, theory and practice were experienced as two completely different things, with practically no relationship between them. In The Netherlands, as in most other countries, the main accent in child-care work until recently was on cleaning (rooms, clothes, noses, etc.) and on feeding, whereas stimulation of development was hardly considered at all. This might have arisen from the fact that neither the workers themselves, nor the society at large believed child-care work to be really important. The sudden increase in play-groups and other centers for children under 4, and the changing attitudes of parents regarding these centers, have shifted the emphasis more to pedagogy. This in turn lead to re-consideration of the goals for preschool education. People in general became convinced of the necessity to approach the work more knowledgeably.

From this summing up of the new and rather complex situation it appears that special training of the workers in a day-care center is very desirable. Below we will attempt to give a brief outline of the training given in Proefkreche'70.

In selecting the child-care workers we pay more and more attention to aspects of personality and character and less and less to schooling and practice. Nevertheless we have learned that some knowledge of how elaborately children of this age can play, seems to be indispensable for a good start. It should be understood that the different child-care workers in our project also have had different working and personal experiences. Our coaching aims at a constant exchange of these different experiences. This is done because we hope that it will teach the workers to meet problems from different angles, which might also create a more flexible attitude towards new situations and new happenings. We try to reach this goal by the following means:

- by talking about what impression our "doing and sayings" make on each other, whereby we try to tolerate and respect different opinions, attitudes and values as far as is possible

- by meetings at which one of the child-care workers discusses "her children" with a team consisting of one of the research-assistants, the social worker and the director. These talks last about 3½ hours, in which the individual development of each child in the group is discussed, together with the attitude of the worker regarding the child, and the reactions of each child to her. Eventually a plan and a strategy for working with individual children is developed for the next period. In these discussions the notes of the child-care worker play an important role. Each worker has such a meeting every six weeks
- by weekly meetings between each child-care worker and the director in which more urgent or personal problems are discussed
- by a monthly meeting between all child-care workers, the two social workers and the director, during which the contacts between the workers and the parents are discussed
- by evening-meetings, during which the programme of activities is discussed, aimed at fostering emotional, social, language, cognitive and motor development. As far as possible new activities are developed and tried out together. Also purchase decisions on new play- and developmental materials are made in these group discussions
- by each child-care worker sharing responsibility for "hiring and firing" other child-care workers, with whom they have to work closely. This also applies to the acceptance or rejection of temporary trainees who are working under the daily guidance of the child-care workers
- by child-care workers maintaining contacts with other people or institutions outside the center and appearing as representatives of the center, e.g. at training courses.

As well as co-operation between child-care workers, co-operation with the other workers in the project is important. Below we give some examples of difficulties that have been encountered.

In the early period of the project the child-care workers had high expectations of the team-members with an academic background. Concrete and direct answers in practical matters were expected as well as definite ideas on goals and means of the working with the children and parents.

Evidently the academicians were unable to meet these expectations and the child-care workers gradually had to change their view on what could reasonably be expected.
On the other hand advice and suggestions regarding prac ical matters given bij the academic workers, were sometimes cooly received. Hence, mutual aggresiveness and distrust occasionally arose. This was also aggravated by the fact that only the child-care workers were permanently in the position of being exposed to observation via one-way screens. This led to feelings of stress and insecurity which were insufficiently recognized by the other (observing) members of the team.
Since most personal contacts between parents and center are maintained by the social worker, there is a constant overlap between the many contacts the child-care workers have with the parents, and those of the social worker. Both parties had to learn to reach concordant attitudes regarding the way specific problems in the contacts with specific parents had to be handled. A constant and continuous communication appears necessary between the center and parents.
The fact that in our center the director is also responsible for the coaching of the child-care workers has initially caused other difficulties with the child-care workers; feelings of reserve and even mistrust have arisen. On the side of the director there were initial difficulties in combining the coaching role with the requirement of guidance and leadership.

Although we now appear to have successfully integrated all these different roles and relationships, we are still careful never to neglect the factors which might cause tensions, annoyances and insecurities.

4. THE CHILDREN

4.1 Daily activities

The top priority for the project must be to ensure that the center always is a place where the children are happy and where they are eager to attend. As with the comments made in section 3, this may appear self evident but certainly the realization of such a goal, for an institution this young, is not easy. Nevertheless the workers and the parents have the impression that this goal is reached most of the days with the vast majority of the children.

Although there is no rigid plan for the day which must be followed, there are some anchor points which structure it. After arrival the children play freely until 9.45 or 10.00 hours. Up to this time they can do what they like (climbing, riding in cars, building, playing with dolls, puzzels, water etc.). The child-care worker just watches, or helps if necessary, and gives some extra attention to any child that needs it.

The rooms are then cleaned up a bit and preparations are made for "juice-time". Juice-time in our center has evolved into a rather elaborate ceremony during which songs are sung and rhymes, riddels and stories are told. The juice and biscuits are on the table, the group sits around the table, and sometimes it may be 20 minutes before drinking and eating starts.

After juice-time, directed group activities are available such as games for motor, musical, conceptual and perceptual development and other creative activities are organized such as clay work, painting, cutting and pasting. In our center we have developed non-structured programmes for all of these activities, some of which are based on several external sources. There is no explicit philosophy behind these activities. The main criterion for keeping an activity in the "repertoire" is the pleasure arising for the children and the child-care workers.

Typical of our approach is the fact that these activities are carried out in small groups; that we have also developed a repertoire for children aged 2 years;

that an equilibrium has been developed between systematically following a structured plan, while at the same time allowing for totally new inventions which may come up spontaneously every day. After these activities, which may last from 15 to 30 minutes, children are again free to play with anything they want to for about half an hour. This may be inside or outside, depending on the weather. Lunch is served at about noon, after which the morning-children leave the center. Of the day-children most go to bed until 14.30. The others play inside or outside or go for a walk. After the childrens' rest it is juice-time again, after which there is another period of structured activities, lasting about 30 minutes. Then a period of free play begins until the children are called for by their parents. Sometimes the children go to the zoo, a museum or a park, but there is no day which lacks alternation between structured and unstructured activities. We are engaged in describing the repertoire completely, in written text and on 16 mm. color film.

4.2 Special Attention to Individual Children

Although the child-care workers in our center work with small groups and although they always encourage individual participation, we have found that some children (about 15% of our population) do not seem to profit from this enough for their emotional development. So we have selected them for special attention in individual sessions, held by a student of pedagogy. These sessions, which last about 20 minutes, are held in a separate room which has a large dolls' house in it. The form of interaction can be compared with play therapy on a nondirective (Rogerian) base. Since we do not want to use the overloaded word "therapy" we talk about "individual attention". During this "individual attention" we strive towards frequent contacts with the parents of these children. In these talks we try to form a common viewpoint on the problem behavior of the child and to agree on a co-ordinated strategy for dealing with this problem, both in the center and at home.

5. THE PARENTS

We aim to make the center a place where the parents feel welcome. We believe that the center contributes to the favorable development of the children both at the center and in their homes. Similarly there is considerable benefit to both center and parents in a free exchange of views concerning the children. We try to develop a situation where the parents themselves help each other by discussing various matters of common interest. This in turn ensures further benefit for the child through, say a more relaxed homelife atmosphere.

At first we tried to create this situation by the traditional means of evening meetings for parents and workers, as is normal in the Dutch educational system. In fact, we have had many successful evenings but also there have been unsuccessful ones (low attendance rate, cool atmosphere, too little participation, dominating workers, dominating parents, etc.). We have more recently developed new forms of meetings which seem to be far more effective in helping to establish a good contact between parents and center, and between parents and parents.

After bringing their children to the center many parents remain for some time in the rooms and talk with each other and the child-care worker. Very often they help their child to start with some game or activity. Mostly after some 10 minutes when the child is concentrating on its play, the parent leaves or starts talking with another parent or the worker.

Fairly early in the development of our day care center doubts arose about the usefulness of this general situation of playing children, talking parents and very busy child-care workers, who had to divide their attention between both the children and the parents.

However, since many of the parents (mostly mothers) seemed really to appreciate the possibility of talking with each other, and since we wanted to stimulate this possibility, but did not want to lay an extra burden on the child-care workers, we took the only spare room for extra activities we had and reshaped it into a comfortable meeting-place for parents.

At the same time the room was given an official function as toy-library where toys are displayed and can be borrowed. Also books and journals, occasionally on pedagogic subjects can be borrowed. The "library" started in january 1975 and has been very successful. Its success may have been due to the fact that first, one of our social workers is always present and acts as a hostess, as a source of information, as a conflict-regulator, etc. and that second there is a permanent supply of coffee.
So now, many of the mothers, after having brought their children to the play-rooms and having stayed there for verying times, come down to the "library" (we use the less formal work "uitlenerij", which perhaps can be best translated as "lending-place") and participate in the group discussions for one or more mornings in the week. The social worker keeps a diary of these mornings, so we know how many parents came on how many days, and we also have a list of subjects discussed in the group. The extent to which mothers and fathers participate ranges from once a month up to 4 times a week. Probably the success of our "uitlenerij" is helped a great deal by the fact that most of our mothers, as is typical for the Dutch society, do not work or only have a part-time occupation.

Apart from the social worker for group activities, the center has one part-time social worker for individual contacts with the parents. She also carries out regular parent interviews to discuss the development of the children with the parents etc.
More recently we extended this last aspect.
Once a year the concerning child-care worker, together with one of the social workers or the director, has a meeting with both parents in which they discuss, as extensive as possible, the development of the child in the last period. We find that this is a very effective way to establish a good mutual relation which is to the advantage of all people involved and in particular the child.

The social workers co-operate with the parents in:

- selecting an appropriate kindergarten for the children when they have passed their fourth birthday
- editing and producing the center-bulletin
- suggesting joint external activities for the parents with their children
- providing information on where to buy good and cheap clothes etc.

They also initiate other actions for the benefit of the parents, for example:

- ensuring that parents are well informed on the aims and methods of the work in the center, and on changes in staff
- helping parents to find information on matters of general interest, such as possibilities for further education, goals of certain action groups, political issues etc.

6. PROJECT LIMITATIONS

Due to experimental losses and various other factors we now expect to end the project with about 48 children from lower socio-economic classes, who have participated in the project for 1 to 3 years.
The number of children whose parents had at least 12 years of formal schooling (college level) is expected to be 18.
The comparison group for the lower class children will be about twice as large, namely 80 to 90 children.
Apart from the relatively small number of children participating in the project, there are six further major limitations to the possibility of confidently assessing the influence of our day care center on the children:

I. Children could not be assigned to experimental and control conditions in a random manner

This is characteristic of the vast majority of studies in the same field. Although we have tried to form a "control group" of similar age and background, the fact that this group consists of children whose parents do not ask for a place in a day care center, also implies that the two groups of parents differ in many other aspects, some of which are unknown.
Furthermore, we had no "pool" from which to select project children, since few parents from lower socio-economic classes in The Netherlands make use of day care facilites. In fact, given the strict criteria for admission to the project (neither parent more than 7 or 8 years of formal schooling etc.) we had trouble in finding enough children to fill the "experimental" groups.
This means that nearly all the selection is made by the parents themselves, which makes it impossible to generalize about children of parents from lower socio-economic classes in Amsterdam.
This difficulty implies that we shall be limited in interpreting results that indicate differences between groups.
Currently a model for statistical evaluation is being developed including an analysis of co-variance in which the entrance test scores will be used as the co-variables.
All analyses will take place in 1975.

II. Measurement of effects is limited by the instruments and the evaluation budget

In section 2.3 we have summarized the tests used for general and language development. Measurement of possible effects is limited by the sensitivity of these instruments. If our evaluation budget were larger, we could have attempted to develop and apply sophisticated methods for observing social and emotional behavior, for example, in day care center situations. But, since it would take considerable time to develop, test and apply these methods, we have had to abandon this idea. We are experimenting with a collection of statements on the social and emotional aspects of the behavior of the children (to be divided into Q-sorts by parents and some members of the staff) to obtain a measurement of opinions on the behavior of the children.
However for various reasons it will be impossible to obtain these opinions about the children from the comparison group. We are interviewing the teachers from the kindergarten classes on the social, emotional and cognitive aspects of the behavior of children from the "experimental" and comparison groups.
However, since the reliability and validity of such methods may be seriously questioned, we shall not place much weight on the outcome of these interviews.

III. Our knowledge about the meaning of the test scores on the tests used is limited

The tests used for children under 5 have not yet been standardized in The Netherlands, which implies that there are no national norms and that the information about the reliability of the instruments is limited to the data collected at our own project.

Of the tests mentioned in section 2.3 only the AKIT general intelligence test has been standardized on a national sample. The reliability and stability of the test is good.

The UTANT test for language development consists of an adaptation of three sub-tests from the ITPA and a vocabulary sub-test derived from Thurstone's PMA 5-7. The test was standardized provisionally on a sample of 800 schoolchildren from Utrecht aged 4 - 7. Reliability and stability of the test are reasonable.

For the Bayley, the Stutsman Merrill-Palmer and the Stanford-Binet, the only references we have are the published data on the North American standardization samples. Considering cross-cultural differences, it is obvious that tests may change considerably when translated and used in other cultures.

Besides it is doubtful whether these tests still meet current psychometric standards. This applies specifically to the Stutsman and the Stanford-Binet. To mention only two of the short-comings, even in the United States no one knows whether 100 is still the mean of the population, while sub-norms for groups with different occupational status are totally unknown.

So we are more or less dependent on the data collected in our own project. For example, we have obtained the following stability-coefficients for the Stutsman-test.

period between the two testings	number of children	co-efficient of correlation
3 - 5 months	11	0.78
6 - 8 months	29	0.76
9 -12 months	29	0.70

The coefficients of correlation mentioned above were based on children with rather a large age range, but a restricted age group, taking the first test between the age of 35 and 40 months. yielded a correlation of about 0.75 both after 3 - 5 months and after 6 - 8 months.

The stability-coefficients obtained seem to indicate that the immediate test/re-test reliability of the Stutsman for Dutch children (according to our translation and our way of testing) will almost certainly be over 0.80, which seems acceptable for such an early and unstable age.
From the data collected in our project we hope to derive valid developmental regression-coefficients, means and standard deviations for the kind of Dutch children studied in our project.

IV. Different tests were used for different age groups

Since any test we chose can only be used for children from a limited age group, we had to shift to different instruments in order to cover the whole age range from 1 - 6 years. Obviously, this is an enormous set-back for the interpretation of the scores obtained. Although little is known about the tests themselves even less is known about the relationship between the tests. Therefore, we are considering comparing the scores on one test with the scores on the next in ordinal scale values only.

V. There is no possibility for a random assignment of children or child-care workers to different conditions of treatment within the project

One of the consequences of a project such as ours, in which the people responsible for the daily care of the children make up a cohesive team, is that the researcher loses his superior and detached position as an organizer of situations in which the practical worker is more or less forced to operate. Another consequence is that experimental changes in treatment or environment can only be made with the whole-hearted consent of the practical workers.
From the pedagogical and emotional viewpoint of the child-care workers a random assignment for treatment of a child that has participated in the center is not feasible.

VI. <u>There is no possibility of comparing our data with those from similar projects in The Netherlands or in Europe</u>

Since we know of no other projects in The Netherlands, or even in Europe, with the same goals, the same kind of children and the same kind of instruments for evaluation purposes, we cannot compare our data with those of other projects.
A comparison with data obtained in North American projects will always be doubtful because of the differences between the children and their home surroundings as well as general cultural differences. However, this does not imply that we will not try to compare our data with those from North American projects operating on a similar basis and with similar instruments.

After this discussion on the negative aspects to our research a few positive words seem appropriate.

a. This is the first project in the Nehterlands (and as far as we know for that matter in any other European country) which is collecting so much psychometric data about such young children. The total data will form a foundation for further research.

b. Although we will not be absolutely certain in interpreting the collected scores, it will be possible to say <u>something</u>.
Since we know the pre-test position of the children on two instruments it will be possible to draw conclusions about their post-test positions on other instruments, be it in ordinal terms only.

c. For one of the post-test instruments (AKIT) national norms are available. Norms for a reasonably large comparison group are available for one other (UTANT). In both cases comparisons will make sense, although one has to be aware of the effect of "test-wiseness" of our project-children on the data (see e. below).

d. The Stanford-Binet scores will allow us to make tentative but sensible comparisons with data collected in other, mainly North American pre-school evaluation projects.

e. Given the difficult circumstances, the energy spent in conducting our research as scientifically as possible compares favorably with the nonchalence observed in some other projects. One example is the special effort we have made to give all the children from the comparison group the same testing experience as our day care-children. Thus, both sets of scores should be equally inflated as to test-wiseness.

7. PARTICIPATION IN ADVISORY WORK CONCERNING THE DEVELOPMENT OF THE DUTCH SYSTEM FOR PRESCHOOL PROVISIONS

The staff of the experimental day care center has played an important role in several committees set up to report on different aspects of Dutch preschool provisions.
Below we mention the two most important ones:

1. On the request of the Secretary of State for Education a committee was formed to advise on the desirability to lower the kindergarten entrance-age in Holland. As we have mentioned above nearly all Dutch children go to kindergarten from their fourth birthday on and the question is now if younger children also should be allowed to go to these kindergartens.
   The advisory group came to the conclusion that this would not be a very sensible thing to do. Rather, the group would like to see an extension of the playgroup and day care provisions for children below four, and an amelioration of the quality of these provisions. The classes of the existing kindergartens were considered too large for 3 year old children and the teachers were considered inadequately trained for this particular age-group. Rather than let the 3-year olds try to adapt to the provisions set up for 4- and 5-year old children, the group advised to put more money in a system specifically meant for children of 2 and 3.

   The arguments partly are the same as those used in Great Britain in the controversy between the playgroup movement and the regular infant schoolsystem. These arguments also involve the question which system is better for promoting strong relations with the parents of the children.
   In Holland as well as in Great Britain the chances for parent participation were thought to be better in the playgroup and day care area than in the kindergarten or infant-school system.
   As yet (Juni 1974) it is uncertain whether the Dutch government will take any action in accordance with or contrary to the advice given in this report.

2. On the request of a body co-ordinating the efforts to develop a better system for training those who are working in or who want to work in poaygroups and day care centers, an advisory committee was formed which brought out a report in May 1974. The staff of our day care center was deeply involved in formulating the goals for such a new form of teacher-training, both on a general level and in the behavioral details.
The report deals with all the aspects of the work in playgroups and day care centers and puts emphasis on the role the day care worker plays in the educational system at large.
In the report the intricate social and emotional complexities of the job, in dealing with children, parents and co-workers, are illustrated with examples from daily practice.
Also an extensive but not unrealistic list of behaviors is given which are thought to be instrumental for fostering development in the children being cared for. It is hoped that this report will be followed by action to create a system for training the day-care and playgroup workers of the future.
It is also hoped that this report will be translated into other languages.

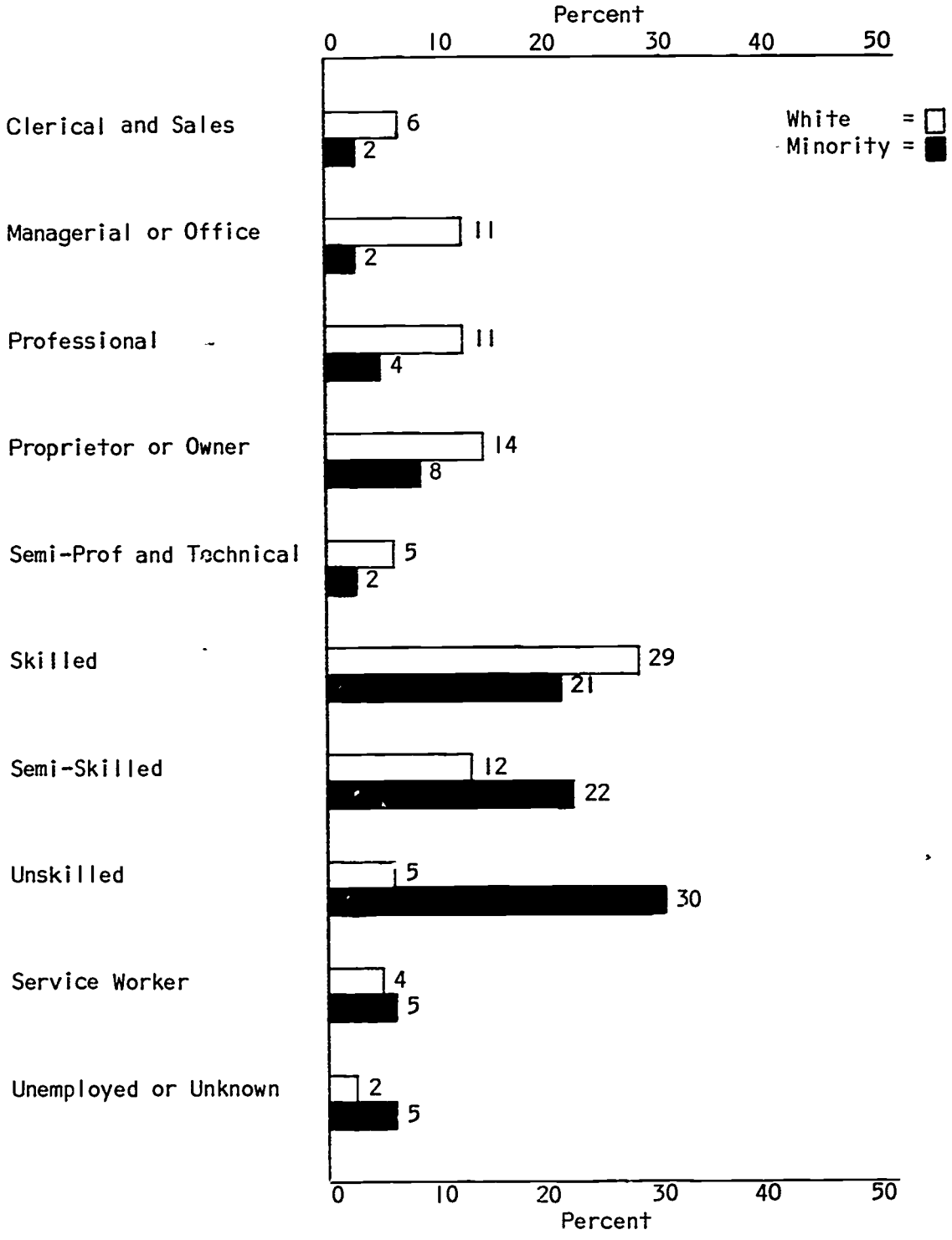

Figure 5. Father's Occupation of All Respondents By Race

semi-skilled and skilled occupations (Table 32). These results are not surprising since fathers of the minority group were shown to have less education than fathers of the majority group.

The fathers of graduates tended slightly more toward managerial/office and professional occupations; fathers of nongraduates tended slightly more towards proprietorship/owner, semi-skilled and unskilled occupations. Overall, however, little difference between the occupations of fathers of graduates and nongraduates was found (Table 33).

Fathers of AAS graduates were engaged proportionally more in managerial and professional roles than fathers of diploma and certificate graduates. Fathers of diploma graduates were engaged proportionally more in proprietorship, skilled and semi-skilled jobs, while fathers of certificate graduates were engaged proportionally more in unskilled occupations (Table 34). Figure 6 illustrates the distribution of father's occupations of graduates by type of award.

The following tabulation compares the percentages of graduates' fathers engaged in blue-collar and white-collar occupations by curricular area.

Father's Occupation of Graduates by Curricular Area

	Blue-Collar		White-Collar	
	N	%	N	%
Business	641	65	347	35
Communications	21	66	11	34
Engineering	540	69	240	31
Health	113	59	78	41
Public Service	34	47	38	53
Other	76	55	62	45

The majority of fathers of graduates in all curricular areas except public service were engaged in blue-collar occupations (Table 35). Fathers of engineering graduates were most likely to be in blue-collar jobs, and the fathers of public service graduates were most likely to be in white-collar jobs.

Academic Achievement

The academic performance of former occupational-technical students was investigated in terms of cumulative grade point average (GPA), total credit hours earned, and number of quarters enrolled at the community college.

Cumulative Grade Point Average

Graduates had a higher grade point average (GPA) than nongraduates (2.76 and 2.21 on a 4.00 grading scale) (Table 36).

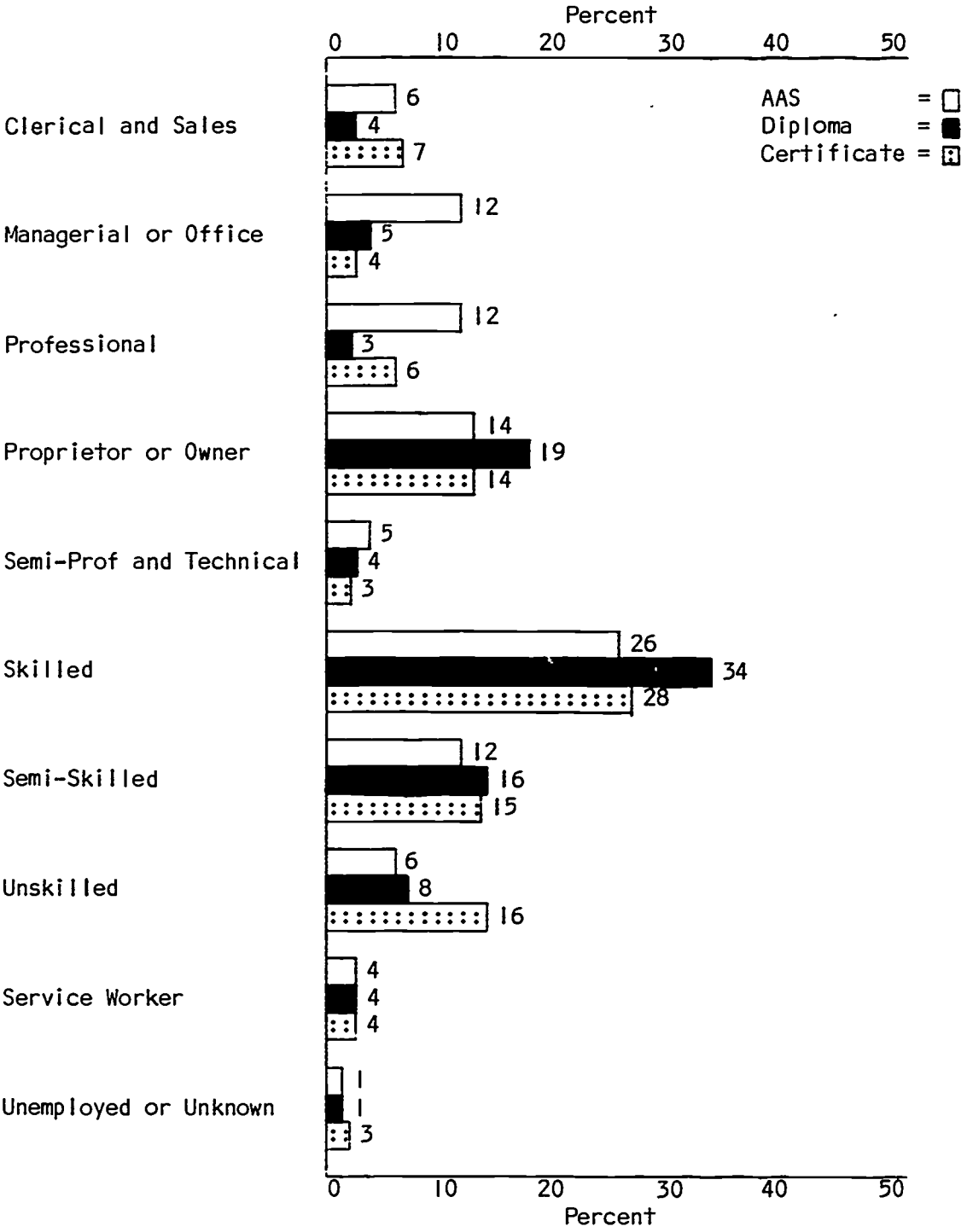

Figure 6. Father's Occupation of Graduate Respondents By Types of Awards

Women, both graduates and nongraduates, achieved a higher GPA than men by 0.12 and 0.24 grade points, respectively. White graduates achieved a 0.16 higher GPA than minority graduates.

Among types of graduates, diploma students achieved the highest GPA (2.86), followed by AAS students (2.75) and then certificate students (2.72).

Among curricular areas, students in health services achieved the highest GPA (2.91) and students in the business area, the lowest (2.69) (Table 37).

Number of Quarters in Residence

Minimum credit hours required for an associate degree vary from program to program and curriculum to curriculum. Certificate programs can normally be completed within a year or less. Diploma programs generally require six or seven quarters, or approximately two years excluding summers. AAS programs can be completed in two years on a full-time basis, excluding summer sessions. Findings indicate that students generally do not complete their programs within the specified time periods (Table 38). The majority of certificate graduates from 1966-67 to 1970-71 took from four to nine quarters, with great variation from year to year. The majority of diploma graduates finished their degrees in seven to twelve quarters. Between 1966-67 and 1968-69, about 80 percent of the AAS graduates took from seven to nine quarters to complete the degree, but from 1969-1970 to 1970-71, only about 60 percent completed the degree in seven to nine quarters (more than two to three years). During the latter two years, 30 percent required more than three years to complefe the degree. It is not known whether the extended completion periods are due more to part-time status of students or to a pattern of dropping out and then returning to the community college.

Credit Hours Earned

The minimum number of credit hours required for certificates and diplomas varies. AAS degrees require students to complete a minimum of 97 hours. The number of credit hours earned by the AAS graduates from 1966-67 through 1970-71 averaged from 97 to 102, figures which correspond closely to the minimal requirement for the degree (Table 39). Diploma graduates earned slightly more credit hours than AAS graduates, ranging from 101-106. Certificate graduates earned an average of from 50 to 58 credit hours.

SUMMARY AND CONCLUSIONS

This section contains a summary of the study, including the procedures and results. In addition, several implications of this research are presented, followed by recommendations for further research.

A Summary of Procedures

Two instruments were designed to gather data on former occupational-technical students at 13 Virginia community colleges. A college data form was used to collect information on students from college files. The second instrument was a questionnaire completed by the former students giving information on postcollege activities, current employment and evaluation of college experiences.

Students enrolled in occupational-technical curricula from fall 1966 through fall 1969 were contacted by mail. Both graduates and nongraduates were asked to participate. Four contacts were made to increase the return rate. In all, 61 percent of the former students returned usable questionnaires. Nonresponse bias was investigated and several areas of significant difference between nonrespondents and respondents were found.

A Summary of Results

This report described former occupational-technical students in terms of their curricula, demographic characteristics, socioeconomic backgrounds, and past academic achievements.

Curricula of Former Occupational-Technical Students

Former students were enrolled in 99 different occupational-technical curricula. Approximately half of the 6,387 respondents were in business related programs. Nearly one-third were in engineering. The remaining 12 percent were in public service, health services, communications and media, and other curricula.

One-third of the respondents were graduates: of these, 63 percent had earned the AAS degree; 17 percent, the diploma; and 20 percent, the certificate. Two-thirds of the respondents were nongraduates. Public service had the highest percentage of nongraduates (81%) and health services, the lowest (42%) (Table 5).

Demographic Characteristics

Men comprised 69 percent of the respondents in general (Table 6), but minority representation involved nearly equal numbers of men and women.

Although men comprised 64 percent of the total graduate group, women on a proportional basis were more likely to graduate.

Men and women showed distinct curricular preferences. Of the total former student group, men predominated in all curricula except health services (Table II). More men were in engineering than in any other curricula. Business was chosen next most frequently. Health services was chosen least frequently by the men. On the other hand, women overwhelmingly selected business curricula or health services. Women chose public service the least.

Male graduates were more likely to choose engineering than nongraduate males, who selected business most often. Graduate and nongraduate women selected business most frequently (Tables 10 and 11).

Nearly equal percentages of men and women on a proportional basis chose the AAS degree. However, other degree choices varied greatly by sex. Whereas only one percent of the graduate women selected the diploma, 26 percent of the men did. Only ten percent of the men were granted certificates compared to 39 percent of the women.

Whites comprised 88 percent of the former students. Minority women were represented twice as much as minority men. Although whites predominated in all curricula areas, minorities were represented more heavily in communications and media (23%) and health services (22%).

When one examines curricular choices within each racial group, differences become narrower. Fifty percent of whites chose business, and 56 percent of the minorities chose business. The largest difference was in engineering where there was 10 percent more whites than minorities.

Of the total graduate group, 90 percent were white and 10 percent were minorities. Of the nongraduates, 14 percent were minorities. It appears that minorities may be less persistent in completing their programs. White women were the most likely to graduate; minority men were the least likely. Whites chose the AAS degree and the diploma more frequently than did minority group members. The certificate was chosen by minorities twice as much as by whites. Proportionally, more whites graduated than minorities. The highest percentage of minority graduates chose the certificate award.

The median age of former students was 22.8 years. Graduates were slightly older than nongraduates. Certificate holders were the youngest group. Men were one year older than women. No age difference between white and minority students was found. Health services graduates were the oldest, but only slight age differences were noted among students in other curricula.

A majority of respondents were married (57%). Proportionally more men, more graduates, and more whites were married. Over 98 percent of the former students were Virginia residents at the time of their enrollment. Nearly all of these remained in Virginia.

Socioeconomic Background

Nearly 50 percent of former students' parents had not completed high school. Almost 30 percent had no formal education above the eighth grade. Fathers generally were less well educated than mothers, although more fathers had attained four year college degrees or higher. AAS graduates' fathers were better educated than the fathers of diploma or certificate holders. Parents of graduates and nongraduates showed few differences in educational attainment. Minority students' parents, however, were considerably less well educated than the parents of majority students.

The largest proportion of respondents' fathers were in blue-collar occupations (55%). Minority fathers were more often in blue-collar occupations than were majority fathers. Fathers of AAS graduates were more likely to be in white-collar jobs than were fathers of diploma and certificate graduates.

Academic Achievement

Graduates had a higher cumulative GPA than nongraduates. Women achieved higher averages than men. White graduates had slightly higher GPAs than minority graduates. Minority men graduates achieved a higher GPA than minority women graduates; white graduate women achieved a higher GPA than white graduate men. Ranges of GPAs among types of graduates were narrow with diploma graduates achieving the highest and certificate graduates, the lowest. Health services graduates had the highest GPA; business graduates, the lowest.

Former students gererally took more time to complete their degrees than the minimum number of quarters required. The majority of certificate graduates took from four to nine quarters; diploma graduates, seven to twelve quarters; and AAS graduates, from seven to nine quarters. It was found that students generally graduate with approximately the minimal number of credit hours needed for the degree or award.

Discussion

This report has presented a profile of former occupational-technical students at Virginia's community colleges. It has particular value as baseline information for future research and for understanding and interpreting the two companion reports on this project (Eyler et al., 1974; Trufant et al., 1974).

Although there are multiple research topics suggested in the narrative of the report, several seem especially worth noting here:

- The question of the relationship between level of graduation award and family socioeconomic status should be investigated in order to measure what impact the community college has on income, education, occupation, and other characteristics which measure social mobility. There are indications in the findings of this report that patterns of graduation awards are related to socioeconomic status. Additional study should extend beyond these findings and should be related to the role of the community college.

- Are there common characteristics among nongraduates which help to explain why students choose not to complete their programs or stop short of achieving their enrollment goals? Further investigation should include personal and occupational effects of their decisions not to graduate or complete their goals.

- How are student attrition and retention related to characteristics of curricular areas? For example, what factors, such as degree of academic difficulty, amount of required general education, salable skill development, or career potential in each curricular area are related to student persistence?

- How do the characteristics of occupational-technical students compare with those of the population in the community college regions from which they come? What can the community college do to increase attendance among groups which are underrepresented?

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Trufant, J. E., Kelly, S. J., & Pullen, P. A. Perceptions of Former Occupational-Technical Students Toward Community College Experience and Postcollege Activities. Research Report #4. Richmond, Virginia: Virginia Department of Community Colleges, 1974.

APPENDICES

APPENDIX A

TABLES

TABLE I

DISTRIBUTION OF GRADUATE AND NONGRADUATE RESPONDENTS BY COLLEGE

Community College	OVERALL			GRADUATES			NONGRADUATES		
	Initial	Usable		Initial	Usable		Initial	Usable	
	N	N	%[a]	N	N	%[a]	N	N	%[a]
Blue Ridge	985	556	63	294	221	79	691	335	55
Central Virginia	476	294	67	177	132	78	299	162	60
Dabney S. Lancaster	270	174	66	123	93	77	147	81	56
Danville	989	601	65	533	378	76	456	223	53
John Tyler	1,338	655	56	301	204	74	1,037	451	50
New River	318	208	69	267	178	69	51	30	65
Northern Virginia	2,568	1,307	60	827	490	69	1,741	817	56
Southwest Virginia	442	236	55	150	94	64	292	142	51
Thomas Nelson	1,319	811	65	92	68	80	1,227	743	64
Tidewater	1,011	486	55	52	31	70	959	455	54
Virginia Highland	198	131	68	100	72	73	98	59	63
Virginia Western	1,203	579	55	297	182	68	906	397	50
Wytheville	506	349	71	209	164	80	297	185	64
VCCS TOTAL	11,623	6,387	61	3,422	2,307	73	8,201	4,080	56

[a]Based on deliverable questionnaires

TABLE 2

COMPARISONS OF CHARACTERISTICS BETWEEN MAIL RESPONDENTS AND NONRESPONDENTS (TELEPHONE INTERVIEWEES)

VARIABLES	TELEPHONE		MAIL RESPONDENTS	
	N	%	N	%
Sex				
Male	104		4,438	
Female	35		1,949	
$\chi^2 = 1.59$; $p > .05$				
Age				
Median Age (in years)	22.9		22.8	
Father's Education				
Under 8 Years	29		1,432	
Completed 8th Grade	10		732	
Attended High School	13		1,111	
High School Graduate	45		1,568	
Attended College	17		737	
4-Yr. College Graduate	14		382	
Master's or Higher	2		163	
$\chi^2 = 15.57$; $p < .05$				
Mother's Education				
Under 8 Years	14		793	
Completed 8th Grade	13		536	
Attended High School	15		1,177	
High School Graduate	63		2,490	
Attended College	22		751	
4-Yr. College Graduate	4		261	
Master's or Higher	2		54	
$\chi^2 = 9.36$; $p > .05$				
Present Activity				
Full-Time Employment	99	75	4,438	75
Part-Time Employment	17	13	327	6
College Full-Time	10	8	488	8
Military Service	2	2	330	6
Housewife	3	2	304	5
TOTAL	131	100	5,887	100
Curriculum Congruence With First Job				
Very Much (3)	43		1,399	
Somewhat (2)	22		694	
Very Little (1)	26		1,375	
$t = 1.896$; $p > .05$	Mean	2.19		2.01
Curriculum Congruence With Present Job				
Very Much (3)	36		1,910	
Somewhat (2)	21		943	
Very Little (1)	27		1,121	
$t = .973$; $p > .05$	Mean	2.11		2.20

TABLE 2 (Continued)

VARIABLES	TELEPHONE		MAIL RESPONDENTS	
	N	%	N	%
Initial Salary				
Up to $2,999	3		475	
$3,000 - 3,999	13		494	
$4,000 - 4,999	10		637	
$5,000 - 5,999	9		626	
$6,000 - 6,999	9		525	
$7,000 - 7,999	15		444	
$8,000 - 8,999	12		238	
$9,000 - 9,999	2		111	
$10,000 - 10,999	6		91	
$11,000 and Over	3		96	
$\chi^2 = 28.03$; $p < .05$				
Present Salary				
Up to $2,999	2		70	
$3,000 - 3,999	4		244	
$4,000 - 4,999	8		479	
$5,000 - 5,999	11		553	
$6,000 - 6,999	10		525	
$7,000 - 7,999	9		582	
$8,000 - 8,999	15		535	
$9,000 - 9,999	6		316	
$10,000 - 10,999	7		247	
$11,000 and Over	6		378	
$\chi^2 = 4.15$; $p > .05$				
Ratings of the Quality of College Preparation				
Technical Knowledge				
Superior	20		915	
Good	100		3,667	
Fair/Poor	17		1,387	
$\chi^2 = 9.78$; $p < .05$				
General Education				
Superior	14		692	
Good	96		3,993	
Fair/Poor	18		1,115	
$\chi^2 = 2.54$; $p > .05$				
Opinions About College Experience				
Shop and Laboratory Instruction				
Superior	20		922	
Good	72		3,192	
Fair/Poor	24		1,502	
$\chi^2 = 2.16$; $p > .05$				
Academic Instruction				
Superior	19		812	
Good	104		3,946	
Fair/Poor	14		1,036	
$\chi^2 = 5.34$; $p > .05$				

TABLE 2 (Continued)

VARIABLES	TELEPHONE N	TELEPHONE %	MAIL RESPONDENTS N	MAIL RESPONDENTS %
Counseling				
Superior	28		767	
Good	70		2,287	
Fair/Poor	26		2,542	
$\chi^2 = 30.19$; $p < .05$				
Overall				
Superior	18		467	
Good	111		3,825	
Fair/Poor	7		1,381	
$\chi^2 = 28.41$; $p < .05$				
Job Satisfaction				
Overall				
Superior	27		524	
Good	55		2,490	
Fair/Poor	9		1,180	
$\chi^2 = 31.14$; $p < .05$				

TABLE 3

DISTRIBUTION OF ALL RESPONDENTS BY CURRICULUM OR CURRICULAR GROUP, SEX AND RACE

	All Respondents	SEX				RACE			
		Men		Women		White		Minority	
	N	N	%	N	%	N	%	N	%
Business									
Accounting Tech./Accounting	371	227	61	144	39	329	89	42	11
Data Processing(Prog./Unit Rec.)	660	472	72	188	28	562	85	98	15
DP(Mach. & Comp. Opr./Keypunch)	97	31	32	66	68	47	48	50	52
Business Management	1,104	954	86	150	14	1,020	92	84	8
Hotel, Restaurant & Inst. Mgt.	20	12	60	8	40	17	85	3	15
Merchandising Management	67	48	72	19	28	63	94	4	6
Real Estate Management	2	2	100	-	-	2	100	-	-
Stenography/Clerical Studies	189	4	2	185	98	151	80	38	20
Secretarial Science	705	13	2	692	98	584	83	121	17
Sub-Total	3,215	1,763	55	1,452	45	2,775	86	440	14
Communications/Media									
Commercial Art/Printing	146	89	61	57	39	112	77	34	23
Sub-Total	146	89	61	57	39	112	77	34	23
Engineering									
Architectural Technology	109	107	98	2	2	100	92	9	8
Aeronautical Technology	2	2	100	-	-	2	100	-	-
Automotive Technology	46	46	100	-	-	45	98	1	2
Auto Trades	121	120	99	1	1	107	88	14	12
Chemical Technology	4	3	75	1	25	4	100	-	-
Civil Engineering Technology	67	67	100	-	-	65	97	2	3
Drafting and Des. Technology	380	376	99	4	1	332	87	48	13
Draft Trades (Mech., Arch., Struct.)	198	194	98	4	2	185	93	13	7
Industrial Mgt./Tech.	53	51	96	2	4	49	93	4	7
Electronic Technology	442	430	97	12	3	402	91	40	9
Electronic Trades	217	212	98	5	2	200	92	17	8
Machine Technology/Trades	156	156	100	-	-	139	89	17	11
Marine Technology	18	17	94	1	6	14	78	4	22
Mechanical Engr. Technology	160	158	99	2	1	151	94	9	6
Building Trades (Air Cond., Refr., Masonry, Plbg., Sh. Met., Weldg. Carpentry)	79	79	100	-	-	71	90	8	10
Textile Management	32	30	94	2	6	30	94	2	6
Cosmetology*	25	2	8	23	92	25	100	-	-
Sub-Total	2,109	2,050	97	59	3	1,921	91	188	9
Health Services									
Dental Lab. Technology	22	-	-	22	100	21	96	1	4
Medical Lab. Technology	1	-	-	1	100	1	100	-	-
Medical Records Technology	3	1	33	2	67	3	100	-	-
Mental Health Technology	2	-	-	2	100	2	100	-	-
Mortuary Science	9	8	89	1	11	6	67	3	33
Nursing	245	13	5	232	95	182	74	63	26
Practical Nursing	43	1	2	42	98	37	86	6	14
Radiological Technology	8	2	25	6	75	7	88	1	12
Sub-Total	333	25	8	308	92	259	78	74	22

TABLE 3 (Continued)

	All Respondents	SEX				RACE			
		Men		Women		White		Minority	
	N	N	%	N	%	N	%	N	%
Public Service									
Community & Social Service Tech.	2	-	-	2	100	2	100	-	-
Fire Science	63	63	100	-	-	63	100	-	-
Recreation and Parks Leadership	1	1	100	-	-	1	100	-	-
Police Science	315	301	96	14	4	291	92	24	8
Environmental Technology	13	12	92	1	8	13	100	-	-
Sub-Total	394	377	96	17	4	370	94	24	6
Other									
Agricultural Bus. Technology	46	42	91	4	9	45	98	1	2
Forest Technology	14	14	100	-	-	14	100	-	-
Teacher Aide (Lib./Audio Visual)	25	7	28	18	72	10	40	15	60
Developmental/Unclassified)	105	71	68	34	32	95	90	10	10
Sub-Total	190	134	71	56	29	164	86	26	14
TOTAL	6,387	4,438	69	1,949	31	5,601	88	786	12

*Cosmetology students were inadvertently included in the Engineering curriculum. They are of insufficient numbers to affect the findings in this report.

TABLE 4

THE SEX AND RACIAL DISTRIBUTION
OF GRADUATE RESPONDENTS ACROSS CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	1,036	47	474	46	562	54	909	88	127	12
Communications/Media	34	2	24	71	10	29	25	74	9	26
Engineering	823	37	801	97	22	3	783	95	40	5
Health Services	199	9	11	6	188	94	166	83	33	17
Public Service	74	3	70	95	4	5	72	97	2	3
Other	36	2	25	69	11	31	29	81	7	19
TOTAL	2,202	100	1,405	64	797	36	1,984	90	218	10

TABLE 5

THE SEX AND RACIAL DISTRIBUTION
OF NONGRADUATES ACROSS CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	2,179	53	1,289	59	890	41	1,866	86	313	14
Communications/Media	112	3	65	58	47	42	87	78	25	22
Engineering	1,286	32	1,249	97	37	3	1,138	88	148	12
Health Services	134	3	14	10	120	90	93	69	41	31
Public Service	320	8	307	96	13	4	298	93	22	7
Other	49	1	38	78	11	22	40	82	9	2
TOTAL	4,080	100	2,962	73	1,118	27	3,522	86	558	14

TABLE 6

SEX DISTRIBUTION FOR ALL RESPONDENTS, GRADUATES AND NONGRADUATES BY RACE

	White		Minority		Total	
	N	%	N	%	N	%
ALL RESPONDENTS						
Men	4,036	72	402	51	4,438	69
Women	1,565	28	384	49	1,949	31
TOTAL	5,601	100	786	100	6,387	100
ALL GRADUATES						
Men	1,389	67	87	56	1,476	64
Women	690	33	141	44	831	36
TOTAL	2,079	100	228	100	2,307	100
ALL NONGRADUATES						
Men	2,647	75	315	56	2,962	73
Women	875	25	243	44	1,118	27
TOTAL	3,522	100	558	100	4,080	100

TABLE 7

RACE DISTRIBUTION OF GRADUATES
AND NONGRADUATES BY SEX

	WHITES						MINORITY						Overall Total	
	Men		Women		Total		Men		Women		Total			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Graduates	1,389	34	690	44	2,079	37	87	22	141	37	228	29	2,307	36
Nongraduates	2,647	66	875	56	3,522	63	315	78	243	63	558	71	4,080	64
TOTAL	4,036	100	1,565	100	5,601	100	402	100	384	100	786	100	6,387	100

TABLE 8

SEX DISTRIBUTION FOR ALL RESPONDENTS,
GRADUATES AND NONGRADUATES BY CURRICULAR AREAS

ALL RESPONDENTS

	Total		Business		Communications		Engineering		Health		Public Service		Other	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Men	4,438	69	1,763	55	89	61	2,050	97	25	8	377	96	134	70
Women	1,949	31	1,452	45	57	39	59	3	308	92	17	4	56	30
TOTAL	6,387	100	3,215	100	146	100	2,109	100	333	100	394	100	190	100

ALL GRADUATES

Men	1,476	64	474	46	24	71	801	97	11	6	70	95	96	68
Women	831	36	562	54	10	29	22	3	188	94	4	5	45	32
TOTAL	2,307	100	1,036	100	34	100	823	100	199	100	74	100	141	100

ALL NONGRADUATES

Men	2,962	73	1,289	59	65	58	1,249	97	14	10	307	96	38	78
Women	1,118	27	890	41	47	42	37	3	120	90	13	4	11	22
TOTAL	4,080	100	2,179	100	112	100	1,286	100	134	100	320	100	49	100

TABLE 9

THE SEX AND RACIAL DISTRIBUTION
OF RESPONDENTS BY CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	3,215	51	1,763	40	1,452	74	2,775	49	440	57
Communications/Media	146	2	89	2	57	3	112	2	34	4
Engineering	2,109	33	2,050	46	59	3	1,921	34	188	24
Health Services	333	5	25	1	308	16	259	5	74	9
Public Service	394	6	377	8	17	1	370	7	24	3
Other	190	3	134	3	56	3	164	3	26	3
TOTAL	6,387	100	4,438	100	1,949	100	5,601	100	786	100

TABLE 10

THE SEX AND RACIAL DISTRIBUTION
OF GRADUATE RESPONDENTS BY CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	1,036	47	474	34	562	70	909	47	127	59
Communications/Media	34	2	24	2	10	1	25	1	9	4
Engineering	823	37	801	56	22	3	783	39	40	18
Health Services	199	9	11	1	188	24	166	8	33	15
Public Service	74	3	70	5	4	1	72	4	2	1
Other	36	2	25	2	11	1	29	1	7	3
TOTAL	2,202	100	1,405	100	797	100	1,984	100	218	100

TABLE II

THE SEX AND RACIAL DISTRIBUTION
OF NONGRADUATES BY CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	2,179	53	1,289	45	890	80	1,866	54	313	56
Communications/Media	112	3	65	2	47	4	87	2	25	4
Engineering	1,286	32	1,249	42	37	3	1,138	32	148	27
Health Services	134	3	14	-	120	11	93	3	41	7
Public Service	320	8	307	10	13	1	298	8	22	4
Other	49	1	38	1	11	1	40	1	9	2
TOTAL	4,080	100	2,962	100	1,118	100	3,522	100	558	100

TABLE 12

SEX DISTRIBUTION OF GRADUATE
RESPONDENTS BY TYPES OF AWARDS

	Total		AAS		Diploma		Certificate	
	N	%	N	%	N	%	N	%
Men	1,465	64	939	65	385	98	141	30
Women	830	36	496	35	9	2	325	70
TOTAL	2,295	100	1,435	100	394	100	466	100

TABLE 13

THE SEX AND RACIAL DISTRIBUTION
OF AAS GRADUATES BY CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	771	57	445	50	326	68	706	56	65	59
Communications/Media	18	1	13	1	5	1	15	1	3	3
Engineering	334	24	328	37	6	1	322	26	12	11
Health Services	146	11	10	1	136	29	119	9	27	25
Public Service	72	5	68	8	4	1	70	6	2	2
Other	25	2	25	3	-	-	25	2	-	-
TOTAL	1,366	100	889	100	477	100	1,257	100	109	100

TABLE 14

THE SEX AND RACIAL DISTRIBUTION
OF DIPLOMA GRADUATES BY CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	11	3	7	2	4	45	10	3	1	4
Communications/Media	14	4	11	3	3	33	9	2	5	22
Engineering	359	93	358	95	1	11	342	95	17	74
Health Services	1	-	-	-	1	11	1	-	-	-
TOTAL	385	100	376	100	9	100	362	100	23	100

TABLE 15

THE SEX AND RACIAL DISTRIBUTION
OF CERTIFICATE GRADUATES BY CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	254	57	22	16	232	74	193	52	61	71
Communications/Media	2	-	-	-	2	1	1	-	1	1
Engineering	130	29	115	82	15	5	119	33	11	13
Health Services	52	12	1	1	51	16	46	13	6	7
Public Service	2	-	2	1	-	-	2	1	-	-
Other	11	2	-	-	11	4	4	1	7	8
TOTAL	451	100	140	100	311	100	365	100	86	100

TABLE 16

RACIAL DISTRIBUTION OF GRADUATE AND NONGRADUATE RESPONDENTS BY SEX

	White		Minority		Total	
	N	%	N	%	N	%
ALL RESPONDENTS						
Men	4,036	91	402	9	4,438	100
Women	1,565	80	384	20	1,949	100
TOTAL	5,601	88	786	12	6,387	100
ALL GRADUATES						
Men	1,389	94	87	6	1,476	100
Women	690	83	141	17	831	100
TOTAL	2,079	90	228	10	2,307	100
ALL NONGRADUATES						
Men	2,647	89	315	11	2,962	100
Women	875	78	243	22	1,118	100
TOTAL	3,522	86	558	14	4,080	100

TABLE 17

THE SEX AND RACIAL DISTRIBUTION
OF AAS DEGREE GRADUATES ACROSS CURRICULAR GROUPS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Business	771	57	445	58	326	42	706	92	65	8
Communications/Media	18	1	13	72	5	28	15	83	3	17
Engineering	334	24	328	98	6	2	322	96	12	4
Health Services	146	11	10	7	136	93	119	82	27	18
Public Service	72	5	68	94	4	6	70	97	2	3
Other	25	2	25	100	-	-	25	100	-	-
TOTAL	1,366	100	889	65	477	35	1,257	92	109	8

TABLE 18

THE SEX AND RACIAL DISTRIBUTION
OF DIPLOMA GRADUATES ACROSS CURRICULAR GROUPS

	All Respondents	SEX				RACE			
		Men		Women		White		Minority	
	N	N	%	N	%	N	%	N	%
Business	11	7	64	4	36	10	91	1	9
Communications/Media	14	11	79	3	21	9	63	5	36
Engineering	359	358	99	1	1	342	95	17	5
Health Services	1	-	-	1	100	1	100	-	-
TOTAL	385	376	98	9	2	362	94	23	6

TABLE 19

THE SEX AND RACIAL DISTRIBUTION
OF CERTIFICATE GRADUATES ACROSS CURRICULAR GROUPS

	All Respondents	SEX				RACE			
		Men		Women		White		Minority	
	N	N	%	N	%	N	%	N	%
Business	254	22	9	232	91	193	76	61	24
Communications/Media	2	-	-	2	100	1	50	1	50
Engineering	130	115	88	15	12	119	92	11	8
Health Services	52	1	2	51	98	46	88	6	12
Public Service	2	2	100	-	-	2	100	-	-
Other	11	-	-	11	100	4	36	7	64
TOTAL	451	140	31	311	69	365	81	86	19

TABLE 20

RACIAL DISTRIBUTION FOR ALL RESPONDENTS,
GRADUATES, AND NONGRADUATES BY CURRICULAR AREAS

	Total		Business		Communications		Engineering		Health		Public Service		Other	
ALL RESPONDENTS	N	%	N	%	N	%	N	%	N	%	N	%	N	%
White	5,601	88	2,775	86	112	77	1,921	91	259	78	370	94	164	86
Minority	786	12	440	14	34	23	188	9	74	22	24	6	26	14
TOTAL	6,387	100	3,215	100	146	100	2,109	100	333	100	394	100	190	100
ALL GRADUATES														
White	2,079	90	909	88	25	73	783	95	166	83	72	97	124	88
Minority	228	10	127	12	9	27	40	5	33	17	2	3	17	12
TOTAL	2,307	100	1,036	100	34	100	823	100	199	100	74	100	141	100
ALL NONGRADUATES														
White	3,522	86	1,866	86	87	78	1,138	88	93	69	298	93	40	82
Minority	558	14	313	14	25	22	148	12	41	31	22	7	9	18
TOTAL	4,080	100	2,179	100	112	100	1,286	100	134	100	320	100	49	100

TABLE 21

RACIAL DISTRIBUTION OF GRADUATE RESPONDENTS BY TYPES OF AWARDS

	Total		AAS		Diploma		Certificate	
	N	%	N	%	N	%	N	%
White	2,067	90	1,319	92	371	94	377	81
Minority	228	10	116	8	23	6	89	19
TOTAL	2,295	100	1,435	100	394	100	466	100

TABLE 22

THE SEX AND RACIAL DISTRIBUTION
OF GRADUATES BY TYPES OF AWARDS

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
AAS	1,435	63	939	64	496	60	1,319	64	116	51
Diploma	394	17	385	26	9	1	371	18	23	10
Certificate	466	20	141	10	325	39	377	18	89	39
TOTAL	2,295	100	1,465	100	830	100	2,067	100	228	100

TABLE 23

MEDIAN AGE OF RESPONDENTS BY CATEGORIES AT TIME OF STUDY

CATEGORY	MEDIAN AGE		
	Men	Women	Overall
All Respondents	23.2	22.2	22.8
White	23.1	22.1	22.8
Minority	23.4	22.6	22.8
Nongraduates	23.3	22.2	22.9
Graduates	22.9	22.2	22.6
By Types of Awards (Graduates Only)			
AAS	23.2	22.3	22.9
Diploma	22.4	21.5	22.3
Certificate	22.5	21.8	21.9
By Curricular Areas (Graduates Only)			
Business	-	-	22.4
Communications/Media	-	-	22.3
Engineering	-	-	22.6
Health Services	-	-	25.9
Public Service	-	-	23.2
Other	-	-	23.4
By Year of Graduation (Graduates Only)			
1966-67	-	-	25.5
1967-68	-	-	24.4
1968-69	-	-	23.2
1969-70	-	-	22.7
1970-71	-	-	21.8
1971-72	-	-	21.7

TABLE 24

MARITAL STATUS OF ALL RESPONDENTS BY RACE AND SEX

	Men		Women		Total	
	N	%	N	%	N	%
ALL RESPONDENTS						
Single	1,718	40	759	40	2,477	40
Married	2,488	58	1,002	54	3,490	57
Other	85	2	112	6	197	3
TOTAL	4,291	100	1,873	100	6,164	100
WHITE						
Single	1,548	39	584	39	2,132	39
Married	2,302	59	840	55	3,142	58
Other	75	2	91	6	166	3
TOTAL	3,925	100	1,515	100	5,440	100
MINORITY						
Single	170	46	175	49	345	48
Married	186	51	162	45	348	48
Other	10	3	21	6	31	4
TOTAL	366	100	358	100	724	100

TABLE 25

MARITAL STATUS OF GRADUATE AND NONGRADUATE RESPONDENTS BY SEX

	GRADUATES					
	Men		Women		Total	
	N	%	N	%	N	%
Single	628	44	359	45	987	44
Married	776	54	395	50	1,171	53
Other	26	2	43	5	69	3
TOTAL	1,430	100	797	100	2,227	100
	NONGRADUATES					
Single	1,090	38	400	37	1,490	38
Married	1,712	60	607	57	2,319	59
Other	59	2	69	6	128	3
TOTAL	2,861	100	1,076	100	3,937	100

TABLE 26

MARITAL STATUS OF GRADUATE RESPONDENTS
BY TYPES OF AWARDS AND CURRICULAR AREAS

TYPES OF AWARD

	Total		AAS		Diploma		Certificate	
	N	%	N	%	N	%	N	%
Single	987	44	639	45	155	41	188	42
Married	1,171	53	713	51	218	57	234	53
Other	69	3	51	4	6	2	23	5
TOTAL	2,227	100	1,403	100	379	100	445	100

CURRICULAR AREA

	Total		Business		Communications		Engineering		Health		Public Service		Misc.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Single	987	44	497	50	18	55	323	41	53	27	29	39	67	49
Married	1,171	53	466	47	14	42	459	58	124	64	41	56	67	49
Other	69	3	30	3	1	3	12	1	18	9	4	5	4	2
TOTAL	2,227	100	993	100	33	100	794	100	195	100	74	100	138	100

TABLE 27

JURISDICTIONAL RESIDENCE OF FORMER OCCUPATIONAL-TECHNICAL STUDENTS, ALL RESPONDENTS BY SEX, RACE, GRADUATES AND NONGRADUATES

	ALL RESPONDENTS				
	Virginia Residents		Nonresidents		Total
Sex	N	%	N	%	N
Men	4,355	98	79	2	4,434
Women	1,926	99	21	1	1,947
Race					
White	5,515	98	83	2	5,598
Minority	767	98	17	2	784
Graduation Status					
Graduates	2,269	98	35	2	2,304
Nongraduates	4,013	98	65	2	4,078

TABLE 28

PARENTS' EDUCATION OF GRADUATE AND NONGRADUATE RESPONDENTS

	ALL RESPONDENTS						GRADUATES				NONGRADUATES			
	Father		Mother		Total		Father		Mother		Father		Mother	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Under 8 Years	1,432	23	793	13	2,225	18	554	25	319	14	878	22	474	12
Completed 8th Grade	732	12	536	9	1,268	11	279	12	187	9	453	12	349	9
Attended High School	1,111	18	1,177	20	2,288	19	405	18	434	20	706	18	743	19
High School Graduate	1,568	26	2,490	41	4,058	33	576	26	874	40	992	25	1,616	42
Attended College	737	12	751	12	1,488	12	243	11	272	12	494	13	479	13
4-Yr. College Graduate	382	6	261	4	643	5	124	6	94	4	258	7	167	4
Master's or Higher	163	3	54	1	217	2	48	2	15	1	115	3	39	1
TOTAL	6,125	100	6,062	100	12,187	100	2,229	100	2,195	100	3,896	100	3,867	100

TABLE 29

PARENT'S EDUCATION OF GRADUATE RESPONDENTS BY TYPES OF AWARDS RECEIVED

	AAS				DIPLOMA				CERTIFICATE			
	Father		Mother		Father		Mother		Father		Mother	
	N	%	N	%	N	%	N	%	N	%	N	%
Under 8 Years	289	21	167	12	106	28	67	18	157	35	85	20
Completed 8th Grade	157	11	107	8	61	16	33	9	60	13	46	10
Attended High School	244	18	258	19	74	19	77	20	84	19	97	22
High School Graduate	380	27	558	41	98	26	146	39	96	21	164	38
Attended College	174	12	199	14	29	8	46	12	38	9	25	6
4-Yr. College Graduate	105	8	72	5	7	2	9	2	10	2	13	3
Master's or Higher	42	3	11	1	3	1	1	-	3	1	3	1
TOTAL	1,391	100	1,372	100	378	100	379	100	448	100	433	100

TABLE 30

PARENTS' EDUCATION OF GRADUATE RESPONDENTS BY CURRICULAR AREAS COMPLETED

	Business		Communications		Engineering		Health		Public Service		Other	
Father's Educational Level	N	%	N	%	N	%	N	%	N	%	N	%
Under 8 Years	251	25	9	28	199	25	55	28	9	12	31	22
Completed 8th Grade	117	12	4	12	114	14	25	13	11	15	8	6
Attended High School	190	19	5	15	150	19	26	13	10	14	24	17
High School Graduate	263	26	7	21	219	28	36	19	16	22	35	25
Attended College	108	11	4	12	71	9	23	12	18	25	19	14
4-Yr. College Graduate	53	5	2	6	29	4	19	10	5	7	16	11
Master's or Higher	17	2	2	6	9	1	9	5	4	5	7	5
TOTAL	999	100	33	100	791	100	193	100	73	100	140	100
Mother's Educational Level												
Under 8 Years	131	13	3	10	121	15	37	20	8	11	19	14
Completed 8th Grade	72	7	3	10	74	9	23	12	6	8	9	7
Attended High School	208	21	5	16	154	20	26	14	12	17	29	22
High School Graduate	414	42	9	29	319	40	51	27	28	39	53	39
Attended College	114	12	6	19	93	12	32	17	12	17	15	11
4-Yr. College Graduate	36	4	4	13	24	3	16	9	6	8	8	6
Master's or Higher	6	1	1	3	4	1	2	1	-	-	2	1
TOTAL	981	100	31	100	789	100	187	100	72	100	135	100

TABLE 31

PARENTS' EDUCATION OF ALL RESPONDENTS BY RACE

	WHITE						MINORITY					
	Father		Mother		Total		Father		Mother		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Under 8 Years	1,197	22	657	12	1,854	17	235	34	136	20	371	27
Completed 8th Grade	641	12	452	8	1,093	10	91	13	84	12	175	13
Attended High School	971	18	1,008	19	1,979	18	140	20	169	25	309	22
High School Graduate	1,447	27	2,285	43	3,732	35	121	17	205	30	326	24
Attended College	676	12	697	13	1,373	13	61	9	54	8	115	8
4-Yr. College Graduate	343	6	230	4	573	5	39	5	31	4	70	5
Master's or Higher	150	3	47	1	197	2	13	2	7	1	20	1
TOTAL	5,425	100	5,376	100	10,801	100	700	100	686	100	1,386	100

TABLE 32

FATHER'S OCCUPATION OF RESPONDENTS BY SEX AND RACE

	All Respondents		SEX				RACE			
			Men		Women		White		Minority	
	N	%	N	%	N	%	N	%	N	%
Clerical and Sales	357	6	245	6	112	6	344	6	9	2
Managerial or Office	653	10	447	10	206	11	621	12	8	2
Professional	638	10	410	10	228	12	581	11	23	4
Proprietor or Owner	849	14	641	15	208	11	781	14	40	7
Semi-Pro. and Technical	297	5	220	5	77	4	280	5	8	2
Skilled	1,707	28	1,240	29	467	25	1,561	29	110	21
Semi-Skilled	789	13	549	13	240	13	656	12	115	22
Unskilled	465	8	275	6	190	10	293	5	160	30
Service Worker	256	4	174	4	82	5	224	4	25	5
Unemployed	43	1	29	1	14	1	34	1	7	1
Unknown	83	1	53	1	30	2	58	1	21	4
TOTAL	6,137	100	4,283	100	1,854	100	5,433	100	526	100

TABLE 33

FATHER'S OCCUPATION OF GRADUATE AND NONGRADUATE RESPONDENTS

	All Respondents		Graduates		Nongraduates	
	N	%	N	%	N	%
Clerical and Sales	357	6	139	6	218	6
Managerial or Office	653	11	208	9	445	12
Professional	638	10	210	9	428	11
Proprietor or Owner	849	14	340	15	509	13
Semi-Pro. and Technical	297	5	100	4	197	5
Skilled	1,707	28	616	28	1,091	28
Semi-Skilled	789	13	305	14	434	12
Unskilled	465	7	193	9	272	7
Service Worker	256	4	90	4	166	4
Unemployed	43	1	12	1	31	1
Unknown	83	1	28	1	55	1
TOTAL	6,137	100	2,241	100	3,896	100

TABLE 34

FATHER'S OCCUPATION OF GRADUATE RESPONDENTS
BY TYPES OF AWARDS RECEIVED

	AAS		Diploma		Certificate	
	N	%	N	%	N	%
Clerical and Sales	89	6	17	5	31	7
Managerial or Office	172	12	118	5	18	4
Professional	171	12	10	3	26	6
Proprietor or Owner	202	15	74	19	62	14
Semi-Pro. and Technical	70	5	16	4	13	3
Skilled	361	26	128	34	127	28
Semi-Skilled	171	12	62	16	69	15
Unskilled	90	7	31	8	72	16
Service Worker	54	4	16	4	19	4
Unemployed	5	-	4	1	3	1
Unknown	11	1	5	1	12	2
TOTAL	1,396	100	381	100	452	100

TABLE 35

FATHER'S OCCUPATION OF GRADUATE RESPONDENTS BY CURRICULAR AREAS

	Business		Communications		Engineering		Health		Public Service		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Clerical and Sales	75	8	1	3	40	5	8	4	6	8	9	7
Managerial or Office	103	10	2	6	58	7	19	10	12	17	14	10
Professional	79	8	3	9	57	7	33	17	15	20	23	16
Proprietor or Owner	141	14	7	22	138	17	23	12	8	11	23	16
Semi-Pro. and Technical	39	4	3	9	32	4	13	7	3	5	10	7
Skilled	280	28	5	15	253	32	39	20	15	20	24	17
Semi-Skilled	146	15	5	15	111	14	20	10	6	8	17	12
Unskilled	91	9	5	15	59	7	26	14	1	1	11	8
Service Worker	34	3	1	3	32	4	10	5	6	8	7	5
Unemployed	4	-	-	-	7	1	-	-	1	1	-	-
Unknown	11	1	1	3	12	2	1	1	1	1	2	2
TOTAL	1,003	100	133	100	799	100	192	100	74	100	140	100

TABLE 36

CUMULATIVE GRADE POINT AVERAGE (GPA)
OF RESPONDENTS BY SEX

	N	MEAN
ALL GRADUATES	2,307	2.76
Men	1,476	2.72
Women	831	2.84
WHITE GRADUATES	2,079	2.79
Men	1,389	2.73
Women	690	2.89
MINORITY GRADUATES	228	2.63
Men	87	2.66
Women	141	2.61
AAS	1,435	2.75
Men	939	2.67
Women	496	2.88
DIPLOMA	394	2.86
Men	385	2.86
Women	9	2.98
CERTIFICATE	466	2.72
Men	141	2.59
Women	325	2.77
ALL NONGRADUATES	4,080	2.21
Men	2,962	2.14
Women	1,118	2.38

TABLE 37

CUMULATIVE GRADE POINT AVERAGE (GPA)
OF RESPONDENTS BY CURRICULAR AREAS

Curricular Areas	N	Mean
Business	1,036	2.69
Communications/Media	34	2.75
Engineering	823	2.83
Health Services	199	2.91
Public Service	74	2.83
Other	141	2.81

NUMBER OF YEARS (QUARTERS) TO COMPLETE A GIVEN AWARD FROM INITIAL ENROLLMENT TO GRADUATION BY ACADEMIC YEAR, IN PERCENTAGES

	Academic Year				
	1966-67 %	1967-68 %	1968-69 %	1969-70 %	1970-71 %
AAS					
Up to 1 Year (Up to 3 Quarters)	-	2	2	1	-
Over 1 to 2 Years (4 to 6 Quarters)	26	7	7	16	4
Over 2 to 3 Years (7 to 9 Quarters)	74	87	80	57	67
Over 3 to 4 Years (10 to 12 Quarters)	-	4	10	23	22
Over 4 to 5 Years (13 to 15 Quarters)	-	-	!	3	7
Over 5 Years (16 Quarters and Over)	-	-	-	1	-
DIPLOMA					
Up to 1 Year (Up to 3 Quarters)	-	-	-	-	-
Over 1 to 2 Years (4 to 6 Quarters)	-	-	9	14	1
Over 2 to 3 Years (7 to 9 Quarters)	-	-	91	36	54
Over 3 to 4 Years (10 to 12 Quarters)	-	-	-	49	38
Over 4 to 5 Years (13 to 15 Quarters)	-	-	-	1	5
Over 5 Years (16 Quarters and Over)	-	-	-	-	2
CERTIFICATE					
Up to 1 Year (Up to 3 Quarters)	-	4	5	2	4
Over 1 to 2 Years (4 to 6 Quarters)	33	81	43	57	25
Over 2 to 3 Years (7 to 9 Quarters)	67	15	51	33	60
Over 3 to 4 Years (10 to 12 Quarters)	-	-	-	8	8
Over 4 to 5 Years (13 to 15 Quarters)	-	-	-	-	3
Over 5 Years (16 Quarters and Over)	-	-	-	-	-

Note: Summer sessions excluded

TABLE 39

AVERAGE NUMBER OF CREDIT HOURS EARNED
BY TYPES OF AWARDS AND BY ACADEMIC YEAR

	AAS	DIPLOMA	CERTIFICATE
1966-67	92	-	55
1967-68	98	-	56
1968-69	97	106	58
1969-70	100	101	53
1970-71	102	108	50

APPENDIX B
COLLEGE DATA FORM

VIRGINIA COMMUNITY COLLEGE SYSTEM
DATA ELEMENTS FOR FORMER STUDENTS

College ______________________ Code ____________ [1]

Campus ______________________ Code ____________ [2]

Person Completing Form ______________________

Date Prepared ______________________ [3] Page ______ of ______

PLEASE PRINT ALL ENTRIES

[4] Social Security Number	NAME [5] Last	[6] First	[7] MI	HOME ADDRESS Number	[8] Street	[9] City	[10] State	[11] Zip	[12] Year of Birth	[13] Sex	[14] Home Residence	[15] Quarter Year First Enrolled	[16] Quarter Year Last Enrolled	[17] Curriculum First Enrolled	[18] Curriculum Last Enrolled	[19] Credits Earned	[20] Cumulative GPA	[21] Degree	[22] Year Graduated
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NOTE: Actual size of this form is 11" x 16 1/2"

APPENDIX C

CODING INSTRUCTIONS AND DATA CODES

INSTRUCTIONS

	Description of Data	Coding Instructions (Please Print All Entries)
1.	College Name and College Code	Print the Name and 3 digit code number for your college
2.	Campus Code	Campus Name and Code on each page of the Student Data Form
3.	Date Prepared and Page Number	Show date prepared and print page as Page 1 of 7, 2 of 7, 3 of 7, . . . 7 of 7
4.	Social Security Number	9 digit social security number
5.	Last Name	Self-explanatory
6.	First Name	Self-explanatory
7.	Middle Initial	Self-explanatory
8.	House Number/Street	Self-explanatory
9.	City or Town	Print full name of city or town in mailing address
10.	State	Print abbreviated name of state (See Code List 1)
11.	Zip	Print the 5 digit zip code
12.	Year of Birth	Print last 2 digits of year of birth (e.g.: for 1950 print 50)
13.	Sex	1 - Male, 2 - Female
14.	Home Residence	Show appropriate 3 digit code for county, city, out-of-state residence (See Code List 3)
15.	Quarter & Year 1st Enrolled	(See Code List 2)
16.	Quarter & Year Last Enrolled	(See Code List 2)
17.	Curriculum 1st Enrolled in	See Curriculum List - Code List 4
18.	Curriculum Last Enrolled in	See Curriculum List - Code List 4
19.	Total Credits Earned	Write total credits earned
20.	Cumulative GPA	Write Cumulative GPA (e.g. 3.33)
21.	Type of Degree Earned	1 - AA 2 - AS 3 - AAS 4 - Diploma 5 - Certificate (-) no degree
22.	Year of Graduation	1 - 1966-67 2 - 1967-68 3 - 1968-69 4 - 1969-70 5 - 1970-71 (-) no graduation

Code List 1

OFFICIAL ABBREVIATIONS OF STATES

Alabama	AL
Alaska	AK
Arizona	AZ
Arkansas	AR
California	CA
Colorado	CO
Connecticut	CT
Delaware	DE
Washington, D. C.	DC
Florida	FL
Georgia	GA
Guam	GU
Hawaii	HI
Idaho	ID
Illinois	IL
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NE
Nevada	NV
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY
North Carolina	NC
North Dakota	ND
Ohio	OH
Oklahoma	OK
Oregon	OR
Pennsylvania	PA
Puerto Rico	PR
Rhode Island	RI
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virginia	VA
Virgin Islands	VI
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY

Code List 2

CODES FOR QUARTER AND YEAR OF ENROLLMENT

	Quarter Code
Winter	1
Spring	2
Summer	3
Fall	4

	Year Code
Summer and Fall, 1966	66
Winter, Spring, Summer, and Fall, 1967	67
Winter, Spring, Summer, and Fall, 1968	68
Winter, Spring, Summer, and Fall, 1969	69
Winter, Spring, Summer, and Fall, 1970	70
Winter, Spring, Summer, and Fall, 1971	71

Example: A student whose 1st enrollment was Fall 1968 should be coded as 468.

Code List 3

COUNTIES AND INDEPENDENT CITIES IN VIRGINIA

	Counties		Counties		Cities
001	Accomack	049	King George	120	Alexandria
002	Albemarle	050	King William	130	Bedford
003	Alleghany	051	Lancaster	140	Bristol
004	Amelia	052	Lee	160	Buena Vista
005	Amherst	053	Loudoun	180	Charlottesville
006	Appomattox	054	Louisa	200	Chesapeake
007	Arlington	055	Lunenburg	220	Clifton Forge
008	Augusta	056	Madison	240	Colonial Heights
009	Bath	057	Mathews	260	Covington
010	Bedford	058	Mecklenburg	280	Danville
011	Bland	059	Middlesex	290	Emporia
012	Botetourt	060	Montgomery	300	Fairfax
013	Brunswick	061	Nansemond	320	Falls Church
014	Buchanan	062	Nelson	340	Franklin
015	Buckingham	063	New Kent	360	Fredericksburg
016	Campbell	064	Northhampton	380	Galax
017	Carolina	065	Northumberland	400	Hampton
018	Carroll	066	Nottoway	420	Harrisonburg
019	Charles City	067	Orange	440	Hopewell
020	Charlotte	068	Page	460	Lexington
021	Chesterfield	069	Patrick	480	Lynchburg
022	Clarke	070	Pittsylvania	500	Martinsville
023	Craig	071	Powhatan	520	Newport News
024	Culpeper	072	Prince Edward	540	Norfolk
025	Cumberland	073	Prince George	560	Norton
026	Dickenson	074	Prince William	580	Petersburg
027	Dinwiddie	075	Pulaski	600	Portsmouth
028	Essex	076	Rappahannock	620	Radford
029	Fairfax	077	Richmond	640	Richmond
030	Fauquier	078	Roanoke	660	Roanoke
031	Floyd	079	Rockbridge	680	Salem
032	Fluvanna	080	Rockingham	700	South Boston
033	Franklin	081	Russell	720	Staunton
034	Frederick	082	Scott	740	Suffolk
035	Giles	083	Shenandoah	760	Virginia Beach
036	Gloucester	084	Smyth	780	Waynesboro
037	Goochland	085	Southampton	800	Williamsburg
038	Grayson	086	Spotsylvania	820	Winchester
039	Greene	087	Stafford		
040	Greensville	088	Surry		
041	Halifax	089	Sussex		
042	Hanover	090	Tazewell	999	OUT-OF-STATE
043	Henrico	091	Warren		
044	Henry	092	Washington		
045	Highland	093	Westmoreland		
046	Isle of Wight	094	Wise		
047	James City	095	Wythe		
048	King & Queen	096	York		

MASTER CURRICULUM LIST AND CODE NUMBERS

Standard Code Number	Curriculum
	Business and Related Programs
203	Accounting Tech. and Accounting
209	Data Proc. (Computer Programming)
210	Data Proc. (Mach. and Computer Opr.)
212	Business Mgt. and/or Gen. Business
214	Data Proc. (Unit Records)
215	Data Proc. (Aux. Equip. Opr.)
216	Data Proc. (Keypunch)
218	Clerical Studies
235	Hotel, Restaur. and Inst. Mgt.
240	Hotel-Motel Management
241	Food Service Management
242	Institutional Management
252	Merchandising Mgt. and/or Gen. Merch.
272	Real Estate Management
275	Stenography
276	Secretarial Science
280	Traffic Management
	Communications and Media
513	Commercial Art and/or Media Adv. Arts
	Engineering and Related Programs
901	Architectural Tech. (Include Engr.)
902	Auto Analysis and Repair (Mechanics)
904	Air Conditioning and Refrigeration
905	Aeronautical Technology (Aviation) and/or Aircraft Maintenance
908	Auto Body Repair
909	Automotive Technology
910	Auto Diagnosis and Tune-Up
912	Auto Engine Mechanics
913	Chemical Technology
915	Civil Engineering Technology
916	Broadcast Engineering Technology
918	Costmetology
920	Diesel Mechanics
921	Draft. and Des. Tech. and/or Draft. and Des.
922	Drafting
923	Mechanical Drafting
924	Electrical Engineering Technology
925	Electronics Tech. and/or Electronics
926	Automotive Mechanic
927	Civil Technology
930	Architectural Drafting
931	Structural Drafting
937	Ind. Engr. Tech. and/or Ind. Mgt.
938	Instrumentation
941	Electrical Tech. and/or Electrical-Electronics Tech. and/or Electrical-Electronics Engr. Tech.
942	Electricity
943	Electrical-Electronics
944	Ind. Electricity and Electronics
945	Electromechanical Technology and/or Ind. Electromechanical Repair
947	Electronics Appliance Servicing
948	Electronics Servicing
949	Industrial Electronics
950	Machine Technology
952	Mach. Tool Operator (Operation)
953	Marine Technology
954	Masonry
955	Mechanical Engineering Technology
956	Mechanical Technology
957	Machine Operation
958	Machine Operator and Machinist
959	Machine Shop
960	Mach. Tool Maintenance and Repair
961	Tool-Making
962	Plumbing
963	Industrial Technology
964	Printing
966	Engineering Technical Assistant
972	Television and Radio Serv. and Rpr.
980	Sheet Metal
983	Textile Management
995	Welding
996	Carpentry
998	Mining Technology
999	Water Well Drilling Tech. and/or Water Well Drilling
	Health Services and Related Programs
117	Dent. Lab. Tech. and/or Dent. Assist.
151	Medical Laboratory Technology
152	Medical Records Technology
154	Mental Health Technology
155	Mortuary Science
156	Nursing
157	Practical Nursing
172	Radiologic Technology
188	Animal Technology
	Public and Related Technology
176	Community and Social Serv. Tech. and/or Comm. and Social Serv. Assist.
427	Fire Science and/or Firefighting
460	Recreation and Parks Leadership
463	Law Enforcement
464	Police Science and/or Corrections
468	Citizenship Development
828	Environmental Technology

Standard Code Number	Curriculum
	Miscellaneous
302	Agricultural Business Technology
328	Forest Technology
628	Teacher Aide
632	Library Aide
633	Audio Visual Aide
	College Transfer Codes
504	Art
213	Business Administration
648	Liberal Arts
555	Music
831	Pre-Engineering
625	Pre-Teacher Education
880	Science
	General
001	No Curriculum Area
002	General Education
003	Pre-Professional
004	Developmental and/or foundation
005	Unclassified and/or special

APPENDIX D

FOLLOW-UP QUESTIONNAIRE

VIRGINIA COMMUNITY COLLEGE SYSTEM
SURVEY OF FORMER STUDENTS
SPRING, 1972

Dear Former Student:

Community colleges in Virginia are still in their early stages of growth, and we are searching for ways to improve our educational programs.

To help us, we ask you to complete this questionnaire. It requires information about your current activities and your earlier community college experience. It will require about 10 minutes of your time to complete. Your responses will be grouped with those of other former students, and will be used only for this study.

Please complete the questionnaire and return it to us within three days. A pre-addressed and stamped return envelope is enclosed for your convenience.

Thank you for your help.

Very truly yours.

Fred A. Snyder

Fred A. Snyder, Director
Research & Planning Division
Virginia Department of Community Colleges

(Please correct name and address if necessary)

DIRECTIONS:

USE PENCIL ONLY. MARK THE BOX ☒ OPPOSITE EACH ITEM THAT BEST REPRESENTS YOUR ANSWER(S). COMPLETELY ERASE ANY ANSWERS YOU WISH TO CHANGE.

1. (The following is needed as information about equal opportunity for education or employment.) I consider myself as:

- [1] ☐ White
- [2] ☐ Black or Afro-American
- [3] ☐ American Indian
- [4] ☐ Oriental
- [5] ☐ Spanish surnamed American
- [6] ☐ Other (specify) _____

2. Show your father's and your mother's highest educational level.

	Father	Mother
Under 8 years	[1] ☐	☐
Completed 8th grade	[2] ☐	☐
Attended high school	[3] ☐	☐
High school graduate	[4] ☐	☐
Attended college	[5] ☐	☐
Four-year college graduate	[6] ☐	☐
Master's or higher degree	[7] ☐	☐

3. Father's type of work. If he is retired or deceased, refer to his former job.

- [1] ☐ Clerical and Sales – bank teller, salesman, office or sales clerk, etc.
- [2] ☐ Managerial or Office Occupations – office or sales manager, bank officer, etc.
- [3] ☐ Professional – CPA, dentist, engineer, teacher, military officer, etc.
- [4] ☐ Proprietor or Owner – farm owner, owner of a small business, etc.
- [5] ☐ Semi-professional and Technical – engineering technician, dental technician, practical nurse, surveyor, etc.
- [6] ☐ Semi-skilled worker – machine operator, bus driver, meat cutter, etc.
- [7] ☐ Service worker – barber, policeman, waiter, fireman, etc.
- [8] ☐ Skilled worker or foreman – baker, carpenter, electrician, foreman, etc.
- [9] ☐ Unskilled worker – laborer, filling station attendant, farm worker, etc.
- [10] ☐ Unemployed
- [11] ☐ Unknown

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4. Your Marital Status.

1 ☐ Single
2 ☐ Married
3 ☐ Other

5. Mark the one item that best describes your present employment or related status.

1 ☐ Full-time employment
2 ☐ Part-time employment
3 ☐ College full-time
4 ☐ Military service
5 ☐ Housewife
6 ☐ Unemployed
7 ☐ Other (specify)_____

IF YOU HAVE NEVER BEEN EMPLOYED FULL-TIME SINCE LEAVING THE COLLEGE, GO DIRECTLY TO QUESTION 14.

6. Show the state in which you presently work.

1 ☐ Virginia
2 ☐ Maryland
3 ☐ West Virginia
4 ☐ North Carolina
5 ☐ Tennessee
6 ☐ District of Columbia
7 ☐ Kentucky
8 ☐ Another state (specify)_____

7. Show the approximate distance of your present employment from your former community college.

1 ☐ Up to 25 miles
2 ☐ 25 – 49 miles
3 ☐ 50 – 99 miles
4 ☐ 100 miles and over

8. Was the curriculum you were enrolled in at the community college related to your first job? Your present job?

	First Job	Present Job
Yes, very much	☐	☐
Yes, somewhat	☐	☐
No, or very little	☐	☐

9. If your present job is not related to your community college curriculum, please check each reason which applies.

1 ☐ Could not find a job in field of preparation
2 ☐ Found better paying job in another field
3 ☐ Preferred to work in another field
4 ☐ Qualified for new job by continuing my education
5 ☐ Was not sufficiently qualified for a job in my field of college preparation
6 ☐ Other (specify)_____

10. Please indicate both your initial yearly salary upon leaving the community college and your present salary. (This information will not be identified with you as an individual, but will be grouped with that from other former students.)

Initial Salary		Present Salary
1 ☐	Up to $2,999	1 ☐
2 ☐	$3,000 – 3,999	2 ☐
3 ☐	$4,000 – 4,999	3 ☐
4 ☐	$5,000 – 5,999	4 ☐
5 ☐	$6,000 – 6,999	5 ☐
6 ☐	$7,000 – 7,999	6 ☐
7 ☐	$8,000 – 8,999	7 ☐
8 ☐	$9,000 – 9,999	8 ☐
9 ☐	$10,000 – 10,999	9 ☐
10 ☐	$11,000 – 11,999	10 ☐
11 ☐	$12,000 and over	11 ☐

11. Please rate your satisfaction with your present job in terms of each of the aspects shown below. Mark one answer for each aspect.

	Superior	Good	Fair	Poor
a. Challenging and interesting work	☐	☐	☐	☐
b. Relations with colleagues	☐	☐	☐	☐
c. Salary	☐	☐	☐	☐
d. Opportunity for advancement	☐	☐	☐	☐
e. Overall aspects of your job	☐	☐	☐	☐

12. Please mark the one source most helpful in getting your initial full time job upon leaving the community college. Mark one only.

1 ☐ Community college placement service
2 ☐ College staff member other than a placement service
3 ☐ Employer contact at the college
4 ☐ State employment service
5 ☐ Answered an advertisement
6 ☐ Relative or friend
7 ☐ Other (specify)_____

13. Please mark (X) each statement which shows your feelings about the help you obtained at the community college in getting your first job upon leaving.

1 ☐ The placement office was helpful
2 ☐ Faculty members were helpful
3 ☐ Little help was given to me or others in my curriculum
4 ☐ Faculty members were willing to help, but didn't seem to know what opportunities were available
5 ☐ Job placement service was not adequate

ALL PERSONS SHOULD ANSWER QUESTIONS 14 THRU 22.

14. To what extent have you continued your education since leaving the community college? Mark each statement that applies.

1 ☐ Still enrolled at the community college
2 ☐ None
3 ☐ Completed one or more employer training program
4 ☐ Took courses at another two-year college
5 ☐ Took courses at a four-year college or university
6 ☐ Completed an associate degree
7 ☐ Completed a bachelor's degree
8 ☐ Completed master's degree or beyond
9 ☐ Other (specify)_____

15. If you have continued your education since leaving the community college, please mark each reason for such further education or training which applies to you.

1 ☐ To prepare for further job opportunities in my present occupation
2 ☐ To improve my skills and abilities in my present job
3 ☐ For my own general education and personal satisfaction
4 ☐ To change occupation
5 ☐ It is expected of me by my employer
6 ☐ Other (specify)_____

16. Was the curriculum you were enrolled in at the community college related to your later study, if you have continued your education?

1 ☐ Yes, very much
2 ☐ Yes, somewhat
3 ☐ No, or very little

17. Did you at any time change from one curriculum to another while at the community college?

1 ☐ Yes 2 ☐ No

18. If your answer to question 17 was Yes, please mark the reason(s) for changing your curriculum as noted below.

1 ☐ Dissatisfied with curriculum
2 ☐ Dissatisfied with instruction
3 ☐ Low achievement
4 ☐ Loss of interest
5 ☐ Personal problem
6 ☐ Little opportunity in this field
7 ☐ Parents objected
8 ☐ Counselor's advice
9 ☐ A wrong choice of curriculum in the first place
10 ☐ Changed career goal(s)
11 ☐ Other (specify)_____

19. Would you recommend the community college to a person seeking to complete the same program you studied? 1 ☐ Yes 2 ☐ No

20. How well did the community college prepare you in each of the following aspects? Mark only one answer for each aspect.

	Superior	Good	Fair	Poor
a. Technical knowledge and understanding	☐	☐	☐	☐
b. Job or learning skills	☐	☐	☐	☐
c. Getting along with people	☐	☐	☐	☐
d. Self-understanding	☐	☐	☐	☐
e. Knowledge about career opportunities in your field	☐	☐	☐	☐
f. Communication skills (oral or written)	☐	☐	☐	☐
g. General education	☐	☐	☐	☐

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21. How valuable are each of these aspects of your community college education to you now? Mark only one answer for each aspect.

	Highly Valuable	Valuable	Some Value	Little or No Value
a. Technical knowledge and understanding	☐	☐	☐	☐
b. Job or learning skills	☐	☐	☐	☐
c. Getting along with people	☐	☐	☐	☐
d. Self-understanding	☐	☐	☐	☐
e. Knowledge about career opportunities in your field	☐	☐	☐	☐
f. Communication skills (oral or written)	☐	☐	☐	☐
g. General education	☐	☐	☐	☐

22. Please give your opinion about each of the following aspects of your community college experience. Mark only one answer for each aspect.

	Superior	Good	Fair	Poor
a. Shop and laboratory instruction	☐	☐	☐	☐
b. Academic instruction	☐	☐	☐	☐
c. Shop and laboratory facilities and equipment	☐	☐	☐	☐
d. All other college facilities	☐	☐	☐	☐
e. Counseling given to students	☐	☐	☐	☐
f. Social activities	☐	☐	☐	☐
g. Interest in students shown by faculty	☐	☐	☐	☐
h. Evaluation of students' performance by faculty	☐	☐	☐	☐
i. Overall	☐	☐	☐	☐

ONLY THOSE WHO EARNED A CERTIFICATE, DIPLOMA, OR ASSOCIATE DEGREE SHOULD ANSWER QUESTION 23.

23. In every occupational technical curriculum, there is a "mix" of courses in (a) applied technical and skills preparation and (b) general education. Please show the proportional "mix" of such courses that you would like to see in your curriculum at your community college.

1 ☐ O.K. as is. Don't change it.

2 ☐ Increase the proportion of courses in technical and skills areas.

3 ☐ Increase the proportion of courses in general education.

ONLY THOSE WHO DID NOT COMPLETE AN EDUCATIONAL PROGRAM AT THE COMMUNITY COLLEGE SHOULD ANSWER QUESTIONS 24 THRU 27.

24. What was your primary educational goal when you initially enrolled at the community college? Mark one only.

1 ☐ Earn a certificate or diploma to improve my employment and career skills.

2 ☐ Earn an associate degree or a higher degree

3 ☐ Upgrade technical knowledge and skills in specific fields by taking just one or several courses

4 ☐ Increase my general knowledge and level of education

5 ☐ Other (specify)

25. Was the goal you noted above achieved before you left the community college?

1 ☐ Yes 2 ☐ No

26. What principal reason(s) made you decide to discontinue attendance at the community college? Mark each that applies.

1 ☐ Employment
2 ☐ Marriage
3 ☐ Entered military service
4 ☐ Lack of financial support
5 ☐ Transferred to another college
6 ☐ Moved to another area
7 ☐ Lack of transportation
8 ☐ Completed my educational goal
9 ☐ Personal adjustment problem
10 ☐ Lack of interest
11 ☐ Low achievement
12 ☐ Change in educational goal
13 ☐ Other

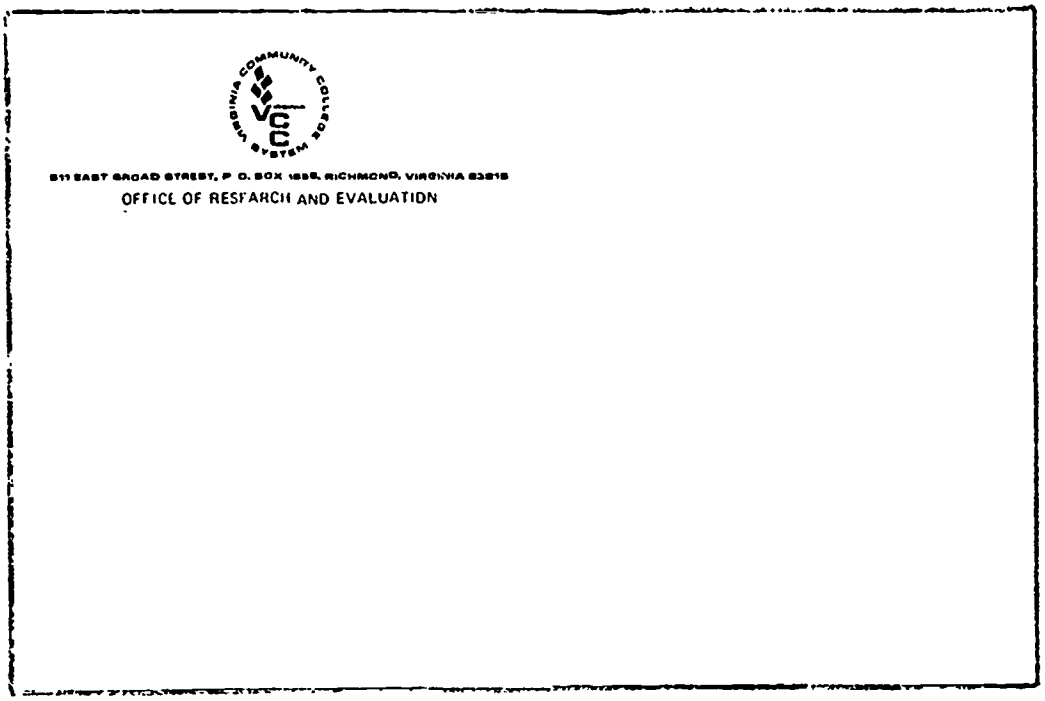
27. Do you intend to return to a community college for additional work?

1 ☐ Yes 2 ☐ No

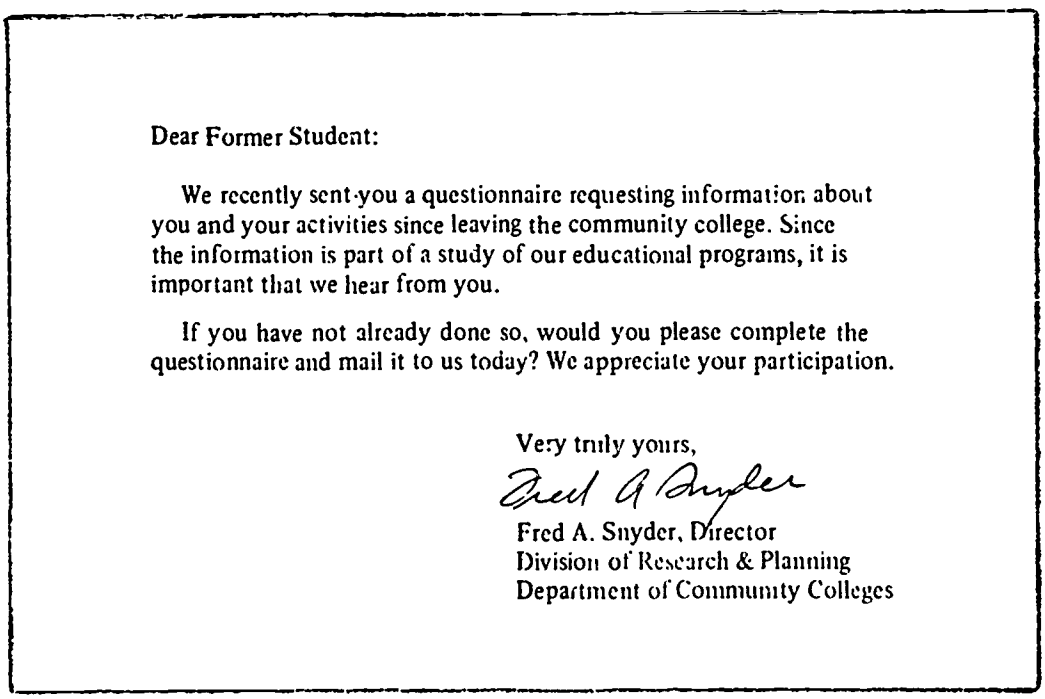
THANK YOU FOR YOUR ASSISTANCE

APPENDIX E

REMINDER POSTCARD



FRONT SIDE



BACK SIDE

COVER LETTER

VIRGINIA DEPARTMENT OF COMMUNITY COLLEGES

May 1972

Dear Former Student:

We recently sent you a questionnaire requesting information about you and your activities since leaving the community college. We have not received your response, and it is important that we do. Therefore, we are enclosing another copy of the questionnaire and a pre-addressed, postage-paid return envelope for your convenience.

If you have not completed the questionnaire, please fill in the enclosed copy and mail it to us immediately. All responses will be treated as confidential and will be used only for research purposes. We appreciate your cooperation.

Very truly yours,

Fred A. Snyder

Fred A. Snyder
Director, Division of Research & Planning

FINAL FOLLOW-UP LETTER

VIRGINIA DEPARTMENT OF COMMUNITY COLLEGES

May 1972

Dear Former Student:

We recently sent you a questionnaire relating to a study of former students at Virginia community colleges. If you have not already completed this questionnaire and returned it to us, would you please take ten minutes to do so now?

The purpose of the questionnaire is to obtain information about your activities and feelings about your community college experience. Each bit of information will be used to evaluate how well the community colleges provide high-quality education to students. Please help us by returning the completed questionnaire today!

Your response will be treated in strictest confidence and used with those from other former students for this study only.

Very truly yours,

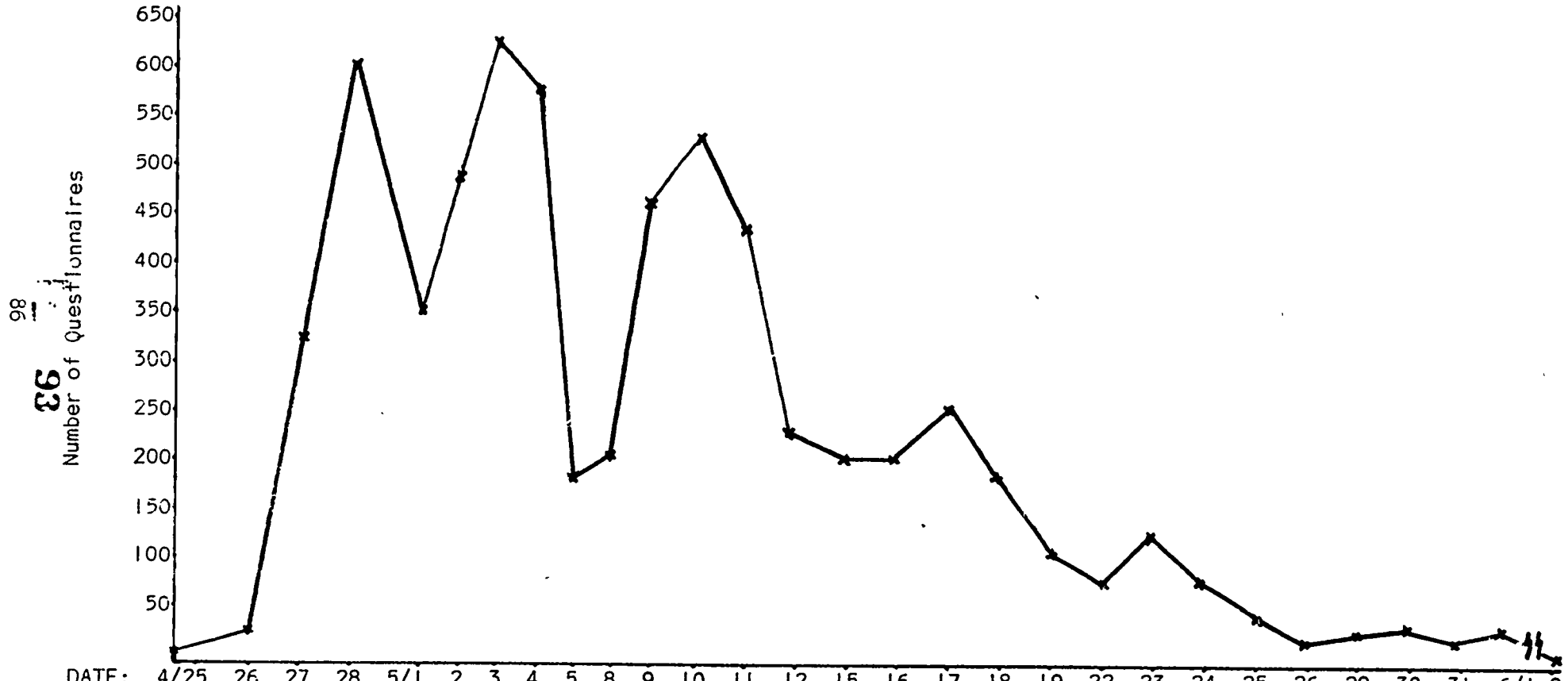
Fred A. Snyder

Fred A. Snyder, Director
Division of Research and Planning
Department of Community Colleges

FAS:TOG:vks

APPENDIX H

FLOW OF COMPLETED QUESTIONNAIRES



APPENDIX I

VIRGINIA COMMUNITY COLLEGE SYSTEM
SURVEY OF FORMER STUDENTS
TELEPHONE INTERVIEW
Spring, 1972

DIRECTIONS: INDICATE THE ANSWERS BY WRITING THE APPROPRIATE NUMBER IN THE BLANK SPACE ON THE LEFT. WHERE THE INTERVIEWEE REFUSED TO RESPOND TO A SPECIFIC QUESTION, THEN JUST LEAVE THE SPACE BLANK AND PROCEED TO THE NEXT QUESTION. BEGIN TELEPHONE CONVERSATION:

I am (state your name & position) from (state name of college). As part of a survey of former students of (state name of community college), we mailed you a questionnaire to obtain information about your activities and opinions. Since we did not get a response from you, would you please help us by answering a few questions which appeared on the original questionnaire? It should take just three minutes. Let me assure you that your answers will be held in strictest confidence.

(2) What is the highest educational level completed by your father? (Pause for response) Your mother? (Use the answer given to select the appropriate number. Write this number in the blank space.)

___Father
___Mother

1 Under 8 years
2 Completed 8th grade
3 Attended high school
4 High school graduate
5 Attended college
6 Four-year graduate
7 Master's or higher degree

___(5) What is your present employment or school status? Are you employed full-time, part-time, or what? (Accept only one answer.)

1 Full-time employment
2 Part-time employment
3 College full-time
4 Military service
5 Housewife
6 Unemployed
7 Other (specify)_____

___(5A) Have you ever been employed full-time since leaving the college?

1 Yes
2 No

IF THE RESPONSE IS NO, SKIP QUESTIONS 8, 10, AND 11, AND GO DIRECTLY TO QUESTION 19.

(8) How much was your community college curriculum related to your initial full-time job upon leaving the community college? (Read the three choices.) Your present full-time job?

___Initial
___Present

1 Very much
2 Somewhat
3 Very little

(10) Would you please give us an estimate of your salary in your first full-time job after leaving the community college? (Pause for response) Also your present salary?

___Initial
___Present

1 Up to $2,999
2 $3,000-3,999
3 $4,000-4,999
4 $5,000-5,999
5 $6,000-6,999
6 $7,000-7,999
7 $8,000-8,999
8 $9,000-9,999
9 $10,000-10,999
10 $11,000-11,999
11 $12,000 and over

___(11) ASK THIS QUESTION ONLY IF THE SUBJECT IS NOW EMPLOYED FULL-TIME. Please rate your satisfaction with your present job in terms of the overall aspects of the job. Enter only one response.

(a) Is your satisfaction: (1) Superior? (2) Good? (3) Fair? (4) Poor?

(continue on other side)

___(19) Would you recommend your community college to a person seeking to complete the same program you studied?

1 Yes
2 No

(20) I want you to rank as (1) SUPERIOR, (2) GOOD, (3) FAIR, or (4) POOR, how well the community college prepared you in terms of:

___(a) Technical knowledge and understanding

___(b) General education

(22) Using the same ranks of (1) SUPERIOR, (2) GOOD, (3) FAIR, and (4) POOR, will you please evaluate several more aspects of your community college experience? These include: (For each aspect enter only one response.)

___(a) Shop and Laboratory Instruction

___(b) Academic Instruction

___(c) Counseling given to students

___(i) Overall

FOR NON-GRADUATES ONLY. LOOK FOR THE CODE N AT THE RIGHT CORNER OF THE LABEL.

(26) Would you please tell me the principal reason or reasons which caused you to discontinue your attendance at the community college? Give two or three examples of possible reasons if necessary. (Check (x) each reason that the individual has given.)

___1 Employment
___2 Marriage
___3 Entered military service
___4 Lack of financial support
___5 Transferred to another college
___6 Moved to another area
___7 Lack of transportation
___8 Completed my educational goal
___9 Personal adjustment problems
___10 Lack of interest
___11 Low achievement
___12 Change in educational goal
___13 Other _____

Do you have some additional comments about your previous college experiences?

_____

_____

_____

We appreciate your help with our survey. I enjoyed talking with you (or something similiar).

END OF INTERVIEW. COMPLETE ADDED INFORMATION SHOWN BELOW

Check reason (s) for failure to conduct interview:

___1. Refused
___2. Deceased
___3. Military-Service-Overseas
___4. Civilian-abroad
___5. Already mailed questionnaire
___6. Other

INTERVIEWER'S NAME _____
(Please Print)

DOCUMENT RESUME

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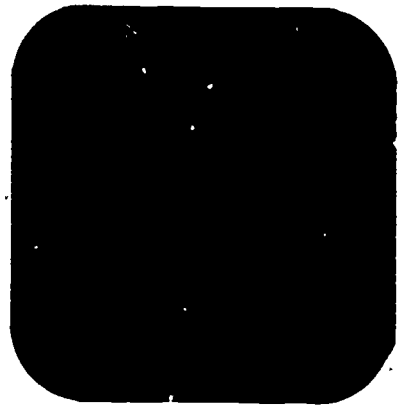
IDENTIFIERS *Netherlands

ABSTRACT

This report describes an experimental day care program in Amsterdam, begun in 1969 to investigate how a day care center could contribute towards the favorable development of children under four from unskilled and semiskilled families. Because it is only recently that day care for children under four has been used to any extent, this is the first project in the Netherlands that is collecting psychometric data on young children which will form the basis for further research. Included in the report is information concerning: (1) the Dutch educational system; (2) objectives, organization, and evaluation (instruments and testing schedules) of the project; (3) the child care workers, with comments on current and future selection and training techniques; (4) the children's daily schedule and the special attention given to problem children; (5) parents' involvement in the program, with special comment on the development of a room in which parents can meet informally with each other and the social worker; and (6) six major limitations on evaluating the project statistically. (ED)



PROEFKRECHE '70

A DAY CARE CENTER FOR VERY YOUNG CHILDREN IN AMSTERDAM

(written Summer 1974)

Authors in alphabetic order

Martine Cornelisse	psychologist
Dolf Kohnstamm	professor of developmental psychology, Leiden University project leader
Truus van der Lem	psychologist director of the center

CONTENTS

1. SOCIAL SECURITY AND EDUCATIONAL BACKGROUND OF THE NETHERLANDS

1.1 Social Security

There is a long history of Dutch social security; provisions on an overall national basis go back to the turn of the century. The principle is now established that adequate and comprehensive legal social security provisions must be maintained to cover the entire population, or at least all residents. The history, organization, financing and operations of the component schemes are quite complex. But briefly we can state that adequate security is provided against incapacity for work, children and sickness expenses, unemployment and old age retirement, and for widows and orphans.

In The Netherlands the term "deprived" can only apply to people with poor housing, little education and low wages. However, their material wealth is often superior to that of most deprived groups in, for instance, the United States.

1.2 Educational System

In The Netherlands school attendance now is compulsory for children aged from 6 to 15. All public education for children in this age group is basically free.
Primary education takes 6 years, after which the child may choose from various different types of secondary education, which take 3 to 6 years.
All education for children aged 16 and older is not free, but lower income groups may obtain grants, so that - theoretically speaking - no one need to be excluded from higher education for financial reasons.

1.3 Pre-school System

Children aged 4 to 6 years may attend kindergartens. These facilities are widely used; about 84% of all Dutch 4 year olds and about 96% of all 5 year olds attend a kindergarten. Parents are required to pay small fee (Dfl. 40 per year, about $ 16) and are free in their choice of a kindergarten (Catholic, Protestant or no specific church affiliation).
The Ministry of Education subsidizes all Dutch kindergartens even private ones, if they meet certain requirements such as minimum entrance age, teacher training, pupil-teacher ratio, content and duration of the daily schedule, sanitary and hygenic conditions in the building, etc. In 1971 the average number of pupils in each class was 30. Generally the kindergartens follow loosely structured programmes which exhibit the influence of Froebel, Montessori and Dutch educationalists. On a smaller scale experiments with compensatory programmes for lower-class children have been conducted.

1.4 History of Day Care

At the beginning of this century there were various day-care centers in the larger cities, attended, in particular, by children from lower-class families. Until the sixties, it was generally thought that a child should stay at home with his mother until the age of 4 and, consequently, the number of day-care centers remained limited. Moreover, there were less working mothers in the Netherlands than in other West European countries. It is estimated that no more than 20% of the mothers with a child or children under five have a paid job outside the home. However, during the last few years there has been a marked increase in the number of morning day-care centers for 2 - 4 year olds, in which the mothers take turns in assisting the child-care worker. Also, the traditional day-care centers are now being attended increasingly by children from middle-class and upper-class families.

Most morning day-care centers and regular day-care centers (about 2000 facilities) have united in a co-ordinating organization, called: Werkgemeenschap Kindercentra Nederland - W.K.N. The Government is drafting a set of legal requirements for day-care of children up to 4 years old; at present, each municipality has its own policy, regulations and subsidies. Day-care workers do not yet require a specific training in the Netherlands. There are approximately 10 different types of secondary education which have some relation to training on child-care.

The salaries and status of child-care workers are low as compared with those of kindergarten teachers.

At present, various factors are subject to discussion, such as the desirability of day-care centers, the possibility of making this type of "education" free of charge, the standards that should apply to day-care in general, the introduction of special day-care for special children, etc.

2. OBJECTIVES, ORGANIZATION AND EVALUATION OF THE PROJECT

2.1 Inception and Objectives

The project Proefkreche'70 was started in 1969 at the request of the Dutch Ministry of Cultural and Social Work to investigate how a day-care center could contribute towards the favorable development of children under 4 from unskilled or semi-skilled families.

Although the majority of the children in the project were to come from this background, it was considered desirable to include a smaller group of children whose parents had at least 12 years of schooling, in order to compare the development of both groups.

The project also aims to design, evaluate and propagate programmes and activities suitable for children of this age group. Besides this, it aims to contribute towards the improvement of the quality of Dutch day-care in general.

2.2 Accomodation, Location, Children and Staff

2.2.1 Accomodation, Location

The day-care center is established in a renovated office building on one of the main roads in Amsterdam. It is situated near one of the working-class quarters of the city and it takes about 10 minutes for the parents to bring their children to the center.
Two floors are available for the children, each devided into two rooms separated by a door. The first floor is about 30 square metres and the second about 40 square metres. The adjoining observation rooms are equipped with one-way screens and headphones which can be used for listening in to the children. The children can also play in the corridors and in the garden behind the building. The building contains a reception room for the administration, a testing room, a room for the research staff, a kitchen and a room for the children's parents, which also holds a "toy-library".

2.2.2 Children

The maximum capacity of the center is 40 children, half of whom attend whole days and half only during the morning. Most children are brought between 8.00 and 9.00 hours. Morning-children are collected between 12.00 and 13.00 hours; day-children between 16.00 and 17.30 hours. About 75% of the children between 16.00 and 17.30 hours. About 75% of the children are of unskilled parents. Although a child may enter the project after his first birthday, most children start attending when they are two years old. The minimum length of participation in the project is 9 months; the maximum is 3 years. All the children leave the project when they are four years old, to attend one of the kindergartens in Amsterdam.
The children are grouped according to age: there are two groups of children from about 1.0 to about 2.6 years and four groups of older children. The former groups "juniors" each consist of 4 (maximum 5) children and the latter groups "seniors" each consists of 7 children. Groups intermingle quite often during the day. Every group has its own child-care worker.

2.2.3 Staff

The people on charge of the groups are called "kinderverzorgsters" for which "child-care workers" is the best translation. Neither "nurse" nor "teacher" would be an adequate term, since the job entails more teaching than that of a nurse and more nursing than that of a teacher. There is a total of 8 child-care workers. Their schooling varies from 9 to 10 years. Ages range from 22 to 30 years. The day-care center is headed by Truus van der Lem, a psychologist. Two other half-time psychologists work on the project, who with 4 part-time research assistants are responsible for the collection of research data. The research assistants are students of the Psychology Faculty at the two Universities of Amsterdam.

Another part-time co-worker (who is a Pedagogy-student) provides play therapy with problem children (see section 4.2). There are two part-time social workers, one of whom makes the first contacts with the parents and, after the child's admission, provides individual help in the problems the parents may have concerning their child. The other part-time social worker is working with the parents in group activities (see section 5). Also working at the project are two part-time secretaries, a kitchen supervisor and various trainees. The project was initiated by Dolf Kohnstamm.

2.3 Evaluation

2.3.1 Instruments

The following tests are used for measuring general and cognitive development: the Bayley developmental scale, the Stutsman Merrill-Palmer scale, the Stanford-Binet intelligence scale and the AKIT for ages 4 - 6 years.
Only the AKIT has standardized norms for Dutch children.
Two Dutch tests are used to measure the children's vocabulary, one of which has been standardized on a large sample of the population of Utrecht. All tests are administered under standardized conditions in the presence of the child's mother or father. Standardized interviews are held with the parents (every 6 months) and with the kindergarten teachers of the schools attended by the children after they have left the project. Finally, standard progress reports are gathered from regular meetings at which individual children are discussed.

2.3.2 Testing Scheme

Children may join the project at different ages. Those joining ages between 1.0 (one year) and 1.6 (one year six months) are tested for the first time with the Bayley scale. However, the majority begin with the Stutsman, as most children join the project at an age too high for the Bayley.

The testing scheme for a child joining at 1.0 is as dollows:

approximate age	instrument
1.2	Bayley
2.2	Stutsman
2.3	Vocabulary test (PKW)
3.0	Stutsman
3.1	Vocabulary test (PKW)
3.10	Stanford Binet
3.11	Vocabulary test (UTANT)
4.11	Intelligence scale (AKIT)
4.11	Vocabulary test (UTANT)
5.11	Intelligence scale (AKIT)
	Stanford Binet
	Vocabulary test (UTANT)

Tests below the dotted line are administered when the children are in kindergarten

2.3.3 Group of Children for Comparison

Since children could not be assigned to experimental and control groups in a random manner, the research design is not a true experimental one. However, a comparison group was formed, consisting of children not attending any kind of day care center but raised exclusively at home. The comparison group was chosen from about 400 families, obtained mostly via municipal medical services for babies and infants.

By comparing these children with the project group for a number of factors (parent's education and occupation, sex, age, and order of birth) the comparison group was selected consisting of children similar to those of the project group.

All comparison children are tested on the same basis, at about the same ages, in the presence of the mother or father.

When the project children enter kindergarten (i.e. leave the day-care center), two new comparison children are selected from the class the child joins. The children in kindergarten (both ex-project-children and the comparison children) are tested in school.

3. THE CHILD-CARE WORKERS

3.1 Education and background

As described in section 2.2.2 there are day-children and morning-children. For the day-children there are 5 child-care workers: one attends a full week of 40 hours, two attend 30 hours a week and two attend 20 hours a week. For the morning-children there are three part-time child-care workers, attending 30 hours a week.

All of our child-care workers have had a training directed at care of children in institutions. The number of years of experience in this particular kind of day-care work varies from 0 to 14 years.

3.2 Personal and vocational development in the project

Working with children in our center implies that one must have the intention and the capacity:

- to develop a warm and affectionate relationship with children
- to recognize different needs and feelings of the children and react adequately to these needs and feelings
- to present educational materials and activities in a basically relaxed and versatile manner
- to respect the individuality of each child
- to stimulate all children in their development
- to work actively at a good co-operation with parents and with the other workers
- to co-operate in a team with representants of different disciplines in order to diagnose, draw up a plan and a strategy for a child and evalua e it all.

The prior training and experience of the workers has not prepared them for this complex task. The greatest difference seems to be that in their previous experience there was no demand to consider explicitly what one was doing and why.

During prior training, theory and practice were experienced as two completely different things, with practically no relationship between them. In The Netherlands, as in most other countries, the main accent in child-care work until recently was on cleaning (rooms, clothes, noses, etc.) and on feeding, whereas stimulation of development was hardly considered at all. This might have arisen from the fact that neither the workers themselves, nor the society at large believed child-care work to be really important. The sudden increase in play-groups and other centers for children under 4, and the changing attitudes of parents regarding these centers, have shifted the emphasis more to pedagogy. This in turn lead to re-consideration of the goals for preschool education. People in general became convinced of the necessity to approach the work more knowledgeably.

From this summing up of the new and rather complex situation it appears that special training of the workers in a day-care center is very desirable. Below we will attempt to give a brief outline of the training given in Proefkreche'70.

In selecting the child-care workers we pay more and more attention to aspects of personality and character and less and less to schooling and practice. Nevertheless we have learned that some knowledge of how elaborately children of this age can play, seems to be indispensable for a good start. It should be understood that the different child-care workers in our project also have had different working and personal experiences. Our coaching aims at a constant exchange of these different experiences. This is done because we hope that it will teach the workers to meet problems from different angles, which might also create a more flexible attitude towards new situations and new happenings. We try to reach this goal by the following means:

- by talking about what impression our "doing and sayings" make on each other, whereby we try to tolerate and respect different opinions, attitudes and values as far as is possible

- by meetings at which one of the child-care workers discusses "her children" with a team consisting of one of the research-assistants, the social worker and the director. These talks last about 3½ hours, in which the individual development of each child in the group is discussed, together with the attitude of the worker regarding the child, and the reactions of each child to her. Eventually a plan and a strategy for working with individual children is developed for the next period. In these discussions the notes of the child-care worker play an important role. Each worker has such a meeting every six weeks
- by weekly meetings between each child-care worker and the director in which more urgent or personal problems are discussed
- by a monthly meeting between all child-care workers, the two social workers and the director, during which the contacts between the workers and the parents are discussed
- by evening-meetings, during which the programme of activities is discussed, aimed at fostering emotional, social, language, cognitive and motor development. As far as possible new activities are developed and tried out together. Also purchase decisions on new play- and developmental materials are made in these group discussions
- by each child-care worker sharing responsibility for "hiring and firing" other child-care workers, with whom they have to work closely. This also applies to the acceptance on rejection of temporary trainees who are working under the daily guidance of the child-care workers
- by child-care workers maintaining contacts with other people or institutions outside the center and appearing as representatives of the center, e.g. at training courses.

As well as co-operation between child-care workers, co-operation with the other workers in the project is important. Below we give some examples of difficulties that have been encountered.

In the early period of the project the child-care workers had high ex[illegible]cations of the team-members with an academic background. Concrete and direct answers in practical matters were expected as well as definite ideas on goals and means of the working with the children and parents.

Evidently the academicians were unable to meet these expectations and the child-care workers gradually had to change their view on what could reasonably be expected.
On the other hand advice and suggestions regarding practical matters given bij the academic workers, were sometimes cooly received. Hence, mutual aggresiveness and distrust occasionally arose. This was also aggravated by the fact that only the child-care workers were permanently in the position of being exposed to observation via one-way screens. This led to feelings of stress and insecurity which were insufficiently recognized by the other (observing) members of the team.
Since most personal contacts between parents and center are maintained by the social worker, there is a constant overlap between the many contacts the child-care workers have with the parents, and those of the social worker. Both parties had to learn to reach concordant attitudes regarding the way specific problems in the contacts with specific parents had to be handled. A constant and continuous communication appears necessary between the center and parents.
The fact that in our center the director is also responsible for the coaching of the child-care workers has initially caused other difficulties with the child-care workers; feelings of reserve and even mistrust have arisen. On the side of the director there were initial difficulties in combining the coaching role with the requirement of guidance and leadership.

Al' ough we now appear to have successfully integrated all these different roles and relationships, we are still careful never to neglect the factors which might cause tensions, annoyances and insecurities.

4. THE CHILDREN

4.1 Daily activities

The top priority for the project must be to ensure that the center always is a place where the children are happy and where they are eager to attend. As with the comments made in section 3, this may appear self evident but certainly the realization of such a goal, for an institution this young, is not easy. Nevertheless the workers and the parents have the impression that this goal is reached most of the days with the vast majority of the children.

Although there is no rigid plan for the day which must be followed, there are some anchor points which structure it. After arrival the children play freely until 9.45 or 10.00 hours. Up to this time they can do what they like (climbing, riding in cars, building, playing with dolls, puzzels, water etc.). The child-care worker just watches, or helps if necessary, and gives some extra attention to any child that needs it.

The rooms are then cleaned up a bit and preparations are made for "juice-time". Juice-time in our center has evolved into a rather elaborate ceremony during which songs are sung and rhymes, riddels and stories are told. The juice and biscuits are on the table, the group sits around the table, and sometimes it may be 20 minutes before drinking and eating starts.

After juice-time, directed group activities are available such as games for motor, musical, conceptual and perceptual development and other creative activities are organized such as clay work, painting, cutting and pasting. In our center we have developed non-structured programmes for all of these activities, some of which are based on several external sources. There is no explicit philosophy behind these activities. The main criterion for keeping an activity in the "repertoire" is the pleasure arising for the children and the child-care workers.

Typical of our approach is the fact that these activities are carried out in small groups; that we have also developed a repertoire for children aged 2 years;

that an equilibrium has been developed between systematically following a structured plan, while at the same time allowing for totally new inventions which may come up spontaneously every day. After these activities, which may last from 15 to 30 minutes, children are again free to play with anything they want to for about half an hour. This may be inside or outside, depending on the weather. Lunch is served at about noon, after which the morning-children leave the center. Of the day-children most go to bed until 14.30. The others play inside or outside or go for a walk. After the childrens' rest it is juice-time again, after which there is another period of structured activities, lasting about 30 minutes. Then a period of free play begins until the children are called for by their parents. Sometimes the children go to the zoo, a museum or a park, but there is no day which lacks alternation between structured and unstructured activities. We are engaged in describing the repertoire completely, in written text and on 16 mm. color film.

4.2 Special Attention to Individual Children

Although the child-care workers in our center work with small groups and although they always encourage individual participation, we have found that some children (about 15% of our population) do not seem to profit from this enough for their emotional development. So we have selected them for special attention in individual sessions, held by a student of pedagogy. These sessions, which last about 20 minutes, are held in a separate room which has a large dolls' house in it. The form of interaction can be compared with play therapy on a nondirective (Rogerian) base. Since we do not want to use the overloaded word "therapy" we talk about "individual attention". During this "individual attention" we strive towards frequent contacts with the parents of these children. In these talks we try to form a common viewpoint on the problem behavior of the child and to agree on a co-ordinated strategy for dealing with this problem, both in the center and at home.

5. THE PARENTS

We aim to make the center a place where the parents feel welcome. We believe that the center contributes to the favorable development of the children both at the center and in their homes. Similarly there is considerable benefit to both center and parents in a free exchange of views concerning the children. We try to develop a situation where the parents themselves help each other by discussing various matters of common interest. This in turn ensures further benefit for the child through, say a more relaxed homelife atmosphere.

At first we tried to create this situation by the traditional means of evening meetings for parents and workers, as is normal in the Dutch educational system. In fact, we have had many successful evenings but also there have been unsuccessful ones (low attendance rate, cool atmosphere, too little participation, dominating workers, dominating parents, etc.). We have more recently developed new forms of meetings which seem to be far more effective in helping to establish a good contact between parents and center, and between parents and parents.

After bringing their children to the center many parents remain for some time in the rooms and talk with each other and the child-care worker. Very often they help their child to start with some game or activity. Mostly after some 10 minutes when the child is concentrating on its play, the parent leaves or starts talking with another parent or the worker.

Fairly early in the development of our day care center doubts arose about the usefulness of this general situation of playing children, talking parents and very busy child-care workers, who had to divide their attention between both the children and the parents.

However, since many of the parents (mostly mothers) seemed really to appreciate the possibility of talking with each other, and since we wanted to stimulate this possibility, but did not want to lay an extra burden on the child-care workers, we took the only spare room for extra activities we had and reshaped it into a comfortable meeting-place for parents.

At the same time the room was given an official function as toy-library where toys are displayed and can be borrowed. Also books and journals, occasionally on pedagogic subjects can be borrowed. he "library" started in january 1975 and has been very successful. Its success may have been due to the fact that first, one of our social workers is always present and acts as a hostess, as a source of information, as a conflict-regulator, etc. and that second there is a permanent supply of coffee.
So now, many of the mothers, after having brought their children to the play-rooms and having stayed there for verying times, come down to the "library" (we use the less formal work "uitlenerij", which perhaps can be best translated as "lending-place") and participate in the group discussions for one or more mornings in the week. The social worker keeps a diary of these mornings, so we know how many parents came on how many days, and we also have a list of subjects discussed in the group. The extent to which mothers and fathers participate ranges from once a month up to 4 times a week. Probably the success of our "uitlenerij" is helped a great deal by the fact that most of our mothers, as is typical for the Dutch society, do not work or only have a part-time occupation.

Apart from the social worker for group activities, the center has one part-time social worker for individual contacts with the parents. She also carries out regular parent interviews to discuss the development of the children with the parents etc.
More recently we extended this last aspect.
Once a year the concerning child-care worker, together with one of the social workers or the director, has a meeting with both parents in which they discuss, as extensive as possible, the development of the child in the last period. We find that this is a very effective way to establish a good mutual relation which is to the advantage of all people involved and in particular the child.

The social workers co-operate with the parents in:

- selecting an appropriate kindergarten for the children when they have passed their fourth birthday
- editing and producing the center-bulletin
- suggesting joint external activities for the parents with their children
- providing information on where to buy good and cheap clothes etc.

They also initiate other actions for the benefit of the parents, for example:

- ensuring that parents are well informed on the aims and methods of the work in the center, and on changes in staff
- helping parents to find information on matters of general interest, such as possibilities for further education, goals of certain action groups, political issues etc.

6. PROJECT LIMITATIONS

Due to experimental losses and various other factors we now expect to end the project with about 48 children from lower socio-economic classes, who have participated in the project for 1 to 3 years.
The number of children whose parents had at least 12 years of formal schooling (college level) is expected to be 18.
The comparison group for the lower class children will be about twice as large, namely 80 to 90 children.
Apart from the relatively small number of children participating in the project, there are six further major limitations to the possibility of confidently assessing the influence of our day care center on the children:

I. Children could not be assigned to experimental and control conditions in a random manner

This is characteristic of the vast majority of studies in the same field. Although we have tried to form a "control group" of similar age and background, the fact that this group consists of children whose parents do not ask for a place in a day care center, also implies that the two groups of parents differ in many other aspects, some of which are unknown.
Furthermore, we had no "pool" from which to select project children, since few parents from lower socio-economic classes in The Netherlands make use of day care facilites. In fact, given the strict criteria for admission to the project (neither parent more than 7 or 8 years of formal schooling etc.) we had trouble in finding enough children to fill the "experimental" groups.
This means that nearly all the selection is made by the parents themselves, which makes it impossible to generalize about children of parents from lower socio-economic classes in Amsterdam.
This difficulty implies that we shall be limited in interpreting results that indicate differences between groups.
Currently a model for statistical evaluation is being developed including an analysis of co-variance in which the entrance test scores will be used as the co-variables.
All analyses will take place in 1975.

II. Measurement of effects is limited by the instruments and the evaluation budget

In section 2.3 we have summarized the tests used for general and language development. Measurement of possible effects is limited by the sensitivity of these instruments. If our evaluation budget were larger, we could have attempted to develop and apply sophisticated methods for observing social and emotional behavior, for example, in day care center situations. But, since it would take considerable time to develop, test and apply these methods, we have had to abandon this idea. We are experimenting with a collection of statements on the social and emotional aspects of the behavior of the children (to be divided into Q-sorts by parents and some members of the staff) to obtain a measurement of opinions on the behavior of the children.
However for various reasons it will be impossible to obtain these opinions about the children from the comparison group. We are interviewing the teachers from the kindergarten classes on the social, emotional and cognitive aspects of the behavior of children from the "experimental" and comparison groups.
However, since the reliability and validity of such methods may be seriously questioned, we shall not place much weight on the outcome of these interviews.

III. Our knowledge about the meaning of the test scores on the tests used is limited

The tests used for children under 5 have not yet been standardized in The Netherlands, which implies that there are no national norms and that the information about the reliability of the instruments is limited to the data collected at our own project.

Of the tests mentioned in section 2.3 only the AKIT general intelligence test has been standardized on a national sample. The reliability and stability of the test is good.

The UTANT test for language development consists of an adaptation of three sub-tests from the ITPA and a vocabulary sub-test derived from Thurstone's PMA 5-7. The test was standardized provisionally on a sample of 800 schoolchildren from Utrecht aged 4 - 7. Reliability and stability of the test are reasonable.

For the Bayley, the Stutsman Merrill-Palmer and the Stanford-Binet, the only references we have are the published data on the North American standardization samples. Considering cross-cultural differences, it is obvious that tests may change considerably when translated and used in other cultures.

Besides it is doubtful whether these tests still meet current psychometric standards. This applies specifically to the Stutsman and the Stanford-Binet. To mention only two of the short-comings, even in the United States no one knows whether 100 is still the mean of the population, while sub-norms for groups with different occupational status are totally unknown.

So we are more or less dependent on the data collected in our own project. For example, we have obtained the following stability-coefficients for the Stutsman-test.

period between the two testings	number of children	co-efficient of correlation
3 - 5 months	11	0.78
6 - 8 months	29	0.76
9 -12 months	29	0.70

The coefficients of correlation mentioned above were based on children with rather a large age range, but a restricted age group, taking the first test between the age of 35 and 40 months, yielded a correlation of about 0.75 both after 3 - 5 months and after 6 - 8 months.

The stability-coefficients obtained seem to indicate that the immediate test/re-test reliability of the Stutsman for Dutch children (according to our translation and our way of testing) will almost certainly be over 0.80, which seems acceptable for such an early and unstable age.
From the data collected in our project we hope to derive valid developmental regression-coefficients, means and standard deviations for the kind of Dutch children studied in our project.

IV. Different tests were used for different age groups

Since any test we chose can only be used for children from a limited age group, we had to shift to different instruments in order to cover the whole age range from 1 - 6 years. Obviously, this is an enormous set-back for the interpretation of the scores obtained. Although little is known about the tests themselves even less is known about the relationship between the tests. Therefore, we are considering comparing the scores on one test with the scores on the next in ordinal scale values only.

V. There is no possibility for a random assignment of children or child-care workers to different conditions of treatment within the project

One of the consequences of a project such as ours, in which the people responsible for the daily care of the children make up a cohesive team, is that the researcher loses his superior and detached position as an organizer of situations in which the practical worker is more or less forced to operate. Another consequence is that experimental changes in treatment or environment can only be made with the whole-hearted consent of the practical workers.
From the pedagogical and emotional viewpoint of the child-care workers a random assignment for treatment of a child that has participated in the center is not feasible.

VI. <u>There is no possibility of comparing our data with those from similar projects in The Netherlands or in Europe</u>

Since we know of no other projects in The Netherlands, or even in Europe, with the same goals, the same kind of children and the same kind of instruments for evaluation purposes, we cannot compare our data with those of other projects.
A comparison with data obtained in North American projects will always be doubtful because of the differences between the children and their home surroundings as well as general cultural differences. However, this does not imply that we will not try to compare our data with those from North American projects operating on a similar basis and with similar instruments.

After this discussion on the negative aspects to our research a few positive words seem appropriate.

a. This is the first project in the Nehterlands (and as far as we know for that matter in any other European country) which is collecting so much psychometric data about such young children. The total data will form a foundation for further research.

b. Although we will not be absolutely certain in interpreting the collected scores, it will be possible to say <u>something</u>.
Since we know the pre-test position of the children on two instruments it will be possible to draw conclusions about their post-test positions on other instruments, be it in ordinal terms only.

c. For one of the post-test instruments (AKIT) national norms are available. Norms for a reasonably large comparison group are available for one other (UTANT). In both cases comparisons will make sense, although one has to be aware of the effect of "test-wiseness" of our project-children on the data (see e. below).

d. The Stanford-Binet scores will allow us to make tentative but sensible comparisons with data collected in other, mainly North American pre-school evaluation projects.

e. Given the difficult circumstances, the energy spent in conducting our research as scientifically as possible compares favorably with the nonchalence observed in some other projects.
One example is the special effort we have made to give all the children from the comparison group the same testing experience as our day care-children. Thus, both sets of scores should be equally inflated as to test-wiseness.

7. PARTICIPATION IN ADVISORY WORK CONCERNING THE DEVELOPMENT OF THE DUTCH SYSTEM FOR PRESCHOOL PROVISIONS

The staff of the experimental day care center has played an important role in several committees set up to report on different aspects of Dutch preschool provisions.
Below we mention the two most important ones:

1. On the request of the Secretary of State for Education a committee was formed to advise on the desirability to lower the kindergarten entrance-age in Holland. As we have mentioned above nearly all Dutch children go to kindergarten from their fourth birthday on and the question is now if younger children also should be allowed to go to these kindergartens.
The advisory group came to the conclusion that this would not be a very sensible thing to do. Rather, the group would like to see an extension of the playgroup and day care provisions for children below four, and an amelioration of the quality of these provisions. The classes of the existing kindergartens were considered too large for 3 year old children and the teachers were considered inadequately trained for this particular age-group. Rather than let the 3-year olds try to adapt to the provisions set up for 4- and 5-year old children, the group advised to put more money in a system specifically meant for children of 2 and 3.

   The arguments partly are the same as those used in Great Britain in the controversy between the playgroup movement and the regular infant school system. These arguments also involve the question which system is better for promoting strong relations with the parents of the children.
In Holland as well as in Great Britain the chances for parent participation were thought to be better in the playgroup and day care area than in the kindergarten or infant-school system.
As yet (Juni 1974) it is uncertain whether the Dutch government will take any action in accordance with or contrary to the advice given in this report.

2. On the request of a body co-ordinating the efforts to develop a better system for training those who are working in or who want to work in poaygroups and day care centers, an advisory committee was formed which brought out a report in May 1974. The staff of our day care center was deeply involved in formulating the goals for such a new form of teacher-training, both on a general level and in the behavioral details.
The report deals with all the aspects of the work in playgroups and day care centers and puts emphasis on the role the day care worker plays in the educational system at large.
In the report the intricate social and emotional complexities of the job, in dealing with children, parents and co-workers, are illustrated with examples from daily practice.
Also an extensive but not unrealistic list of behaviors is given which are thought to be instrumental for fostering development in the children being cared for. It is hoped that this report will be followed by action to create a system for training the day-care and playgroup workers of the future.
It is also hoped that this report will be translated into other languages.