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ABSTRACT

In the first phase of this study (see ED 040 133), data revealed that lunchroom aides constituted the largest category of paraprofessionals in both paid and voluntary respects. Inasmuch as the lunchroom aide was found to be the most common paraprofessional, the decision was made to study this type of paraprofessional in depth. Questionnaires were sent to principals, all lunchroom aides, and 25 percent of the teachers in 150 randomly selected schools qualified for inclusion in the study based on the use of three or more lunchroom aides working in the building. The response rate constituted 89.3 percent of the total requested. Survey results are provided in tables and texts under the headings (1) profile of lunchroom aides, (2) working environment of the lunchroom aide, (3) participants' perceptions of lunchroom aides job, (4) lunchroom aide employment procedures and policies, and (5) lunchroom aides' perceived and preferred roles. (Author/MLF)

Research Coordinating Unit

THE STATUS AND ROLE OF LUNCHROOM AIDES IN SELECTED NEW YORK STATE SCHOOL DISTRICTS

PHASE TWO OF A CONTINUING STUDY
SCHOOL PARAPROFESSIONALS:
ROLES AND JOB SATISFACTIONS

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Occupational Education Research
Albany, New York 12224

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Phase Two of a Continuing Study
School Paraprofessionals: Roles and Job Satisfactions

With the Aid of a Grant from the Bureau of Occupational Education Research, The New York State Department of Education, Albany, New York

Department of Education
College of Agriculture
Cornell University, Ithaca, New York

February, 1970

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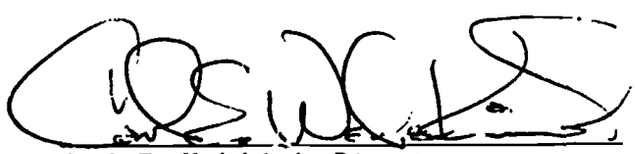
FOREWORD

Increasing Federal attention is being directed toward school lunch programs. When the Senate recently passed an expanded school lunch bill, it provided free lunches for nine million children. Many more children will benefit from "reduced-price" meals.

The government is also in the process of developing school breakfast programs. As lunch programs are expanded and breakfast programs are begun, there will be an increasing demand in the schools for food service personnel. School lunchroom aides, the largest category of paraprofessionals presently being used in New York State school districts, should continue to receive major consideration as a source for satisfying this demand.

This report was coordinated for publication by Theresa M. Mack, Associate, and Whitney G. Wilkes, Aide in the Bureau of Occupational Education Research. Additional single copies may be obtained by writing: Bureau of Occupational Education Research, New York State Education Department, Albany, N.Y. 12224.



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Forty-five New York State school districts participated in this phase of the continuing study of school paraprofessionals. Grateful appreciation is extended to the chief school administrators, building principals, teachers, and lunchroom aides who responded so well to extensive questionnaires. Returns were received from 89.3 percent of the individuals contacted.

Funding for this study was provided by the Bureau of Occupational Education Research, the New York State Education Department. The assistance of the Bureau is very much appreciated.

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The Status and Role of Lunchroom Aides in Selected New York State School Districts

Introduction

The first phase in a continuing study of the role and job satisfactions of school paraprofessionals revealed a surprising number of New York State schools actively participating in this approach. Of the 94 percent of responding school districts larger than common schools and exclusive of New York City, use of paraprofessionals was reported by 94.7 percent. The total number of paid paraprofessionals (10,054) was about twice the number of voluntary paraprofessionals (4,854).

Lunchroom aides constituted the largest category of paraprofessionals in both paid and voluntary respects. In 407 school districts of the State there was a total of 3,106 paid lunchroom aides; in 18 school districts voluntary lunchroom aides totaled 738.

Nature of Phase Two

Inasmuch as the lunchroom aide was found to be the most common paraprofessional, decision was made to study this type of paraprofessional in depth. Random selection was made of 20 suburban central school districts, 20 rural central school districts, and 5 enlarged city school districts on the basis of admitted lunchroom aide use.

A roster of principals, teachers, and lunchroom aides by school buildings within the cooperating school districts was obtained from the chief school administrators. It was found that 180 school buildings were located within the 45 districts. Of these school buildings, 150 (83.3 percent) were qualified for inclusion in the study based on the use of three or more lunchroom aides working in the building.

As a next step in the study, "packages" of questionnaires were sent to the principals of the qualifying school buildings. A "package" consisted of the following: (1) a questionnaire to be completed by the building principal, (2) a questionnaire to be completed by all lunchroom aides, and (3) questionnaires to be completed by a random selection of teachers comprising 25 percent of the total teacher population within a school building. (A copy of the questionnaire, together with instructions for the principal for distributing, collecting, and returning the entire package, may be obtained from the Bureau of Occupational Education Research, New York State Education Department, Albany, New York 12224.)

The response from school buildings constituted 89.3 percent of the total requested including 89 from suburban central, 33 from rural central and 12 from enlarged city school districts. A total of 1,437 questionnaires was returned by 330 lunchroom aides, 978 teachers, and 129 building principals.

Profile of Lunchroom Aides

Age of Lunchroom Aides

Nearly three-quarters of the lunchroom aides are between 30 and 49 years. Almost one-quarter of these aides are over 49. Very few aides are less than 30 years old.

Table 1: Age of Lunchroom Aides

Age	Frequency	Percent of Total
Under 20	1	.3
20-25	1	.3
26-29	11	3.4
30-39	109	33.5
40-49	128	39.4
Over 49	75	23.1
Total	225	100.0

Selection of Lunchroom Aides by Sex

The majority (55.3 percent) of schools do not select lunchroom aides on the basis of sex. A little less than half of the schools hired only women while three schools hired only men.

Table 2: Selection of Lunchroom Aides by Sex

Sex	Frequency	Percent of Total
Male	3	3.2
Female	46	41.5
Either	66	55.3
Total	115	100.0

Formal Education of Lunchroom Aides

The majority (58.8 percent) of lunchroom aides in the study are high school graduates. Seventeen percent have had some high school experience, and about 11 percent (10.8) have been to college but have not graduated.

Table 3: Formal Education of Lunchroom Aides

Level of Formal Education	Frequency	Percent of Total
8th Grade or Less	12	3.7
Some High School	55	17.0
High School Graduate	190	58.8
Trade School	18	5.6
Some College	35	10.8
Bachelor's Degree	7	2.2
Master's Degree	0	0
Doctor's Degree	0	0
Other	6	1.9
Total	323	100.0

Lunchroom Aide Marital Status

Nine-tenths (90.8 percent) of the lunchroom aides contacted in the study are married. Another 5 percent are widowed. Very few single, divorced, or separated individuals hold lunchroom aide positions.

Table 4: Lunchroom Aide Marital Status

Marital Status	Frequency	Percent of Total
Single	6	1.8
Married	295	90.8
Widowed	17	5.2
Divorced or Separated	7	2.2
Total	325	100.0

The Working Environment of the Lunchroom Aide

Lunchroom Aide Working Arrangements

Almost 90 percent (86.4) of the lunchroom aides are considered as regular workers, but working only part-time. (Table 5) Better than 90 percent (94.4) of the aides are on a daily schedule. (Table 6)

Table 5: Working Arrangements of Lunchroom Aides

Time Required	Frequency	Percent of Total
Full-Time	37	11.4
Part-Time	280	86.4
As Needed	7	2.2
Total	324	100.0

Table 6: Time Schedules of Lunchroom Aides

Time	Frequency	Percent of Total
Daily	301	94.4
Alternate 2 or 3 Days per Week	7	2.2
2 Consecutive Days	0	0
1 Day per Week	11	3.4
Other	0	0
Total	319	100.0

Daily Work Hours

As might be expected, most of the lunchroom aides are busy in school during the noon hour periods. Almost three-quarters (73.8 percent) work between the hours of 10:30 A.M. and 1:30 P.M.

Table 7: Hours Typically Worked by Lunchroom Aides

Hour	Frequency	Percent of Total
Preschool Hours		0
Morning Only (e.g. 8 A.M. - 10 A.M.)	3	.9
Morning and Midday (e.g. 8 A.M. - 1:30 P.M.)	26	8.1
Midday Only (10:30 A.M. - 1:30 P.M.)	236	73.8
Afternoon and Midday	36	11.3
Afternoon Only	1	.3
8 Hour Day	18	5.6
Total	320	100.0

Number of Hours Normally Worked Per Week

Three-quarters (75.9 percent) of the lunchroom aides contacted work under 15 hours per week. This approximates 3 hours a day and agrees with the tabulation of just under 75 percent of the aides in school from 10:30 A.M. to 1:30 P.M. (Tables 7 and 8) Only a small fraction are retained for longer lunchroom duty or other work.

Table 8: Number of Hours per Week Worked by Lunchroom Aides

Number of Hours	Frequency	Percent of Total
Under 15	245	75.9
Approximately 20	34	10.5
Approximately 30	11	3.4
Approximately 40	3	.9
Other	30	9.3
Total	323	100.0

Distance Traveled by Lunchroom Aide from Home to School

[illegible] percent (91.7) of the lunchroom aides contacted travel 5 miles or l[illegible] between home and school. Only three aides (0.9 percent) have homes over 10 miles from school.

Table 9: Travel Distance, Home to School

Mileage: Home to School	Frequency	Percent
0-5	297	91.7
6-10	24	7.4
11-15	3	.9
Total	324	100.0

Lunchroom Aides Hourly and Monthly Wages

The median monthly salary for paid lunchroom aides is about $65.00. Half of the lunchroom aides report a salary of $1.00 to $1.50 per hour. About one-third (33.4 percent) receive hourly wages of $1.50 to $2.00.

Table 10: Lunchroom Aides Hourly Wages

Dollars per Hour	Frequency	Percent of Total
Less than $1.00	16	5.4
$1.00 - $1.50	150	50.7
$1.51 - $2.00	99	33.4
$2.01 - $3.00	28	9.5
More than $3.00	3	1.0
Total Aides	296	100.0

The Lunchroom Aide Reports on How Long it Took Her to Learn Her Job

From the point of view of the lunchroom aide only a short time was needed to become acquainted with the details of the job. Of the lunchroom aides so reporting, 140 (43.6 percent) reported learning the job in a week while 125 (38.9 percent) believed they needed only 1 day.

For those few aides who felt they needed more than a week it is presumed that they may be among the group who have had their positions complicated by other nonlunchroom details or more extensive lunchroom duties.

Table 11: Lunchroom Aide: Time Needed to Learn Her Job

Time	Frequency	Percent of Total
About 1 day	125	38.9
About 1 week	140	43.6
About 1 month	43	13.4
Several months	7	2.2
About 1 year	6	1.9
Several years	0	0
Total	321	100.0

Training Provided Lunchroom Aides after Employment

Individual on-the-job training for lunchroom aides is provided by about three-quarters (76.3 percent) of the schools studied. Group inservice training is arranged by 16 (13.6 percent) of the schools. Special training by outside organizations in conjunction with school authorities is conducted in four of the schools. Many schools use combinations of post employment training.

Table 12: Training Provided for Lunchroom Aides after Employment

Type of Training	Number of Schools Providing	Percent
Individual on-the-Job Training	90	76.3
Group Inservice Training	16	13.6
Special Training	4	3.4
No Special Training Provided	28	26.4

Lunchroom Aide Views of Additional Work and Training

Only a very small fraction (9.2 percent) of lunchroom aides report that they have had additional training. At the same time a large number (84.1 percent) state their belief that additional training is necessary. (Table 13) This view seems at odds with their report (table 11) that only a short time is needed to learn the job. This paradox may perhaps be explained by aide perception of what is and what might be. The aides may view lunchroom details as mundane and casual with something missing; additional training programs might improve understanding and performance.

When lunchroom aides were asked whether they felt qualified to do other school work, four-fifths replied affirmatively. Of this number, 92.4 percent stated they would be willing to do this work. It would appear that most aides feel they are able and would like to take on other duties in addition to lunchroom service. It is noted that 8.2 percent have other jobs outside of school.

Tasks Other Than Lunchroom Aide Duty Performed by the Lunchroom Aide

It is common practice for lunchroom aides to perform additional tasks. Only 42 of the 311 respondent lunchroom aides (13.5 percent) reported lunchroom work as the sole school task. The most frequently reported additional task is audiovisual. Many combinations are evident.

Table 13: Additional Work and Training Perceived by Lunchroom Aides

Question	Yes	%	Unc.*	%	No	%
Have you had additional training?	29	9.2			286	90.8
Do you feel qualified to do more responsible work?	245	80.1			61	19.9
(If yes) would you be willing to do this work?	206	92.4			17	7.6
Have you had previous para-professional experience?	63	20.5			244	79.5
Do you need additional training to do your job?	270	84.1	26	8.1	25	7.8
Do you have another job outside of school?	29	8.2			296	91.8

*Unc. = Uncertain

Table 14: Tasks Other Than Lunchroom Aide Duty Performed by the Lunchroom Aide

Other Tasks	Frequency	Percent of Total
Audiovisual Aide	47	15.1
Playground Aide	2	.6
Teaching Aide	14	4.5
Library Aide	14	4.5
Transportation Aide	9	2.9
Other	183	58.9
Lunchroom Aide Only	42	13.5
Total	311	100.0

Lunchroom Aide Time in Present Position

Nearly all (94.5 percent) of the lunchroom aides have worked less than 1 year at their present positions. None of the aides has worked longer than 3 years. This short job tenure may, perhaps, be explained by the relatively short length of time most school districts have used lunchroom aides.

Table 15: Lunchroom Aide Time in Present Position

Time in Present Position	Frequency	Percent of Total
Less than 1 Year	307	94.5
1-3 Years	18	5.5
More than 3 Years	0	0
Total	325	100.0

Lunchroom Aides Job Plans and Satisfactions

Slightly over half (57.0 percent) of the lunchroom aides intend to stay on their same jobs for the coming year; 21.0 percent expect to be at the same school, but in another position. This retention of about 75 percent seems to indicate considerable continuity in the lunchroom aide programs. These data perhaps indicate some job satisfaction and security.

Table 16 shows lunchroom aide job satisfaction. The evidence from contact with lunchroom aides in the study suggests high satisfaction with the personnel involved, including supervisors; somewhat less satisfaction with the job itself; and considerable dissatisfaction with promotion possibilities and salary. Over 90 percent of the aides are satisfied with the personnel with whom they work and their immediate supervisors. Three-quarters show satisfaction with the type of work required. In the matter of promotion possibilities slightly over half (51.6 percent) are dissatisfied, somewhat dissatisfied, or neutral. Pay dissatisfaction, although representing a small fraction (20.7 percent), is large enough to constitute a possible problem needing consideration.

Table 16: Lunchroom Aide Job Satisfaction

Job Conditions	Satisfied		Somewhat Satisfied		Neutral		Somewhat Dissatisfied		Dissatisfied	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
The people with whom you work	294	91.0	19	5.9	6	1.9	4	1.2	0	0
The supervision you receive	287	90.3	21	6.6	8	2.5	2	.6	0	0
The work you do	239	75.2	44	13.8	20	6.3	13	4.1	2	.6
The promotions available	98	38.6	25	9.8	68	26.8	22	8.7	41	16.1
The pay you receive	148	48.5	58	19.0	36	11.8	24	7.9	39	12.8

Social Privileges of Lunchroom Aides

Acceptance of lunchroom aides may in part be measured by the degree to which staff members view social privileges. Five social factor questions were considered by principals, teachers, and lunchroom aides. (Table 17)

Should lunchroom aides use the teachers' lounge? Over two-thirds of the principals felt that aides should have this privilege. The majority (61.9 percent) of teachers agree with the principals. On the other hand there was no real indication of aides as a whole desiring to use the teachers' lounge since about half said "no" and half said "yes"; those aides with negative feelings may perhaps wish to have their own lounge or feel a little estranged from teachers.

Should lunchroom aides attend faculty meetings? A decidedly strong opinion is indicated by all groups against attendance of aides at faculty meetings.

Should lunchroom aides join teachers at coffee breaks? Slightly over half of principals and teachers would like aides to join with teachers for coffee breaks. On the other hand almost three-quarters (73.7 percent) of the aides think otherwise. The question once again raises the possibility of aide sense of exclusion or nonacceptance primarily by teachers.

Should lunchroom aides attend PTA meetings as part of their job? No group, principals, teachers, or aides, believes this to be necessary. The aides are most pronounced against required attendance.

Should lunchroom aides "chit-chat" with teachers? All groups strongly favor informal communications between aides and teachers. No group block in informal conversation seems to be indicated.

Lunchroom Aide Perception of Immediate Supervisors

In 87.9 percent of the cases lunchroom aides consider the building principals as their immediate supervisors. Food supervisors, teachers, and cooks are seldom considered in this light.

Table 17: Group Ratings of Lunchroom Aide Social Privileges in the School

Selected Activity	Percent of Group in Agreement*			
	Principals	Lunchroom Aides	Teachers	Total
Use teachers' lounge	67.2 (80)	50.2 (145)	61.9 (579)	59.8 (804)
Attend faculty meetings	17.4 (21)	6.2 (17)	13.1 (122)	12.1 (160)
Join teachers at coffee breaks	56.4 (66)	26.3 (75)	57.9 (531)	50.9 (672)
Attend PTA meetings	33.6 (40)	24.2 (68)	43.9 (398)	38.7 (506)
Chit-chat with teachers	90.2 (111)	85.6 (268)	87.0 (820)	86.9 (1199)

*Number in parentheses indicates number in group responding favorably.

Table 18: Lunchroom Aide Perception of Immediate Supervisor

Supervisor	Frequency	Percent of Total
Classroom Teacher	12	3.7
Building Principal	282	87.9
Cook	1	.3
Food Supervisor	10	3.1
Other	16	5.0
Total	321	100.0

Participants' Perceptions of Lunchroom Aides Job

Group Ratings of How Well Lunchroom Aide Duties are Defined

The three groups, principals, teachers, and lunchroom aides, were asked to indicate how well they believed the aide duties were defined. Answers to five questions were requested.

Do lunchroom aides know what their job includes? Principals (96.0 percent) and lunchroom aides (97.5 percent) strongly agree that they do. About three-quarters of the teachers agree, while slightly over one-quarter are uncertain.

Do teachers know what the lunchroom aide's job includes? Again the principals and lunchroom aides strongly agree. A majority of teachers believe they understand the aide duties, but a substantial number of teachers (23.4 percent) are uncertain. This fact indicates lapses of information in connection with teacher knowledge of aide duties.

Are lunchroom aides given a written list of duties? Over 60 percent (68.3) of principals and over half (57.0 percent) of the aides state that no written list of job duties are given out. The great majority (81.1 percent) of teachers are uncertain.

Are lunchroom aides told what to do in their jobs? Nearly all of the principals (99.2 percent) and aides (96.2 percent) react positively to this question. Most of the teachers (62.1 percent) also answer affirmatively although slightly over one-third (35.9 percent) are uncertain.

Do lunchroom aides know what their jobs do not include? Nearly 90 percent (89.4) of the aides believe they understand the job limitations. Over one-fifth (20.5 percent) of the principals and 59 percent of the teachers are uncertain. The principals may be asked several questions: "Why is there uncertainty?" "Did the lunchroom aides have proper orientation?" "What means should be used to determine whether the aides were properly oriented?"

Group Rating of Lunchroom Aide Job Preparation

Principals, teachers, and lunchroom aides were asked to respond whether the lunchroom aides in their schools were well, adequately, or poorly prepared for their duties. A very high percentage (81.8) of the aides believed they were well prepared. Principals (69.4 percent) and teachers (65.0 percent) rated the aides as adequately prepared. No aides rated themselves as poorly prepared and only about 15 percent of the principals and teachers felt the aides to have had poor preparation.

Group Rating of Lunchroom Aide Job Performance

Slightly over half of the principals are satisfied with lunchroom aide job performance; a little less than one-third are somewhat satisfied. Teachers are perhaps a little more critical with almost 50 percent satisfied and one-quarter somewhat satisfied. The aides themselves view their efforts much more favorably.

Group Rating of Lunchroom Aide Job Importance

The degree to which importance is credited to the lunchroom aide is worth knowing. Principals, teachers, and the aides were asked to respond in terms of four related questions. (Table 22)

To the question, "Does the lunchroom aide's job help students?" the great majority of respondents in all three groups answered affirmatively. Teachers as a whole were a little less certain than principals and aides.

All groups agree strongly that lunchroom aides are important to the school. About one-quarter (26.9 percent) of the teachers are uncertain.

That teachers appreciate aide work is agreed upon by all groups. Of interest is the fact that the aides have more doubts and uncertainties than other groups. Teachers themselves state that they do appreciate the importance of lunchroom aide work (89.0 percent).

Table 19: Group Ratings of How Well Lunchroom Aide Duties are Defined

Knowledge of Job Definition	Principals Frequency	Principals Percent	Lunchroom Aides Frequency	Lunchroom Aides Percent	Teachers Frequency	Teachers Percent	Total Frequency	Total Percent
Lunchroom aides know what their job includes								
Yes	120	96.0	318	97.5	705	73.5	1144	81.1
Uncertain	5	4.0	8	2.5	244	25.4	257	18.2
No	0	0	0	0	10	1.1	10	.7
Most teachers know what the job includes								
Yes	107	85.6	291	90.7	573	61.9	991	70.6
Uncertain	18	14.4	26	8.1	285	29.7	329	23.4
No	0	0	4	1.2	80	8.4	84	6.0
Lunchroom aides are given a written list of duties								
Yes	35	28.5	128	42.0	58	6.1	221	16.1
Uncertain	4	3.2	3	1.0	763	81.1	770	56.2
No	84	68.3	174	57.0	120	12.8	378	27.7
Lunchroom aides are told what to do in their jobs								
Yes	124	99.2	310	96.2	589	62.1	1023	73.3
Uncertain	1	0.8	6	1.9	341	35.9	348	24.9
No	0	0	6	1.9	19	2.0	25	1.8
Lunchroom aides know what their job does not include								
Yes	94	77.0	280	89.4	353	37.2	727	52.5
Uncertain	25	20.5	19	6.1	560	59.0	604	43.6
No	3	2.5	14	4.5	36	3.8	53	3.9

Table 20: Group Rating of Lunchroom Aide Job Preparation

Level of Preparation	Principals Frequency	Principals Percent	Lunchroom Aides Frequency	Lunchroom Aides Percent	Teachers Frequency	Teachers Percent
Well	19	15.3	266	81.8	184	19.9
Adequate	86	69.4	59	18.2	600	65.0
Poor	19	15.3	0	0	139	15.1
Total	124	100.0	325	100.0	923	100.0

Table 21: Group Rating of Lunchroom Aide Job Performance

Level of Satisfaction	Principals Frequency	Principals Percent	Lunchroom Aides Frequency	Lunchroom Aides Percent	Teachers Frequency	Teachers Percent
Satisfied	72	58.1	210	65.4	477	49.7
Somewhat Satisfied	38	30.6	73	22.7	241	25.1
Neutral	5	4.0	25	7.8	129	13.5
Somewhat Dissatisfied	9	7.3	12	3.8	78	8.1
Dissatisfied	0	0	1	.3	34	3.6
Total	124	100.0	321	100.0	959	100.0

When lunchroom aide importance is related to parental support only principals as a majority agree that this is the case. Both teachers and aides indicate a majority view of uncertainty or disagreement. A sizable number of principals (40.8 percent) are of similar view. It would appear that little effort has actually been made to determine public support and understanding of lunchroom aides and their part in the school program.

Table 22: Group Rating of Lunchroom Aide Job Importance

Area of Importance and Level of Agreement	Principals		Lunchroom Aides		Teachers		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Helps Students								
Agree	98	78.4	268	86.2	578	62.5	964	69.2
Uncertain	21	16.8	43	13.8	281	29.4	345	24.8
Disagree	6	4.8	0	0	78	8.1	84	6.0
No Response	1	--	18	--	21	--	--	--
Important to School								
Agree	104	83.2	294	92.5	684	71.3	1082	77.1
Uncertain	20	16.0	22	6.9	258	26.9	300	21.4
Disagree	1	.8	2	.6	18	1.8	21	1.5
No Response	1	--	11	--	18	--	--	--
Teachers Appreciate Aides' Work								
Agree	117	93.6	269	84.3	859	89.0	1245	88.4
Uncertain	8	6.4	47	14.8	86	8.9	141	10.0
Disagree	0	0	3	.9	20	2.1	23	1.6
No Response	1	--	10	--	13	--	--	--
Parents Support Aides' Work								
Agree	71	56.8	147	46.8	332	34.9	550	39.6
Uncertain	51	40.8	155	49.4	577	60.7	783	56.4
Disagree	3	2.4	12	3.8	41	4.4	56	4.0
No Response	1	--	12	--	28	--	--	--

Lunchroom Aide Employment Procedures and Policies

Minimum Age Requirement for Lunchroom Aides

Most school districts (81.4 percent) do not require a minimum age. Where minimum age is required the range is from 18 to 32 years, with a median of 21.

Table 23: Minimum Age Requirements for Lunchroom Aides

Minimum Age	Frequency	Percent of Total
18	4	3.4
21	16	13.6
22	1	.8
32	1	.8
No Age Designated	96	81.4
Total	118	100.0

Maximum Age Requirements for Lunchroom Aides

Similar to the situation with minimum age, school districts generally do not establish maximum ages for lunchroom aides. In the very few schools where maximum ages are determined, the range varies from 45 to 70 years. (Table 24)

How Lunchroom Aides Reported Means of Obtaining Positions

Of the 308 lunchroom aides responding to this question, 136 (44.2 percent) state that they received their positions through direct contact with school district personnel offices. Second in frequency was information passed on to the lunchroom aides by school employees. Table 25 identifies sources suggested as possibilities and frequency of use.

Table 24: Maximum Age Requirements for Lunchroom Aides

Maximum Age	Frequency	Percent of Total
45	1	.9
60	1	.9
65	4	3.4
70	2	1.7
No Age Designated	109	93.1
Total	117	100.0

School District Educational Standards for Lunchroom Aides

About half (49.2 percent) of the school districts included in the study have no specific educational requirements for lunchroom aides. On the other hand slightly less than this number (44.1 percent) of school districts require a high school diploma as contingent to employment. (Table 26)

Table 25: How Lunchroom Aides Reported Means of Obtaining Positions

Means of Obtaining Position	Frequency	Percent of Total
Through Relative or Friend	24	7.8
Through School Employee	101	32.8
Newspaper Ad	25	8.1
Applied to School Personnel Office	136	44.2
Government Employment Office	0	0
Private Employment Office	0	0
Radio/TV Announcement	0	0
Union Announcement	0	0
Other	22	7.1
Total	308	100.0

Table 26: Educational Standards Required

Standard	Frequency	Percent of Total
Less than High School	7	5.9
High School Diploma	52	44.1
Some College	0	0
College Degree	1	.8
No Special Requirements	58	49.2
Total	118	100.0

Lunchroom Aide Perception of Level of Education Necessary and Sufficient to Satisfactorily Discharge Tasks

Most (53.4 percent) lunchroom aides in the study consider the high school diploma as the minimum educational standard necessary for proper discharge of their duties. Somwhat less (41.3 percent total) feel that either an education through eighth grade or some high school experience is sufficient. Very few (5.3 percent) view higher education in this light. (Table 27)

This perception agrees in part with the district (44.1 percent) educational requirement of at least a high school diploma, but is at odds with 49.2 percent of districts demanding no special requirements. (Table 26)

Table 27: Lunchroom Aide Perception of Needed Educational Requirements

Level of Education	Frequency	Percent of Total
Eighth Grade or Less	46	14.4
Some High School	86	26.9
High School Diploma	171	53.4
Some College	8	2.5
College Degree	0	0
Other	9	2.8
Total	320	100.0

Fringe Benefits Afforded the Lunchroom Aide

It would appear that fringe benefits are not generally afforded lunchroom aides. When these benefits are permitted they are located primarily in sick leave with pay (41.9 percent) and in free meals (31.6 percent).

Table 28: Fringe Benefits for Lunchroom Aides

Fringe Benefit	Afforded	Percent of Total
Free Meals	101	31.6
Health Insurance	23	7.2
Sick Leave With Pay	134	41.9
Retirement (Not Social Security)	32	10.0
Vacation With Pay	18	5.6
Life Insurance	15	4.7
Other	12	3.6

Sources of Funds Supporting Lunchroom Aide Programs

The regular school budget is the source of funds for the support of lunchroom aide programs in 94.9 percent of the school districts. In eight of these districts governmental support supplements, or is used in place of, the school budget.

Table 29: Sources of Funds for Lunchroom Aide Program

Source	Frequency	Percent of Total*
Regular School Budget	112	94.9
Governmental Support	8	6.8
Foundation Support	0	0
Private Resources	0	0
Other	5	4.2
Total	125	---

*Percent total exceeds 100.0 since some school districts use combinations of fund sources.

Group Rating of Advisability of State Certification Requirements for Lunchroom Aides

Teachers and lunchroom aides were asked to consider whether State certification requirements should be applied to the lunchroom aide position. Over three-quarters (76.7 percent) of the teachers and slightly over 60 percent (61.8) of the aides felt this was not necessary. (Table 30)

Table 30: Group Rating of State Certification Advisability for Lunchroom Aides

Certification Needed?	Teachers Frequency	Teachers Percent	Lunchroom Aides Frequency	Lunchroom Aides Percent	Total Frequency	Total Percent
Yes	215	23.3	115	38.2	330	27.0
No	707	76.7	186	61.8	893	73.0

Lunchroom Aides Perceived and Preferred Roles

Contrast of Lunchroom Aide Expected and Actual Role

Nearly all lunchroom aides are doing what they expected as their role. Job descriptions and/or expectancies appear to be accurate with actual situations. The few cases of discrepancy are probably due to (1) insufficient information by school officials, (2) additional duties appended without prior information, or (3) overselling and/or misinformation.

Table 31: Expected and Actual Roles

Job is as expected	Frequency	Percent of Total
Yes	308	96.0
No	13	4.0
Total	321	100.0

Group Ratings of Actual and Ideal Lunchroom Aide Job Activities

The study attempted to discover the perception of principals, teachers, and lunchroom aides in regard to actual as contrasted to ideal job activities associated with the work of the lunchroom aide. The actual job activity roles as considered by each group are shown in table 32.

Table 32: Actual Role, Group Rating of Activities Perceived as Components of Lunchroom Aide Job

Lunchroom Aide Activity	Principal Percent Yes	Lunchroom Aide Percent Yes	Teacher Percent Yes
Keep Attendance Records	3.2	3.7	3.9
Sell Food	12.1	13.1	18.1
Sell Lunch Tickets	2.4	2.1	8.7
Punch Meal Tickets	1.7	.4	7.2
Make Up Menus	.8	0	4.7
Take Lunch Counts	4.1	9.9	11.6
Keep Lunch Records	5.6	8.8	13.3
Inventory Supplies	4.8	5.5	8.1
Issue Passes	20.3	16.0	24.7
Answer Telephone	8.1	7.3	16.8
Answer Intercom	24.6	11.2	27.9
Complete Accident Reports	46.3	16.1	30.9
Compile Absentee Lists	3.3	1.8	3.1
Bring Students From Class to Lunch	11.5	16.3	8.9
Keep Order in Lunchroom	100.0	96.5	94.8
Take Students From Lunch to Class	18.9	25.2	12.9

Table 32: (Cont.)

Lunchroom Aide Activity	Principal Percent Yes	Lunchroom Aide Percent Yes	Teacher Percent Yes
Take Care of Ventilation and Lights	80.5	51.2	67.0
Take Food to Classrooms	1.6	6.1	3.3
Take Food to Other Buildings	0	0	1.6
Clean up Lunchroom	40.3	39.9	43.6
Clean Kitchen	4.0	1.3	9.0
Collect Dirty Dishes	9.7	13.6	14.7
Wash Dishes	2.4	1.3	8.5
Serve Food on Line	8.1	4.3	11.3
Prepare Food for Cooking	.8	0	7.6
Cook Food	.8	0	7.3
Set Tables	20.2	8.6	13.1
Clean Tables	60.2	64.4	50.7
Play Records: Music Appreciation	19.5	11.9	10.7

Review of table 32 indicates that there is agreement among the groups that actual job activities for most lunchroom aides heavily involve the following jobs (in order of greatest frequency): keep order in the lunchroom, take care of ventilation and lights, clean tables, clean up lunchroom, complete accident reports, and collect dirty dishes. Other job activities are much less frequent in appearance.

All three groups generally agree with the existence of job activities. Such differences in views apply only to small percentages of teachers, principals, and lunchroom aides and do not reflect the groups in general.

Small percentages of teachers credit lunchroom aides as actually performing certain job activities which the principals and lunchroom aides do not admit. These are: sell lunchroom tickets, punch meal tickets, make up menus, keep lunch records, wash dishes, prepare food for cooking, cook food, answer telephone, and clean kitchen. The probable reason for the differences in views by these small numbers of teachers lies in the teachers' lack of real knowledge of lunchroom aide performance with the result that their opinions as reported in the study were based on hearsay or guess work in terms of what they thought the aides probably were doing.

By and large principals and lunchroom aides agree concerning lunchroom aide jobs. The few differences involve small percentages of both groups.

On the basis of mean scores the composite opinions of all three groups are to be seen in table 33.

Table 33: Rank Position of Mean Scores Group Ratings of Actual Activities Perceived as Components of Lunchroom Aide Job

Job Activity	Rating	Job Activity	Rating
Keep order in lunchroom	1.01*	Take lunch counts	1.90
Take care of ventilation and lights	1.35	Serve food on line	1.90
Clean tables	1.46	Inventory Supplies	1.93
Clean up lunchroom	1.57	Clean kitchen	1.93
Complete accident reports	1.70	Sell lunch tickets	1.93
Collect dirty dishes	1.70	Wash dishes	1.94
Answer intercom	1.76	Prepare food for cooking	1.94
Issue passes	1.77	Cook food	1.94
Sell food	1.83	Punch meal tickets	1.95
Take students from lunch to class	1.84	Keep attendance records	1.96
Answer telephone	1.86	Take food to classrooms	1.96
Set tables	1.87	Compile absentee lists	1.97
Keep lunch records	1.88	Make up menus	1.97
Play records	1.88	Take food to other buildings	1.99
Bring students from class to lunch	1.89		

*Duty most common in practice

Principals, teachers, and lunchroom aides were asked to express their opinions concerning the job activities of lunchroom aides which should constitute their ideal roles. These ideal job activities are shown in table 34.

Table 34: Ideal Role, Group Ratings of Activities Perceived as Components of Lunchroom Aide Job

Lunchroom Aide Activity	Principal Yes	Principal Percent Yes	Lunchroom Aide Yes	Lunchroom Aide Percent Yes	Teacher Yes	Teacher Percent Yes
Keep Attendance Records	8	14.8	18	11.8	130	14.9
Sell Food	15	13.8	16	10.6	220	23.5
Sell Lunch Tickets	24	21.8	15	10.2	285	33.1
Punch Meal Tickets	22	20.2	7	4.8	258	30.5
Make up Menus	6	5.4	7	4.8	75	8.7
Take Lunch Count	33	29.5	16	10.7	350	40.4
Keep Lunch Records	29	25.7	19	12.8	318	36.8
Inventory Supplies	17	15.0	14	9.5	159	18.6
Issue Passes	35	31.2	44	28.0	354	41.3
Answer Telephone	20	18.2	17	11.7	269	31.7
Answer Intercom	36	33.3	28	13.3	396	46.3
Complete Accident Reports	55	50.5	31	21.5	456	52.5
Compile Absentee Reports	11	9.9	13	9.2	136	15.9
Bring Students from Class to Lunch	41	36.6	30	20.7	366	41.5

Table 34: (Cont.)

Lunchroom Aide Activity	Principal Yes	Principal Percent Yes	Lunchroom Aide Yes	Lunchroom Aide Percent Yes	Teacher Yes	Teacher Percent Yes
Keep Order in Lunchroom	109	98.2	115	58.3	882	97.8
Take Students from Lunch to Class	41	36.9	43	29.1	406	46.0
Take Care of Ventilation and Lights	90	81.8	79	51.6	681	77.1
Take Food to Classrooms	8	7.5	8	5.8	94	10.9
Take Food to Other Buildings	5	4.7	0	0	56	6.5
Clean up Lunch-room	53	48.6	38	26.2	417	47.4
Clean Kitchen	5	4.6	4	2.9	100	11.5
Collect Dirty Dishes	16	14.7	12	8.6	158	18.2
Wash Dishes	5	4.6	3	2.2	93	10.7
Serve Food on Line	12	11.0	10	7.1	151	17.3
Prepare Food for Cooking	3	2.8	2	1.4	73	8.4
Cook Food	1	.9	2	1.4	68	7.9
Set Tables	33	30.6	15	10.6	203	23.6
Clean Tables	69	63.9	64	43.0	479	54.7
Play Records	56	52.3	50	33.1	486	55.8

Table 34 indicates a strong agreement among all groups that lunchroom aides should be involved in the following job activities (in order of frequency): keep order in lunchroom and take care of ventilation and lights.

Disagreements between views of lunchroom aides with principals and teachers are more numerous. Principals and teachers are more inclined to feel that the aides should be involved in the following job activities: playing records, cleaning tables, taking lunchroom counts, keeping lunch records, issuing passes, answering telephones and intercoms, completing accident reports, bringing students from class to lunch and return, and cleaning up lunchroom. With these items lunchroom aides show much less support.

On the basis of mean scores the composite opinions of all groups in regard to the ideal job composites are shown in table 35.

Comparative Rank of Actual and Ideal Roles of Lunchroom Aides: Composite Groups

A comparison of the combined group ratings for actual and ideal lunchroom aide job activity is given in table 36.

A correlation[1] of .852 between actual and ideal rank scores indicates a strong relationship. This high relationship indicates that the composite views of principals, teachers, and lunchroom aides tend to be quite similar in terms of actual and ideal lunchroom aide job activity importance.

Collective group opinion supports almost uniformly both actual and ideal lunchroom job activity as most important (in order of frequency): keep order in lunchroom, take care of ventilation and lights, clean tables, clean up lunchrooms, and complete accident reports.

On the other hand the same collective group opinion places the following job activities as least important (in order of frequency): take food to other buildings, make up menus, compile absentee lists, take food to classrooms, and keep attendance records.

In contrasting actual as against ideal rankings only "collecting dirty dishes" seems to be very much out of order. Actual practice places this activity in the "frequently done" category, while ideally the composite group places it at about the middle of desired activities. "Selling food" also seems to be done more than ideally desired; as eighth in actual rank, it is 17th in ideal rank. The matter of "punching meal tickets" has more support in practice than in theory.

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[1]On basis of Spearman Rho

Table 35: Rank Positions of Mean Scores Group Ratings of Ideal Activities Perceived as Components of Lunchroom Aide Job

Job Activity	Rating	Job Activity	Rating
Keep order in lunchroom	1.11*	Set tables	1.77
Take care of ventilation and lights	1.25	Sell food	1.78
Clean tables	1.46	Inventory supplies	1.83
Play records	1.48	Collect dirty dishes	1.83
Complete accident reports	1.52	Serve food on line	1.85
Clean up lunchroom	1.55	Keep attendance records	1.86
Take students from lunch to class	1.57	Compile absentee lists	1.86
Answer intercom	1.58	Take food to classrooms	1.90
Issue passes	1.62	Clean kitchen	1.90
Bring students from class to lunch	1.62	Wash dishes	1.91
Take lunch counts	1.65	Make up menus	1.92
Keep lunch records	1.67	Prepare food for cooking	1.93
Sell lunch tickets	1.71	Take food to other buildings	1.94
Answer telephone	1.72	Cook food	1.94
Punch meal tickets	1.74		

*Duty most commonly thought as ideal

Table 36: Composite Group Comparative Ranking of Actual and Ideal Job Activities as Based on Unweighted Means

Job Activity	Actual Rank	Ideal Rank	Job Activity	Actual Rank	Ideal Rank
Keep order in lunchroom	1	1	Take lunch counts	16½	11
Take care of ventilation and lights	2	2	Serve food on line	16½	20
Clean tables	3	3	Inventory supplies	19	18½
Clean up lunchroom	4	6	Clean kitchen	19	23½
Complete accident reports	5½	5	Sell lunch tickets	19	13
Collect dirty dishes	5½	18½	Wash dishes	22	25
Answer intercom	7	8	Prepare food for cooking	22	27
Issue passes	8	9½	Cook food	22	28½
Sell food	9	17	Punch meal tickets	24	15
Take students from lunch to class	10	7	Keep attendance records	25½	21½
Answer telephone	11	14	Take food to classroom	25½	23½
Set tables	12	16	Compile absentee lists	27½	21½
Keep lunch records	13½	12	Make up menus	27½	26
Play records	13½	4	Take food to other buildings	29	28½
Bring students from class to lunch	15	9½			

Comparative Rank of Actual and Ideal Roles of Lunchroom Aides: Individual Groups

It is of interest to compare principal, teacher, and lunchroom aide ratings of actual with ideal job activities. Table 37 shows this comparison based on weighted means.

The correlation of principals' actual with ideal rankings of lunchroom aide job activities is .866. Teachers' rank correlation of these activities is .797 and the lunchroom aides correlation is .902. All of these correlations are quite high and tend to show that each group places actual and ideal job activities in similar ranking.

Lunchroom aides generally view actual jobs as very close to the ideal. This lack of difference may be due to satisfaction on the job and/or lack of experience and training leading to limited knowledge concerning job possibilities and importance. On the other hand teachers as a group believe the lunchroom aide's actual versus ideal situation to be less perfect, although not greatly out of line.

Table 37: An Analysis of the Differences Between Group Ratings of Actual and Ideal Lunchroom Aide Roles

Lunchroom Activity	Principal		Lunchroom Aide		Teacher	
	Actual	Ideal	Actual	Ideal	Actual	Ideal
Keep order in lunchroom	1	1	1	1	1	1
Take care of ventilation and lights	2	2	3	2	2	2
Clean tables	3	3	2	3	3	4
Complete accident reports	4	5	7	8	5	5
Clean up lunchroom	5	6	4	7	4	6
Answer intercom	6	9	12	10	6	7
Issue passes	7	10	8	6	7	10
Set tables	8	11	15	15½	12	16
Play records	9	4	11	4	16	3
Take students from lunchroom to class	10	7	5	5	13	8
Sell food	11	20	10	15½	8	17
Bring students from class to lunchroom	12	8	6	9	18	9
Collect dirty dishes	13	19	9	20	10	19
Answer telephone	14½	16	16	13	9	14
Serve food on line	14½	21	19	21	15	20

Table 37: (Cont.)

Lunchroom Activity	Principal		Lunchroom Aide		Teacher	
	Actual	Ideal	Actual	Ideal	Actual	Ideal
Keep lunch money records	16	13	14	11	11	12
Inventory supplies	17	17	18	18	20	18
Take lunch count	18	12	13	14	14	11
Clean kitchen	19	26½	23½	25	17	23
Complete absentee lists	20	22	22	19	28	21
Keep attendance records	21	18	20	12	26	22
Sell lunch tickets	22½	14	21	17	19	13
Wash dishes	22½	26½	23½	26	21	25
Punch meal tickets	24	15	25	23½	24	15
Take food to classroom	25	23	17	22	27	24
Make up menus	27	24	27½	23½	25	26
Prepare food for cooking	27	28	27½	27½	22	27
Cook food	27	29	27½	27½	23	28
Take food to other buildings	29	25	27½	29	29	29

Conclusions

Demography of Lunchroom Aides

1. Three-quarters of the aides range in age from 30 to 49 years. Only 4 percent are under 30. Those of 50 and over constitute about one-fifth (23.1 percent) of the aides.

2. The majority (58.8 percent) of lunchroom aides are high school graduates. Seventeen percent have had some high school study. About one-tenth (10.8 percent) have had some college experience. Only 3.7 percent of the aides have had an eighth grade education or less.

3. Over 90 percent of the lunchroom aides are married and the same percent of aides work in school on a daily basis.

Working Environment of Lunchroom Aides

1. Lunchroom aides tend to live within a short distance from the school building where they work.

2. Almost three-quarters of the lunchroom aides work between the hours of 10:30 A.M. to 1:30 P.M. A small fraction of the aides (5.6 percent) work an 8-hour day.

3. Slightly over half of the lunchroom aides earn between $1.00 to $1.50 per hour. One-third of the aides earn between $1.51 and $2.00 per hour. The median monthly salary for all lunchroom aides is about $65.00.

4. Almost half (43.6 percent) of the lunchroom aides believe they need a maximum of 1 week to learn the job while 38.9 percent feel only 1 day was needed. On the other hand, 84.1 percent of the aides would like further training although the nature of their needs is not described.

5. Over three-quarters of the lunchroom aides received on-the-job training. Group training and/or special training in conjunction with other institutions is at a minimum.

6. Over four-fifths of the lunchroom aides wish to be engaged in school work in addition to their present duties. Only 13.5 percent of the aides reported lunchroom services as their sole school work. Audiovisual assistance was most often reported as extra work.

7. In general (94.5 percent) lunchroom aides have held their positions for less than a year.

8. Better than half of the lunchroom aides plan to remain at their jobs for the coming year. About one-fifth of the aides anticipate a different position in the school system. Retention of about 75 percent seems certain.

9. Most aides are satisfied with the personnel involved in lunchroom work, but appear less satisfied with the job primarily because of promotion blocks and lack of salary increases.

10. Principals and teachers generally agree that lunchroom aides should have the privilege of using the teachers' lounges; in contrast proportionally fewer aides indicate an interest in this privilege.

11. Principals, teachers, and lunchroom aides strongly agree that lunchroom aides should not attend faculty and P.T.A. meetings.

12. Principals and teachers are about evenly divided over the question of inviting lunchroom aides to teacher coffee breaks while 26.3 percent of the aides want to join the teachers at this function. All three groups strongly support enhancement of informal contacts between lunchroom aides and teachers.

13. Almost 90 percent of the lunchroom aides consider the building principal as their immediate supervisor.

Perception of Lunchroom Aides and their Jobs

1. The majority of principals believe lunchroom aides fully understand their job criteria; teachers are less certain. Most teachers believe their own knowledge of lunchroom aide work details to be sufficient to make judgments; on the other hand, one-quarter of the teachers admit to meager knowledge. Nearly all (96.0 percent) of the lunchroom aides state that they are doing what they expected to do when they accepted their positions.

2. Less than half of the lunchroom aides are given written descriptions of their jobs. Teachers show very little knowledge of the means through which the aides are oriented.

3. Almost 90 percent of the lunchroom aides believe that they understand the job limitations. About one-fifth of the principals and just over half of the teachers have reservations concerning this knowledge.

4. Lunchroom aides (81.8 percent) believe they are well prepared to carry out their duties. Principals (69.4 percent) and teachers (65.0 percent) rated lunchroom aides as only adequately prepared. A small percentage of principals (15.3 percent) and teachers (15.1 percent) rated the aides as poorly prepared.

5. Teachers as a group are more critical of lunchroom aide performance than are principals, and principals are more critical concerning such performance than are the aides. Only 49.7 percent of the teachers indicate full satisfaction with the work of lunchroom aides.

6. Principals, teachers, and lunchroom aides generally support the importance of the lunchroom aide program for students, although teachers tend to be a little less certain.

7. Principals as a whole view the position of the lunchroom aide as important to parental support. However, teachers and lunchroom aides are generally in doubt about this importance.

Lunchroom Aide Employment Procedures and Policies

1. Most school districts do not have regulations concerning minimum and maximum ages for lunchroom aide service. Where regulations do exist, minimum requirements range from 18 to 32 years with a median age of 21, and maximum requirements range from 45 to 70 with a median age of 65.

2. The great majority of lunchroom aides reported that they learned of the existence of their positions through school personnel offices (44.2 percent) and through other school employees (32.8 percent).

3. In the hiring of lunchroom aides school districts operate with and without consideration of educational requirements. The high school diploma is the standard for 44.1 percent of the schools reporting in the study, while 49.1 percent of the schools have no special educational requirements.

4. Over 50 percent (53.4) of the lunchroom aides believe a high school diploma is the necessary educational standard for lunchroom aide employment.

5. Fringe benefits are not generally afforded lunchroom aides. When they are afforded they are usually limited to sick leave with pay (41.9 percent) and free meals (31.6 percent).

6. The regular school budget is the source of support for nearly all reported lunchroom aide programs. Governmental support (6.8 percent) is limited and appears to be a supplement to the regular school budget.

7. Teachers and lunchroom aides generally do not favor State certification for lunchroom aides.

8. Principals, teachers, and lunchroom aides believe the actual job of the lunchroom aide includes (as most frequently reported and in order): keep order in lunchroom, take care of ventilation and lights, clean tables, complete accident reports, and collect dirty dishes.

9. All three groups agree that the ideal role of the lunchroom aide should include keeping order in lunchroom, and taking care of ventilation and lights. Principals and teachers also agree, but with less support from lunchroom aides, that the lunchroom aide should also be involved with playing records, cleaning tables, taking lunchroom counts, keeping lunch records, issuing passes, answering telephones and intercoms, completing accident reports, bringing students to and from classes, and cleaning up the lunchrooms.

10. Correlations of lunchroom aide roles indicate high agreement of each group in respect to actual and ideal roles, and between groups in these respects.

ophthalmoscopically, and therefore such visual failure is often initially described as 'cerebral' or 'cortical' blindness, while in other cases congenital optic atrophy or congenital nystagmus is diagnosed. The electroretinogram, however, is always grossly abnormal in the earliest stages, and in later years ophthalmoscopically observable lesions often develop, and may progress to the final picture resembling retinitis pigmentosa.

This points up another important area in which the ophthalmologist can play a significant and invaluable role in the diagnosis and management of deaf-blind children. This is in the provision of specialized laboratory facilities to aid in the diagnostic evaluation and continuing follow-up evaluation of these children. The traditional types of visual field studies is one example of this, and an important one, but very often these studies are impractical, if not impossible, in this group of children, because such tests are subjective ones which require excellent cooperation, a reasonable degree of intellectual understanding, steady visual fixation, and good communication with the patient. In the presence of severe visual impairment, often with pendular or other types of nystagmus and unsteady fixational patterns, mental retardation, apprehension, and inadequate cooperation so often present in these children, and the frequent difficulties in communication accompanying their impaired hearing, visual field studies are, more often than not, totally impractical in this group. Even in children with normal vision, hearing, and intelligence, accurate visual field studies are difficult to obtain before the age of 6 to 7 years. This is often much later than we need, or would like to obtain, the information available from such studies.

However, more recently developed electro-physiologic diagnostic techniques, now available in many medical centers, provide important, and indeed often invaluable, laboratory information to assist the ophthalmologist.

Electroretinography, and visually evoked cortical responses now have a very important place in the visual assessment of infants and children. Electro-oculography requires good cooperation from the subject, so that no entirely satisfactory methods have been worked out for the use of this technique in young and uncooperative children.

In electroretinography, the eye must remain stationary behind the contact lens electrode during the period of recording, which requires that some form of sedation or general anesthesia be used. With the pupil fully dilated for the test, a thorough ophthalmoscopic examination of the retina and fundi can be carried out at the same time, combined with photographic recording of the fundus.

The ERG is of great value in infants and children in whom the ophthalmoscopic examination reveals no definite abnormalities, even though there is marked visual impairment. Examples of important applications of this technique are in Leber's congenital amaurosis, in which there is a

marked reduction or extinction of the ERG response, and in the allied condition of Congenital Cone Dysfunction Syndrome. In the latter condition there is a diminished ERG response in the light adapted eye, and a much reduced ERG fusion-frequency when a flickering light stimulus is used, because the rod flicker-frequency is much less than that of the cones.

The second electro-diagnostic investigation which is valuable in early childhood is the assessment of the cortical responses induced by light stimulation. These responses can be studied by examining the electro-encephalographic recordings from occipital skin electrodes when repeated light flashes are presented to the eyes. Those changes in potential which are seen in the recording occurring at the same frequency as that of the stimulating light have been induced by the light. With the use of a special purpose computer, a series of electrical potentials fed into the computer can be summated, or averaged, so that only those electrical changes which occur at the same interval of time after each light flash, which represent the visually evoked response (VER) add up so as to appear in the final tracing. Random and out-of-phase cerebral electrical activity is not summated and so forms no significant part of the total recorded response.

If there occur, then, resultant waves of changes in electrical potential at the frequency of the stimulating light, this demonstrates that there is no profound defect of the eyes, of the visual pathways, or of the visual cortex.

As this technique is quite painless, it is possible for it to be carried out without general anesthesia even in small infants, who can lie in their mother's arms, although in some cases mild sedation is required.

As a dominant proportion of the visual cortex is concerned with macular function, the VER is principally a measure of macular function and this is a very important feature. The VER is therefore, markedly reduced in amplitude if there is a considerable defect in the function of the macula itself, or in those fibres in the optic nerves and optic radiations which transmit macular sensation, or in the visual cortex itself. It follows that the assessment of the VER is of more clinical value than the ERG when a view of the fundus is obscured by opacity of the media. For if the VER is normal then there is no gross defect in any of the pathways subserving macular function. On the other hand, the ERG response, which stems from the retinal elements in the outer layers of the retina, namely the rods and cones, and the bipolar cells, will be normal even in the presence of a severe functional abnormality of the macula alone, or of the optic nerves, or of the visual cortex.

Last, a reminder may be in order that the ophthalmologist must, of course, provide the same services in caring for deaf-blind children

that he provides in caring for children with other than these severe disabilities. Thus, he will prescribe glasses in cases of high refractive errors, where glasses may be indicated and helpful. He will prescribe special optical aids in instances of very low vision where these might provide helpful visual improvement. In many instances, in children with impaired hearing who wear hearing aids, the latter can be made a part of their spectacle frames.

The ophthalmologist will treat those children who have strabismus, with or without amblyopia, in the usual acceptable ways, including not only the use of glasses, and occlusion, where these are indicated, but also surgery for functional or cosmetic objectives. Surgery may well be indicated, of course, in children with congenital cataracts, congenital glaucoma, and others. Decisions as to the advisability and timing of surgery should be made in consultation with other members of the professional team, especially the pediatrician, the psychologist, and the audiologist.

The ophthalmologist should follow these patients at periodic intervals, the frequency to be determined by the nature of the problem. Such follow-up examinations are indicated for several reasons: the child's visual status may change, as it very often does, with growth and development; better cooperation from the child with repeated examinations and with further growth and better understanding often permits more reliable testing and better results; changes in his physical, emotional, or educational status may require alternations in the ophthalmologic management or planning.

In summary, the multi-faceted role of the ophthalmologist in the diagnosis and evaluation of deaf-blind children has been described as one in which he:

(1) Attempts to establish a complete ophthalmologic diagnosis, evaluate the child's present and potential vision, and promotes and carries out a treatment plan that hopefully will result in maximum visual improvement at the youngest age possible, and with a view toward optimum developmental growth, emotional health, and educational attainment;

(2) Functions as a member of the team along with the pediatrician, otologist, neurologist, psychologist, psychiatrist, genetic counselor, social worker, the speech pathologist and audiologist, the teacher and special educators;

(3) Assists in providing guidance and strength to the patient and his family, and that he help them to face their difficult problem with an optimistic and hopeful outlook;

(4) Recognizes that combined visual and hearing impairments may vary quantitatively and temporally in severity and progression, that the combination is most frequently congenital or hereditary, and that the early establishment of accurate diagnoses is important not only to attain the optimum result for the patient, but also in order to identify any carriers that may exist and to provide information for the genetic counseling indicated to avert further spread of the disease;

(5) Is aware of the similarities in the origin and development of various elements of the eye and internal ear in order that he may better interpret the findings in combinations of visual and hearing defects and also maintain a high index of suspicion of such combined defects when they are not obvious;

(6) Familiarize himself with the large number of diseases and syndromes in which ophthalmologic abnormalities may be associated with deafness;

(7) Must be constantly alert to the fact that in many of these children, the hearing and visual impairments may be accompanied by pathologic involvement of other organ systems, and diagnostic evaluations and therapeutic plans must be made in the light of other organ systems involved;

(8) Can make significant contributions to the total diagnosis in some of these children from the specific and confirmatory findings in the eyes;

(9) Can help to establish or eliminate the genetic nature or cause of an abnormality from the ophthalmologic findings;

(10) Provides essential ophthalmologic and electro -physiologic diagnostic facilities which currently are essential in the early and accurate diagnostic evaluation of many of the ophthalmologic abnormalities;

(11) Provides the usual ophthalmological care and services for these children that he provides for all his other patients, namely glasses and optical aids where indicated, orthoptics, and surgery when indicated;

(12) Recognizes that the problems of these children change with time, growth, and development, and therefore conducts periodic follow-up examinations for them.

REFERENCES

1. Vernon, N.: Usher's Syndrome - Deafness and Progressive Blindness. J. Chron Dis. 22 : 133, 1969.

2. Bonamour, G.and Bonnet, N. : Lesions of the Uveal Tract with Disorders in Hearing. Ann. Ocul. 197:172, 1964.

3. Smith, D.W. : Recognizable Patterns of Human Malformation. W. B. Saunders Co. Philadelphia, 1970.

4. Francois, J. : Genetic Aspects of Ophthalmology. Little, Brown and Co., Boston, 1968.

THE AUDIOLOGICAL EVALUATION

OF THE DEAF-BLIND CHILD

Marion P. Downs, M.A.

The deaf-blind child poses unique problems to the audiologist in identifying and evaluating his hearing status. Not only does the visual defect confound the testing procedure, but the frequent presence of cerebral dysfunction complicates the customary measurement techniques. The problems of casefinding and of evaluation will be discussed in this paper, and some proposals will be made for guidelines to follow.

Early Identification: The first line of defense we must consider is early identification of the condition. The deafness particularly must be identified in early infancy, in order to utilize residual hearing during the critical periods for language development. Once these critical periods have been passed, by two or three years of age, language learning becomes increasingly more difficult to implant. Let us never forget that Helen Keller heard normally until she was two years old, at which age Eric Lenneberg tells us that 60% of our basic language abilities are established. No educator should feel inadequate if she has not produced the high language level of a Helen Keller, in a congenitally deaf child. Permanent language deficit of some degree inevitably results when high quality language stimulation is not present in the first few years of life. Even the development of adequate hearing perceptions in the child with a great deal of residual hearing is directly dependent upon the age at which amplification is introduced. Early treatment is of the essence.

It is also urgent to identify the deafness early so that an otological diagnosis can be made upon which to base the selection of therapy program. Although it is rare, total agenesis of the cochlea and 8th nerve does occur, in which no hearing is possible. This condition can now be identified by a new radiographic technique called polytomography. When it is found, language input must be achieved by methods other than auditory. The otolaryngologist gives us a more hopeful prognosis in cases of rubella deafness, where histopathological studies have shown that conductive losses can exist in addition to the sensori-neural defect. Thus the severity of the air-conduction audiogram need not preclude successful hearing perceptions being developed with amplification, for the functional hearing may be better than air thresholds indicate. No recommendation for therapy should be made without the guidance

of a knowledgeable otolaryngologist who is able to predict the auditory function from the known pathological condition.

When should the hearing be tested? Most certainly, shortly after birth in every child who is at Risk for visual and/or hearing problems. In Dr. Kaplan's and Dr. Bergstrom's papers, the High Risk conditions are explicitly described. Every newborn infant falling into those categories should be carefully evaluated in a sound room by an experienced audiologist. Even when no hearing loss appears to be present at birth, the High Risk child should be retested regularly every three months during the first year, every six months until three, and yearly thereafter. In many of the categories, the tendency to deafness is inherited, but will not become manifest until some time after birth. Vigilance should never be relaxed.

Conversely, the vision of the deaf child should also be carefully monitored. Dr R. G. Suchman reported that 58% of the children at Kendall School for the Deaf were found to have either impairment of visual acuity or visual anomalies. Ninety percent (90%) of those with correctable vision had not been identified because of inadequate ophthalmic examination.

Hearing Testing of the Deaf-Blind: In measuring the hearing of normally sighted infants and children, we are guided by normative data that tells us what kind of auditory behavior we can expect at a certain age, and to what intensity levels the infant will respond. (See attached chart). Such norms have been obtained on large populations of normal infants. The problem we face in testing the blind child is that no auditory behavior norms have been obtained on this group. Added to this is the frequent presence of cerebral dysfunction, which further confounds the testing picture.

In testing the visually impaired child, we are forced to rely on the observation of subtle behavior responses and on the auditory reflexes to sound. The auditory reflexes are present at birth in both the sighted and the blind child. For example, all infants give a neck turning reflex at one time or another during the newborn period. This reflex is extinguished after a few months and is replaced by the higher level, conscious orienting to a sound source at about four months of age. But in the blind infant, there is no survival value in developing the orienting responses, so we are not likely to see it until he becomes older.

Another common reflex is the Moro's response, or startle, which is present in all children in the newborn period. In the sound room, we produce a startle by introducing a sudden speech signal at 65-70 dB, or a warbled pure tone signal at 80-90 dB. A startle response at these levels indicates normal range of hearing or at worst, can occur in a mild sensori-neural loss.

The more subtle auditory responses must be observed in the quiet of a sound room. They consist of "arousal" responses when the infant is asleep, and "quieting" responses when he is awake. This listening attitude of the blind child is evident after six months; in the very young infant it may be only a momentary cessation of activity.

The babbling activity of the deaf-blind may give no clue to the hearing status, as the deaf infant is known to babble quite normally until 5 or 6 months. By five months, the normal hearing infant develops a large repertoire of phonemes, but in the deaf the variety of phonemes decreases rather than increases.

In Miss Groves' paper she describes with great insight the problems of dealing with the deaf-blind child who also has cerebral dysfunction. Such children tend to inhibit their responses to sound as they grow older, and become increasingly more difficult to test. In early infancy, however, these children give good reflexive responses to sound, and are easier to test than later on.

In summary, we need a great deal more data on the deaf-blind population if we are to deal with their problems. Perhaps these data are available; if so, they should be compiled in a comprehensive manner. In the meantime, we should establish certain goals that will guarantee the best treatment for the deaf-blind child. Such goals for hearing identification and evaluation are outlined in the accompanying Guide-Line Proposal.

PROPOSED GUIDE-LINES FOR IDENTIFICATION AND EVALUATION OF HEARING PROBLEMS

IN THE DEAF-BLIND

I. Hearing testing, at birth, of all infants at risk for visual handicaps, and monitoring of the hearing for as long as indicated.

a. Minimum equipment:
   1. Sound-treated room
   2. Measured acoustic signals, both warbled pure tones and speech, through clinical audiometer in sound field.
   3. Calibrated noise makers.

b. Observations to be made:
   1. Auditory reflexes:
      Startle to 65-70dB speech signal
      Startle to 70-90dB complex sounds
   2. Subtle behavioral responses:
      Quieting to noisemakers or speech at 45-50dB.
      Arousal from sleep at same levels.

c. Personnel: Certified Audiologist experienced in testing infants.

II. Complete otological evaluation to identify pathology and assess whether residual hearing may exist.
Includes: Examination under microscope, polytomography where indicated; evaluation of genetic factors and concomitant symptomatology which assists in diagnosis of probable pathology.

III. Complete diagnostic hearing tests at any age at which a hearing loss is first suspected.

a. Minimum equipment
Same as above, plus availability of evoked response audiometric testing and acoustic bridge measures.

b. Observations to be made:
   1. Under two years: Awareness, quieting, or "listening" responses to sound levels appropriate for age.
   2. Over two years: vocal responses to speech, play conditioned audiometry, or operant conditioning audiometry.

c. Personnel: Certified audiologist experienced in testing infants and children.

IV. Immediate Application of binaural hearing aids when loss is identified, providing sufficient residual hearing is present.

a. Minimum Equipment:
   Same as above
b. Observations to be made when testing aids: same as above.
c. Personnel: same as above.

V. Immediate placement in an appropriate therapy program, whether auditory, tactile, or both.
(Question: is there a tactile "signing" technique available to deaf-blind infants such as the manual Signing-with-Syntax technique for totally deaf sighted infants?)

INDEX OF NORMAL INFANT AUDITORY BEHAVIOR
(IN QUIET ROOM OR SOUND ROOM)
STIMULUS AND LEVEL OF RESPONSE
(RE: ANSI REFERENCE LEVEL)

AGE	Noisemakers (Bells, Squeeze toys, Rattles, etc.)	Warbled Pure Tones (1st response on ascending presentation)	Speech (1st response on ascending presentation)	Expected Response	Startle to Speech
0 - 6 weeks	40-60 dB		60 dB	Eye widening. Stirring or arousal from sleep	65 dB
		78 (SD=0 dB)		Startle or Eye Blink	
6 weeks - 4 months	40 - 50 dB		47 dB (SD= 2 dB)	Eye widen, eye shift, quieting; beginning rudimentary head turn	65 dB
		70 dB (SD=10 dB)		Eye blink, quieting, beginning head turn	
4 months - 7 months	30 - 40 dB	51 dB (SD=9 dB)	21 dB (SD= 8 dB)	Head turn on lateral plane toward sound. "Listening" attitude.	65 dB
7 month - 9 month	30 - 40 dB	45 dB (SD=15 dB)	15 dB (SD=7dB)	Direct localization of sounds to side or below ear level.	65 dB
9 months- 13 months	20 - 30 dB	38 dB (SD=8 dB)	8 dB (SD=7 dB)	Direct localization of sounds toside or below ear level indirectly above.	65 dB
13 months - 16 months	20 - 30 dB	32 dB (SD=10 dB)	5 dB (SD=5 dB)	Direct localization of sounds on side & above & below	65 dB
16 months - 21 months	25 dB	25 dB (SD=10 dB)	5 dB (SD=1dB)	Same	65 dB
21 months - 24 months	25 dB	26 dB (SD=10 dB)	3 dB (SD=2dB)	Same	65 dB

* Modified from: Chap.2, Deafness in Childhood, Vanderbilt University, 1967, Testing Hearing in Infancy & Early Childhood, pp.25-33.

REPORT OF AUDIOLOGY GROUP

This group recognizes the unique character of the deaf-blind population and the resultant challenge to the expertise of the audiologist in evaluating the auditory status. It is agreed that no body of knowledge is available to the evaluator of the deaf-blind at the present time, nor has specialized training arisen to cope with the problems of testing this population. There is a great need for developing the requisite expertise, utilizing both objective and subjective procedures.

Objective techniques have not answered the peculiar needs of testing the deaf-blind: Evoked Response Audiometry is of dubious value for infants before one year of age and for cases with cerebral dysfunction; Acoustic Bridge measures are reported to be useless in the first four months because no acoustic reflex can be elicited at this time; (Later, however, it may give some gross indications of hearing;) Operant conditioning techniques show promise of giving auditory measurements on the older infant; Cardiac evoked response audiometry may ultimately be developed as a useful tool.

In general, research needs for the deaf-blind are similar to those for the sighted deaf, namely: (1. Investigations on the functioning of hearing aids and fitting techniques; (2. Study of communication methodology for the infant and older child.

In answer to the question on reporting of hearing loss, this group recommends the following:

1. That the audiologist make a summary statement with regard to the degree of hearing loss and its significance, in terms of its handicapping effect and the restrictions it will impose on education and learning skills.

2. That reporting shall be in terms of ISO calibration, and the average of the speech frequencies (500-2000 Hz) shall be the guide for interpreting the degree of loss, as follows:

0-26dB: Normal Range of Hearing. The educational significance of a 15-26dB loss depends on the individual child's needs.

26-40dB: Mild Hearing Loss. Significant educational handicap results unless hearing aid is successfully worn.

40-65dB: Moderate Hearing Loss. Fairly severe educational handicap unless hearing aid is successfully worn and intensive special training obtained.

65-90dB: Severe Hearing Loss. Extreme educational handicap ensues, and even with hearing aid, learning problems may be acute. Intensive special training required.

90dB: Profound Hearing Loss. Hearing aid may or may not be able to be effective for language input. Many variables must be considered in educational placement for this degree of loss. Choice of auditory, oral, manual or tactile methods of communication must be made as early as possible.

Total deafness: Manual and/or tactile procedures for communication must be applied.

PSYCHO-EDUCATIONAL ASSESSMENT OF DEAF-BLIND CHILDREN

Frances Jamieson

In today's rapid stream of life, we have learned to step gingerly to avoid being swept into the sea of anonymity. We tend to accept developmental scales, psychological tests and educational practices that have been developed for normal children and "water down" these accepted guidelines for normal children to meet the needs of any child who deviates from the norm, because of physical disabilities. It is difficult to find a "normal" child in the current mainstream of education. It is a gigantic task to establish normative data on children who have multiple sensory deficits.

Currently, there are no specific intelligence or educational tests on the market for deaf-blind children. We are attempting to develop meaningful instruments as we find specific ways in which multiple sensory deficits affect maturation and learning. The majority of deaf-blind children we have seen this past year are retarded according to all standardized scales, that is, retarded in motor age, social growth, and intellectually. This is understandable when one reviews their medical history, the hospitalizations involved and the variations of sensory deprivations. We have used and adapted standardized tests to enable us to get a baseline from which to evolve scales, tests, and educational practices as we begin to understand the progress made by deaf-blind children as compared to so-called normal children. Perhaps psychologists are "hung up" with terms such as severely retarded--indicating little evidence of ability to learn, moderately retarded--showing evidence of ability to learn, and dull-normal and average intellectual levels. However, these are terms that the general population has learned to accept and which have some meaning for educators, for whom we prepare our reports. We shall probably find that such terms as motor age, adaptive age, language and personal-social age may be more meaningful for these particular children.

Materials we have used to test various aspects of the child's growth and development include a plastic form ball obtained from the Tupperware Company which is bright red with yellow plastic forms, the Sequin Formboard and the Mare and Foal puzzle from the Arthur Performance Scale to determine awareness of form and shape as well as the types of approach to problem solving which the child uses. The Sequin Formboard islarge and the children are usually small physically and find it difficult to reach across to obtain the forms; so it is necessary to either modify

the size of the board or to modify the method of administration. In the beginning, no attempt was made to time the performances, but increasingly we have found that time can be measured and norms could conceivably be established. We have frequently found the Arthur Adaptation of the Leiter International Performance scale, in spite of the fact that the figures are very small, could be very useable in a few selected cases. The beginning of Tray I requires matching of colors with direction, and although some students are able to match colors with other media, they are unable to exhibit any transfer of the learning to this particular task.

Tactile exploration is investigated with the use of tactile materials which include texture differences, differences in thickness and differences in lengths. Tactile skills are one of the areas which seem to be foreign to the child's pre-academic experience. Even self-help skills may be highly developed without any development of the tactile skills. It is the feeling of this psychologist that the uncertainty of stabilized vision, that is, vision that will remain with this child the rest of his life, makes it imperative that tactile training be reinforced continually throughout the primary years. We have attempted to use the Ohwaki-Kohs Tactile Block Designs Intelligence Test for the Blind, but we have found that our children are not able to distinguish the textures, which frequently have minute raised dots and the difference in the various textures is not great enough for children. We have made similar blocks using patent, chenille, corduroy and velvet. These blocks, when placed together, make a design similar to the Kohs blocks and are useable with some deaf-blind children.

The Brite-Lite, a commercial toy, can be used in a darkened room. The small pegs light up when inserted and can be made to form a pattern or used to establish counting concepts. Deaf-blind children are usually fascinated by light and are intrigued with this instrument. Some of them will play as long as twenty minutes with this game, on their own, choosing pegs at random or picking their favorite color pegs to insert. The pegs are small and a certain degree of small muscle control is necessary but the high incentive seems to compensate for the most part for the problem of size.

Portions of the Cattell Infant Intelligance scale can readily be used, but the child is penalized for lack of speech at many of the levels. M & M's are useful in behavior modification with many of these children and when substituted for less meaningful objects such as the cat which is used in the Stanford-Binet Form L-M and hidden under one of three boxes consistently provokes interest and meaningful responses. The small Binet formboard is also used as well as a modification of bead stringing.

We have used a transistor radio and have found that children who have not responded to audiological testing have responded occasionally

to a small radio. Standing behind the child and placing the radio on first one side of the head and then the other, we have been able on occasion to ascertain which ear the child appears to be receiving the most stimulus from. Then by changing from news to music, from male to female singers, we have often gained some insight into the pitch levels which elicit response. The children like to hold the small radio to their ears and quickly learn to change stations to what they want. Many vocalize with the radio and facial expressions frequently reveal that something is happening.

The format of the psychological report I most frequently use appears to be of interest to teachers. First we give the reason for the referral, stating who referred the child and for what purpose. Next a brief history which is pertinent to us. This includes mention of onset of rubella, if applicable, difficulties at birth, the beginning of speech, walking, and the self help skills acquired. A brief statement of the vision and hearing present and glasses or hearing aids if used. Hospitalizations and recent illnesses where indicated. Educational opportunities the child has been exposed to and the status of the child's mobility. We list any previous psychological testing and then the methods of study we have used starting with any formal scales and then the informal methods and finally, observations. Next the appearance and behavior of the child are mentioned, then the findings and the summary. Conclusions are drawn from the whole and listed at the end which incorporate the findings. The main body of the report is developed under Self Care with columns for Abilities--those things the child can do or which we see developing and another column for Needs, which is basically for the parent or teacher as a guide to the steps indicated to bring the child along. A type of personalized blueprint or prescription. Developmental Skills-- Abilities and needs are developed the same way.

Under self care we encourage parents to sew tabs on the back of clothes so the child can begin to tell the front and back of T-shirts, pants, and underwear. A running stick with embroidery thread works or an "X" or other symbol. Finger feeding is especially important to deaf-blind children who are just beginning to chew and to some that are very choosey eaters. Often a weighted spoon (even using clay below the bowl of the spoon) may help a child increase hand control to ease the spilling. Even unwrapping candy requires small muscle and eye-hand coordination and control and this stimulus-reward technique usually works.

Suggestions for other implementations for the teacher are usually given orally in the staffing and the written ones are only to initiate ideas for those working with the child.

Language development is the area most retarded in the deaf-blind child. It is my feeling that part of this is a cultural lag seen in our generation today. Parents of normal children are not talking to their children today. If it were not for TV, many of our children would not receive any language stimulation. Mothers do not sing, talk, play, or read to their children with any consistency. It is the rare parent

today who talks to his infant even when handling him. Thus we can understand that parents of deaf-blind children are further handicapped, for the cooing-laughter and eye movements which are cues and stimulate most parents are very limited in these handicapped children. Parents find it a real "chore" to talk continually and receive no apparent response--so the activity is quickly stopped and many children are handled like inanimate objects--kindly but without the nonsense sounds--kissing, caressing given to children who show some response.

Some parents feel so sorry and/or guilty about their handicapped child that they may want to avoid for him any situation in which he might fail. They will do everything for him because they feel he is their full responsibility. This removes incentive from the child and retards his development. We keep the parents for two days of our five-day diagnosis and then see the child for about three days without the parents. The difference is phenomenal in most cases. A child who wouldn't walk with the parents without screaming and fighting, in two days, without the parents, is walking reluctantly the first day, and by the end of three days, willingly. A child who has always had a night bottle even at seven years of age suddenly does without. Even a child who has been on three bottles a day learns quickly to do without and even to reject a night bottle. Foods never tasted are eaten readily. This has happened too often to be mere chance. Parent education is vital; we must get into the homes through television and educate the general public that these children may be released from their parental smothering, that ignorance and indifference and pity may be replaced by sincere constructive activity. Only then can teachers be released from nursery school activities and find children ready for pre-readiness activities of the kindergarten.

Teachers' observations of behavior and learning for each child will help psychologists develop meaningful instruments to better measure these children and their potential. To assist in this, our teacher meets weekly with the parents to involve them in what we have been teaching for the week and what they can do to help over the weekend or for a vacation period. Each child has a report (rounds) made for him by the teacher, in which short term goals for a six week period are set up. The results are then reported under each skill when the new short term goals are set up.

We attempt to work together as a team, the physician, teacher, psychologist, and language therapist. Each one contributes his special knowledge to the problems as they arise. Each is willing to listen and observe. Knowing that we will probably never have enough teachers for the number of deaf-blind children for the ratio to which we feel these children need instruction, we have attempted, at our facility, to educate our attendant staff to our needs, as well as to learn to observe the needs of these children. No suggestion is taken lightly and each attendant feels their contribution is important, and it certainly is. Who else knows the position of sleeping, the restless nights, their fear

of water, their toileting problems, their tantrums as well as the person who is living outside the classroom with the child. To help systematize their findings we developed a brief check form which at present only includes: eating, toileting, and grooming skills. We have three shifts of attendants and each attendant fills out one of these on the evaluation child and will shortly have a brief form to fill out weekly on the residence children, that we may check on their growth and to estimate the time it takes to learn self care skills as opposed to the time it takes to learn the developmental skills exhibited by the classroom teacher. Skilled teaching vs. unskilled teaching--yes, we agree; but, then, what parent or foster home is skilled?

Each day we hope to see some change in the classroom. Perhaps our biggest regret is that the rapid change which is so dramatic in our diagnostic children does not emerge with the same consistency in the classroom. Perhaps we ask for too many miracles, but we feel that working together as a team, with love, patience, and God's help, we can make this a happy world for each child. A place where sound, light, taste, smells, gradually push aside the dark curtains of fog and the wonders and joys we take for granted can be enjoyed by these children too.

CHILD'S NAME_____ DATE_____ REPORTER_____

Eating:	Yes	No	Sometimes	Comments
1. uses fingers only				
2. uses spoon with spilling				
3. uses spoon with little spilling				
4. uses fork with aid (fingers)				
5. uses fork without aids				
6. uses knife for spreading				
7. uses knife for cutting				
8. uses fingers as pusher				
9. uses bread as pusher				
10. fingers all foods even though using utensils				
11. drinks from cup with spilling				
12. drinks from cup without spilling				
13. uses straw				
14. drinks from water fountain				
15. uses napkin				
16. eats with minimum of spilling				
17. eats only soft foods				
18. will eat semi-solid food				
19. chews food				
20. chews food and swallows				
21. chews food with mouth closed				
22. food preferences				
Toileting:				
1. Is toilet trained				
2. cares for self at toilet				
3. uses toilet paper				
4. flushes toilet				
5. washes hands after lavatory				
6. readjusts clothing before leaving bathroom				
7. (boys) uses urinal directs flow				
8. (girls) recognizes need for napkins puts on napkin disposes of soiled napkins properly				
Grooming:				
1. washes hands				
2. dries hands				
3. uses soap				
4. can direct flow of water correctly (according to temp.)				
5. washes face				
6. washes hair				
7. rinses hair				
8. uses washcloth				
9. brushes teeth - manually				
10. puts toothpaste on brush				
11. combs hair				
12. brushes hair				
13. bathes with help				
14. bathes alone				
15. can prepare bath water alone				
16. prefers shower to tub				
17. undresses alone				
18. undresses with help.				
19. DRESSES ALONE				
20. dresses with help.				

DIAGNOSTIC SCHOOL FOR NEUROLOGICALLY HANDICAPPED CHILDREN, NORTHERN CALIFORNIA

THIS IS A CONFIDENTIAL AND PRIVILEGED COMMUNICATION

Psychological Evaluation
Name: Bd: 1-19-60 -b- Sept. 15-25, 1969

SELF CARE

Abilities:	Needs:
5. Is toilet trained - can make wants known and can wipe herself.	5. Teach to flush toilet.
6. Good chewing ability for candy -does not drool.	6. Increase desire for chewing foods.
7. Uses spoon poorly but uses fork well.	7. Increase hand control of a spoon with liquids.
8. Has good travel vision and avoids hazards.	8. Teach to open doors. (waits to be waited on)
9. Can drink from a cup or glass unassisted.	9. Teach how to unwrap candy.
10. Dries fingers only, holds hands under water and then holds the soap.	10. Teach to dry entire hand. Coordinate present skills to enable handwashing to be done acceptably.
11. Mother says can use electric toothbrush.	11. Teach skills without electric implement.
	13. Teach to comb and brush doll's hair, then her own.
	14. Teach to hang up clothes.
	15. Teach to use knife for spreading - later for cutting.

DEVELOPMENTAL SKILLS

Abilities :	Needs:
1. Can match by basic color (not shadings).	1. Teach to match by size. Teach Tactile kinesthetic skills.
2. Can match by texture.	2. Match by simple pictures. Suggest using cans with labels.
3. Can cover square and round boxes.	3. Kinesthetic body awareness needs to be taught.

DIAGNOSTIC SCHOOL FOR NEUROLOGICALLY HANDICAPPED CHILDREN, NORTHERN CALIFORNIA

THIS IS A CONFIDENTIAL AND PRIVILEGED COMMUNICATION

PSYCHOLOGICAL EVALUATION
NAME: BD: 1-19-60

DEAF-BLIND PROJECT
Seen here 9/15-25/69

REASON FOR REFERRAL: Child was referred by , for diagnosis and recommendations as part of the federal Deaf-Blind project.

The mother had rubella during the first month of pregnancy. She sat alone at 14 months, walked at 3 years and was toilet trained between 4 and 5 years. She has no speech. She has congenital heart disease and was born with cataracts which were operated on during the first year of life. She has a nystagmus. Accurate vision cannot be established due to the lack of communication. It is believed she can see.

She has attended the school for the blind since March 1, 1965. Her psycho-motor development is retarded. She uses a hearing aid in her right ear. She uses some manual language. She learned primary colors through constant repetition. She has fair motor-coordination and can move about indoors. She has some self-help skills but has a low frustration tolerance.

PREVIOUS PSYCHOLOGICALS: None.

METHODS OF STUDY: Cattell Infant Intelligence Scale
Maxfield-Buchholz Scale of Social Maturity for Pre-School Blind
Assorted Tactile and Manipulative Materials
Stanford-Binet Form Board
Observation

APPEARANCE AND BEHAVIOR: She is a pleasant blonde girl who wears glasses and a hearing aid. She seldom made any vocalization of sounds except when she was frustrated. She has a short attention span and exhibits some blindism mannerisms. She holds objects close to her left eye so frequently that the left lense is badly scratched. She sleeps low in her bed in a knee-chest position or in a ball.

She is a small child who has "travel" vision. She does not respond to any auditory stimulus nor does she attempt lipreading. She will momentarily attempt Tadoma Motor Kinesthetic methods, but this is only an emerging facet. She can make her wants understood and has a real facility for selecting "coke" from a machine containing a variety. She shows some rigidity in behavior but demonstrates ability to use her memory in spite of her scores in testing.

SELF CARE

Abilities:	Needs:
1. Can dress herself if clothes are laid out or handed to her correctly. Cooperates well. Can also undress herself if shoes are untied.	1. Develop knowledge of front and back - use tabs and tactile skill. a. necessary to tell front of pants, slips etc.
2. Can button in front.	2. Teach to button on side.
3. Can zip and unzip.	3. Teach to use hook and eyes.
4. Can put on socks and shoes a Shoes have rubbed abrasions on heels. She is more comfortable in houseslippers.	4. Teach to lace, tie and untie.

DIAGNOSTIC SCHOOL FOR NEUROLOGICALLY HANDICAPPED CHILDREN, NORTHERN CALIFORNIA

THIS IS A CONFIDENTIAL AND PRIVILEGED COMMUNICATION

Psychological Evaluation
Name: Bd: 1-19-60 -c- Sept. 15-25, 1969

DEVELOPMENTAL SKILLS

Abilities:	Needs:
4. Can dress doll.	4. Teach to undress.
5. Can snip with scissors.	5. Increase the skill.
6. Can turn egg beater with right hand.	6. Increase the skill with the left hand.
7. Can string beads.	7. Teach to string to match a pattern.
8. Can use a peg board.	8. To use pegs to match a pattern.
9. Can build an 8 block tower and put blocks in a cup.	9. Teach to build a bridge or to place blocks in a box.
10. Can do Binet Form Board in any position.	10. Develop Form Board skills to those with more than 3 pieces - gradually, such as Sequin Form Board.
11. Can see and retrieve objects, 2 inches in diameter which are 30 inches away. a. Recognizes coke in machine and can pick it out from several others.	11. Increase use of vision.
12. Loves dolls - cold objects - the color red - shiny objects.	12. Learn to follow commands - feed doll - put doll to bed etc.
13. Can put pellet in bottle and put small buttons in a box.	13. Teach how to sort by black and white accurately.
14. Can use chalk and board in imitation.	14. Develop emerging skill with paper and pencil. a. Enrich with clay of various consistencies, finger paints, and crayons.
15. Uses vibrations minimally - example: music box.	15. Explore use of sound - vibrations - rhythms.
16. Uses some signing.	16. Increase and develop sign language for communication.
17. Smells, tastes and uses left eye with object very close to explore. Ocasionally feels - touches.	17. Help to overcome blindism traits: shaking objects in front of eyes, shaking hands, staring out window into light.

DIAGNOSTIC SCHOOL FOR NEUROLOGICALLY HANDICAPPED CHILDREN, NORTHERN CALIFORNIA

THIS IS A CONFIDENTIAL AND PRIVILEGED COMMUNICATION

Psychological Evaluation
Bd: 1-19-60 -d- Sept. 15-25, 1969

DEVELOPMENTAL SKILLS

Abilities:	Needs:
18. Perseverates - short attention span.	18. Introduction to more skills as mentioned above with recognition of problem (18) will assist.

SUMMARY: Child is functioning on a severely retarded but trainable level. She still sleeps in an infantile fetal position and responds with primitive inhibitions. Her social skills are at about the 4 year level. Her mental age is approximately 22 months. She is capable of learning self-help skills necessary to function in a sheltered supervised environment. She will always need supervision and will probably be eligible for totally dependent assistance when she is older.

Frances Jamieson
Frances Jamieson
Psychologist

nl

ROUNDS

NAME _____ BD _____ DATE _____

TEACHER _____

Vision: _____ With glasses: _____ Date tested: _____

Hearing: _____ With aid: _____ Date Tested: _____

Medication: _____ When administered: _____

Gross motor skills: Goals:

Fine motor skills: Goals:

Self-help skills: Goals:

Language skills: Goals:

Special Assets:

Special Problems:

NAME_____ BD_____ DATE_____

TEACHER_____

Social and Emotional Development: Goals:

Auditory Training and Speech Development: Goals:

REPORT OF PSYCHOEDUCATIONAL ASSESSMENT GROUP

Suggested battery of tests for deaf-blind children

Social age - obtained
with parents and critical items individually checked by examiner.
Vineland Social Material
Maxfield-Buchholtz Scale of Social Maturity for Use With Preschool Blind Children

To obtain mental age - functioning basis
Cattell Infant Intelligence Scale
Bayley
Grace Arthur - especially Sequin Form Board and Mare & Foal Puzzle
Merril-Palmer
Stanford Binet Form L-M portions
Arthur Adgstating Leiter International
Performance Scale (where vision permits)

To assess other areas
Visual and Tactile Materials such as:
Lite-Brite (a commercial toy)
Form Ball (Tupperware Company)
Thickness, length, tactile forms - can be obtained inexpensively from Lakeshore Equipment, San Leandro, California - send for free catalogue
Large beads - shoestring

Observations of child
1. With parent
2. With attendant
3. With children
   a. In classroom
   b. In the yard
4. Eating with parents
5. Eating without parents

Suggested Format for Psychological Reports
1. Name, birth date, date of report
2. Brief family - medical history
   a. Include birth weight, problems at birth, physical and emotional problems which may effect maturation and learning. (This is repeated to help the psychologist and not a typical medical history.)
3. Previous testing
4. Methods of study - a listing of materials used
5. Appearance and behavior

expectations.

e. Recommendations - list briefly (everything important that has been said)
   1. Developmental or educational placement
   2. Directions for parents

Psychologists have an obligation to help establish a base line to assist teachers in measuring growth.

Discussed Perkins Educational Prognoses in lieu of M.A. where basal and ceiling on items are measured in terms of 1/3 of C.A. to establish level of retardation.

6. Findings
   a. Use mental age or learning age rather than IQ (until we have instruments especially designed for deaf-blind).
   b. Use social age (with tongue in cheek) until more adequate instruments are standardized for deaf-blind.
   c. Basal skills - developmental skills or reading levels.
      1. Self-help skills - where child is and next step
      2. Motor age - gross or fine motor skills
      3. Visual discrimination

Educational
What child has learned
What child needs to learn next
Under what conditions does he learn best
Current hindrances to the learning of the child
Motivation moves mountains. Items which motivate some children are - rewards for:

1. Light
2. Love-hugs-holding children
3. M & M's - other food
4. Water play
5. Special toys
6. Using radios with pillow speakers in bedrooms to encourage child to stay in bed.

Deaf-blind children tend to maintain parallel play and find it difficult to share an interest with other children.

Teachers may want to use Try Tasks - form boards and workbooks published by Noble & Noble (three levels with teacher workbook)

New york Times - Perceptual Discrimination Materials

Frostig Materials

Montessori Methods

Necessary to keep tasks appropriate for each child with constant check and recheck.

Auditory Discrimination

Language Skills

Numerical Skills

Tactile Discrimination

Describe briefly what child can do and next developmental step or steps as guide for child.

   d. Summary
      Summarize behavior and tools where the child is successful. motivational tools, and include a prognosis of potential

SPEECH AND LANGUAGE ASSESSMENT AND DEVELOPMENT

IN

THE DEAF-BLIND CHILD

Cathy Groves

I would like to preface the discussion of the above topic with a presentation of a receptive and expressive sketch of the progression of speech and language development in the normal child.

RECEPTIVE

1st month
- a. Activity ceases when the hand bell sounded.

2nd month
- a. Attends to voice.

3rd month
- a. Anticipates sounds associated with feeding.

4th month
- a. Turns to voice on hearing his name.
- b. May turn head on hearing familiar sound.
- c. Recognizes mother and other familiar attendants in numerous, inarticulate but patterned expectancies implanted through feeding, dressing, bathing and expressions of affections.

5th month
- a. Turns to bell.

6th month
- a. Distinguishes between friendly and angry talking.

7th month
- a. Socialized acquaintance with specific persons in environment, facial expressions, gestures, postural attitudes and domestic events. Makes a motor response to these events.
- b. More concerned with practical events, with physical objects, and with tones of voice and inflections than with words.

8th month
- a. Listens to familiar words.
- b. Begins response to words with gestures, such as patty-cake, bye-bye.

9th month
- a. Adjusts to gesture: pat-a-cake, bye-bye, etc.
- b. Adjusts to words: verbal request without gesture.
- c. Responds to bye-bye.
- d. Rings bell rung by examiner, "____ do".(Credit for ringing in imitation)

10th month
- a. Responsive to name.
- b. Understands "no-no".

12th month
- a. Vary behavior according to emotional reactions of others.
- b. Adjusts to simple commands (i.e., will hand you a block, toy, ball or familiar object upon request).
- c. Perceives and communicates emotional states - fears, distress, pleasure, rage, vexation, affection, anxiety.

d. Likes to listen to words.

16th month
a. Understands a demand ("give that to me") with gesture.

18th month
a. Identifies at least one of the following pictures from name: dog, cup, shoe.
b. Recognizes pictures he cannot name.
c. Responds to simple commands like "Put the ball on the chair", "Open your mouth". (Reinforcement by gesture often necessary).
d. Can point to familiar objects in pictures, in rooms, parts of body.
e. Listens to rhymes and songs and interesting repetitions of sounds for a short period of time. (2-3 minutes)

20th month
a. Attempts to follow direction of one command.
b. Points to any three parts of a doll.

22nd month
a. Identifies two pictures from name.
b. Points to any five parts of a doll.
c. Attempts to follow directions. (doll, chair, cup, hankie) All three parts passed.
d. Understands command ("sit-down", "lie down", "stand up") with gesture.
e. Waves "bye-bye". (sense of termination)

24th month
a. Understands direct vocative better (i.e., "Peter kick the ball", instead of "you kick the ball".)
b. Likes to listen for reasons of language as well as of sound. By listening acquires sense of descriptive power of words.
c. Listens to simple stories, especially liking those he's heard before.

25th month
a. Understands two prepositions.

27th month
a. Identifies at least six of the following pictures from names: dog, cup, shoe, house, flag, star, leaf, basket, cook.

28th month
a. Understands three prepostions.

30th month
a. Identifies pictures from name: (at least seven of the following: dog, cup, shoe, house, flag, clock, star, leaf, basket, book.)

36th month
a. Learns to listen and listens to learn. (Single word spoken by mother may instantaneously reorganize whole stream of

activity.

b. Suggestions take effect.
c. Memory span lengthening - recalls events of yesterday.
d. Beginning to distinguish between black and white.
e. Generalization common in comprehension - in, on, under.
f. Distinguishes one and many.
g. Listens and can be reasoned with verbally.
h. Listens to longer and more varied stories.

48th month

a. Tends to re-enact in body postures and gestures what is told in a story.
b. Comprehends: what do you do when you hungry, thirsty, or tired.

60th month

a. Can single out one word and ask its meaning whereas formerly reacted to sentence as a whole.
b. Genuine interchange of ideas remains limited.
c. Tries to use new words, can define some simple ones.
d. Considerable time looking at books - likes to be read to. Understands some abstract words. (connective, colors)

EXPRESSIVE

1st month
- a. Intensity and manner of cry vary with cause and circumstance.
- b. Vocalizations meager and non-expressive, but "mews" and makes small throaty noises.

2nd month
- a. Makes several different vocalizations - cooing and other vocal sounds.

3rd month
- a. Returns glance with smiling or cooing.
- b. Gives vocal expression to feelings of pleasure.

4th month
- a. Bubles, coos, chuckles, gurgles, and laughs.
- b. Vocalizes in self-initiated sound play. (babbling)

5th month
- a. Gives vocal expression of eagerness.
- b. Vocalizes displeasure (on withdrawal of coveted object).

6th month
- a. Coos to music.
- b. Vocalizes to mirror image.
- c. Babbling continues.

7th month
- a. Crows and squeals.
- b. Lalling begins.
- c. Vocalizes satisfaction (in attaining an object).
- d. Pats mirror image.

8th month
- a. Vocalizes recognition.
- b. Vocalizes in interjectional manner.
- c. Babbling continues.

9th month
- a. Combines syllables.
- b. Copies sounds when he hears them, such as voice sounds or other sounds with tongue or mouth. (Echolalia)
- c. Says 'da-da" or equivalent.

10th month
- a. Imitate gestures, facial expressions.
- b. One or two "words" in vocabulary (no semantic content).
- c. Echolalia continues.

11th month
- a. Speaking vocabulary is one word other than "ma-ma" or "da-da" to designate some definite object or situation.

b. Imitates syllables and words.

12th month
a. Speaking vocabulary is two words other than ma-ma, da-da to designate definite object or situation.
b. Echolalia continues.
c. If some of his actions are laughed at is likely to repeat them.
d. Tries to get attention by making noises, squealing or other means.
e. Repeats accustomed words under the stress of repetition and imitation.
f. Can wave "bye-bye" and often can say it.
g. Vocalizes when looking in mirror.

14th month
a. Speaking vocabulary is three words in addition to "ma-ma" and "da-da".

15th month
a. Uses expressive jargon.
b. Indicates wants (points, vocalizes).

16th month
a. Speaking vocabulary is 5 words, not including mama, dada.

18th month
a. Uses words to make wants known; asks for at least two things by appropriate words ("not me", "more", "gimmie")
b. Often 10 definite words in vocabulary.
c. Abandoning baby talk: "thank you" instead of "ta-ta", etc.
d. Beginning to combine words.
e. Says "hello", "thank you" or equivalent.
f. Fluent jargon at peak: (1) vocalization increase in variety (2) talking is form of play, (3) inflections conversational in nature.

21st month
a. Repeats things said.
b. Joins 2 words in speech frequently.
c. Specifies need for food, drink, water, etc.
d. Pulls person to show.

22nd month
a. Uses two concepts put into one sentence: "daddy gone", "shut door". (No credit for two words denoting one concept: "bye-bye", "all gone".)

24th month
a. Often talks while he acts and acts while he talks.
b. 300 words in vocabulary.
c. Names of things, persons, actions, and situations greatly predominate. Adverbs, adjectives, prepositions in minority.
d. Pronouns "mine", "me", "you", and "I" coming into use in

approximately that order.

e. In same sentence expresses intention and action. (Peter slide down.)
f. Jargon may have disappeared, but not sing song which often made musical. Sing-songs sentences.
g. Does not relate experiences in well-defined past tense.
h. Pleasure in matching words with objects.
i. Language is beginning to be used more extensively as communication for wants, needs, ideas. Simple experiences are verbal.
j. Tries to use words in telling his physical needs or answering simple questions, but does not carry on conversation.
k. Carries on "conversation" with self and dolls.
l. Asks names of things, "what's this?", "what's that?"
m. Sentence length of two words on the average.
n. Names 3-5 objects.
o. Refers to self by name.
p. Identifies many pictures by name.

30th month

a. Vocabulary of 450 words.
b. Sentence length of 3 words on the average.
c. Repeats 4 syllables (2 words).

36th month

a. Vocabulary of nearly 1000 words. Averages 900.
b. Words become instruments for designating percepts, concepts. ideas, relationships.
c. Indulges in soliloquy and dramatic play in order to hatch his words and phrases and syntax. Combines acting and talking.
d. Suit action to word and word to action in his monologue.
e. Frequent questions - questions to which he already knows the answers.
f. Uses language easily to tell a story or relay an idea to someone else.
g. Plurals, past tense, personal pronouns, prepositions such as "on".
h. Refers to self as "I".
i. Knows last name, sex, name of street on which he lives, and a few rhymes.
j. Speech may be infantile, but usually understood even by those outside the family.
k. Sentence length average of 3 to 4 words.
l. Long sentences - compound complex.
m. Non-present situations dealt with verbally.
n. Generalizations common in talking.

42nd month

a. Vocabulary of 1200 words.
b. Complete sentences are used.
c. Sentence length of 4 to 5 words on the average.

48th month

a. Vocabulary of 1500 words.
b. Number concept barely goes beyond "one", "two", and "many".

Can count to 4 or more by rote.

c. Powers of generalization and of abstraction are present.
d. Speaks of imaginary conditions: "suppose that" and "I hope".
e. Speech is forthright, not likely to carry on long conversations.
f. Plays with words.
g. Verbal rather than verbose (associative thinking).
h. May have imaginary playmate, but communing is sketchy rather than organized and dramatic play does not long sustain a role.
i. Can tell lengthy story mixing fact and fiction.
j. Can carry on lengthy conversation with adults and children, though he may make grammatical errors and misuse words.
k. Aggressiveness may appear in words as well as actions; he calls names and brags.
l. Talks about everything, social rapport and to attract attention.
m. Questions at a peak, not always interested in explanations but more interested in how answers fit own thought.
n. Sentence length of 4-5 words on the average.
o. Speech quite understandable, although some traces of infantile speech may remain.

54th month

a. Vocabulary of 1900 words.
b. Sentence length averages 4-5 words.

60th month

a. Can count 10 objects. Can tell his age.
b. Can carry a plot in a story and repeat a long sequence accurately.
c. Talks without infantile articulation.
d. Answers questions more succinct and to the point.
e. Questions for information, not merely social intercourse or practice in speaking.
f. Defines in terms of use. ("A horse is to ride")
g. Language essentially complete in structure and form.
h. Uses all types of sentences, including complex sentences with hypothetical and conditional clauses.
i. Uses conjunctions more freely, but generally frequency of parts of speech same as at four years.
j. Vocabulary of 2200 words.
k. Less literal and concrete than formerly.
l. Dramatic play full of practical dialogue and commentary which has to do with everyday functions. (kitchen, grocery store, etc.) Good deal of talk with these. Function is to clear ideas and relationships through words rather than indulge in in make-believe.
m. Distinguishes left and right hand in self, but not others.
n. Lacks power of explicit reasoning.
o. Sentence length averages 4-5 words.
p. Names primary colors.

It is important to keep in mind that language does not develop as a separate entity from other areas developing in the child. To emphasize this perspective, I have attached to this paper a rough development scale of behaviors in the areas of Motor Development, Language Development, Adaptive Behavior, and Personal-Social Development. This scale was assembled from Gesell's normative scales, the Denver Developmental Scale, and from Cattell. It is essential to have an idea of how normal children develop when evaluation and teaching children who are handicapped. Keep in mind that evaluation of the speech and language level and the possible language capacity of the deaf-blind child will not be achieved by looking at and teaching to the language system alone.

MOTOR DEVELOPMENT

6 YEARS					
catches bounced ball					
copies					
draws man six parts					
backward heel to toe walk					
balance on one foot					
5 YEARS					
skips alternating feet					
stands and balances on one foot					
balances on toes					
heel to toe walk					
dress self alone					
hops on one foot					
4 YEARS					
wash face, scoop water in palms of hands, take to face					
walk downstairs alternating feet					
stands on 1 foot 15 seconds					
running broad jump					
standing broad jump					
button clothes					
lace shoes					
skip in lame-duck manner					
copies + (vertical & horizontal movement)					
3 YEARS					
build tower of 8-10 cubes					
stand on one foot for second					
jumps in place					
pedals trike					
imitates vertical line					
alternates feet going up stairs					
imitate bridge of blocks					
walks up and down stairs alone					
2 YEARS					
kicks ball forward					
tower of 4-6 cubes					
string beads					
holding glass with 1 hand (free hand in sympathetic tension)					
runs					
throw ball overhand					
1 1/2 YEARS					
seats self in small chair					
climb into adult chair					
walk up stairs assisted					
descend stairs unassisted					
turn pages of book 2-3 at once					
walk backwards					
tower of 2 cubes					

MOTOR DEVELOPMENT

1 1/4 YEARS					
stands alone					
walks alone					
stoops and recovers					
neat pincer grasp					
1 YEAR					
adept at creeping					
walks with help					
cruises sidewise					
lower self from standing to sitting position					
pull self to standing position - stands momentarily alone					
place cube into container					
place one object above another - momentarily					
10 MONTHS					
sitting alone					
shift positions from sit to prone - prone to sit					
stands holding on					
thumb finger grasp precise					
7 MONTHS					
sits without support					
unilateral reaching and manipulation					
secures small object with scooping or raking movement of head					
(radial palm grasp)					
rotate wrist freely in manipulation					
transfers object from hand to hand					
4 MONTHS					
prone chest up - arm support					
arm support					
rolls over					
head steady when sitting					

LANGUAGE DEVELOPMENT

6 YEARS					
Stanford-Binet items (vocabulary)					
six (orange, envelope, straw, poodle, tap, gown)					
5 YEARS					
language complete in structure and form					
2,200 approximate vocabulary					
names, penny, nickle, dime					
descriptive comment on pictures					
questions asked for information					
definitions are functional					
4 YEARS					
comprehends cold, tired, hungry					
comprehends 3-5 prepositions					
recognizes 3 colors					
questioning at peak (much in form of soliloquy)					
3 YEARS					
gives first and last name					
uses plurals					
sentences appear					
1,000 words					
obeying prepositional commands "on" and "under"					
2 YEARS					
coming into use (mine, me, you, I)					
combines 2 different words					
points to one named body part					
follows 2 of 3 directions					
300 words in vocabulary (names of persons, actions and situations greatly predominate					
sing-song sentences					
matching words with objects					
primarily refers to self with name					
1 1/2 YEARS					
comprehension and communication					
communicating emotional status					
10 words					
using jargon in pre-verbal sentence stage					
responding to simple commands					
looks selectively at pictures and identifies 1					
1 YEAR					
beginning to fit action to command					
2 words - mama and daddy in vocabulary					
becoming good listener					

LANGUAGE DEVELOPMENT

10 MONTHS					
says mama, daddy with meaning					
imitates sounds					
responding to own name					
understands "no"					
one or two words in vocabulary					
7 MONTHS					
crows, squals					
producing					
vowels					
consonants					
syllables					
diphthongs					
4 MONTHS					
bubbles					
coos					
chuckles					
gurgles					
laughs					
excites and breathes heavily					

ADAPTIVE BEHAVIOR DEVELOPMENT

6 YEARS					
adds and subtracts with in 5					
repeats 4 digits					
differentiates AM and PM					
5 YEARS					
realistic					
likes to finish what started					
count ten objects					
he can tell age					
can repeat long sequence accurately					
carry over play project from one day to another					
copies					
4 YEARS					
draws man with 2 parts (head, eyes & arms)					
counts 3 objects with correct pointing					
questions					
going from one thing to thing vs. repetition					
3 YEARS					
match simple forms					
sensitive to incompleteness					
responds to prepositions (in,on, under)					
readiness to conform to spoken word					
copies circle, imitates cross					
2 YEARS					
looks for missing toys					
recalls events of a yesterday					
senses one versus many more					
imitates vertical & circular strokes					
aligns cubes for train					
1 1/2 YEARS					
knows where things are, were, go and belong					
points to pictures					
points to some body parts upon direction					
interest in completion of chain of events					
imitates stroke with a crayon					
1 YEAR					
sensitive to imitative models					
tries to build tower of 2 cubes					
serial play with objects					
releases cube in cup					
10 MONTHS					
matches 2 objects					
Tips approximate more adaptively to rim of cup					
7 MONTHS					
one hand approach & grasp of toy					
transfer toy from one hand to other					
inspecting objects					
4 MONTHS					
eyes follow slowly moving objects					
arms activate on sight of dangling toy					
hands together					
looking					

PERSONAL-SOCIAL BEHAVIOR

6 YEARS					
ties shoelaces					
knows own right from left					
differentiates AM and PM					
5 YEARS					
prefers associative play					
dresses and undresses without assistance					
asks meaning of words					
prints few words					
separates from mother easily					
4 YEARS					
brushes teeth					
distinguishes front from back of clothes					
laces shoes					
takes care of own toileting					
sometimes unreasonable fears					
3 YEARS					
feeds self well					
puts on shoes & unbuttons buttons					
knows few rhymes or songs					
understands taking turns					
washes and dries hands					
plays interactive games, e.g. tag					
feeds himself					
2 YEARS					
helps in house, simple tasks					
removes garment (finds arm holes in garment)					
using word mine					
mostly solitary or parallel play					
verbal distinction between bladder and bowel function					
shows symptoms of pity, sympathy, modesty and shame					
dramatize mother-child relationship with dolls, etc.					
plays with domestic mimicry					
verbalizes toilet needs consistently					
1 1/2 YEARS					
imitates housework					
using spoon--spilling a little					
pulls toy on string					
carries and hugs dolls					
toilet habits regulated in daytime					
resistant to changes of routine					
beginning to claim mine and make distinctions between you, me (elementary)					
duplicating behaviors (pretends smoking, reading paper)					

PERSONAL-SOCIAL BEHAVIOR

1 YEAR					
cooperates in dressing					
tendency to repeat performances laughed at					
unmistakable fear, anger, affection, jealousy, anxiety and sympathy					
feeding with fingers					
rubs spoon on tray					
eliciting attention					
indicates wants					
10 MONTHS					
perceives strangeness					
waves bye-bye					
pat-a-cake					
feeds self cracker					
holds own bottle					
peeks a boo					
accustomed to solids					
7 MONTHS					
takes feet to mouth					
reaches for and pats mirror image					
works for toy out of reach					
4 MONTHS					
smile on social approach					
relishes sitting position					
pulls dress over face					
hand play mutual fingering					

Discussion of Diagnosis and Evaluation of Speech and Language Behavior

I am not aware of a standardized test which has been used with success for our group of deaf-blind children for general IQ information, or for the evaluation of speech and language behavior. In our program this information is dependent upon a period of diagnostic teaching, observation, and consultation services performed within the child's familiar environment. More frequently than not, we receive reports from formal testing situations to which the child had been referred, that the child was uncooperative and unresponsive. "Unable to test", "unable to examine", and "difficult to determine where....", are most familiar comments throughout our children's records. Hence, it appears that we have very little additional information than before the referral. A delightful alternative exists for the teacher, therapist, child, and the consultant to whom the child has been referred. This alternative is to ask the professional to come to the environment of the child, i.e. the school. We have found this approach to the evaluation of the child remarkably successful for all concerned. Definitive information results, as well as a pleasant, informative, and successful encounter for all concerned.

The following is a description of some of the aspects of the initial evaluation of language we have found helpful in our program in Oklahoma City. After we observe the child both in nondirected and directed activities, with the help of the parent, we try to gather information that will allow us to plot the child's development on the form on the previous pages. We try to get a sense of the child's experiential background and, of course, try to note the child's responses to auditory information, visual information, tactile information, and his response to language. Depending on the child's level of receptive and expressive language behavior, and this is a level that we can only estimate through the responses we have been able to elicit, we attempt to set up several activities that will let us "test out" this hypothesized level. If the responses at a particular level are fairly consistent, we feel that we have a valuable nugget of information with reference to the type of language experience with which we will approach the child. More often than not, the level at which we approach the child to evaluate his language level appears to be too sophisticated. Consequently, our moves are right down the developmental scale until we find a level at which we get a response.

I would like to discuss some of the behaiors that you may see during your experience with the deaf-blind, which present to my way of thinking some of the most interesting evaluational and educational priority problems. Take the case of P.F., 1 year, 3 months - fitted with a hearing aide at the age of 6 months, minimal visual impairment, development within normal limits in all areas but language. P. F. seems to ignore peoples' faces and rarely makes eye contact. Few expressions of pleasure are noted, except when manipulating wheels. He responds to calibrated mechanical sounds that would indicate usable hearing in the speech frequencies. No evidence of interest in spoken language. No evidence of (behavioral) neurological involvement was exhibited.

Our decision after the evaluation was to shift priorities, with the help of the parents, to a focus on interpersonal relations vs. the rather mechanical auditory experiences which had been provided. We suggested many lap games and interactive reciprocal games which involved the parents and the child. We recommended more body contact with the child and short periods of placing the child's hands on the parents' face when talking to him. This suggestion was made primarily because the child seemed to follow the movement of his hands with his eyes, rather than for the added tactile information. Because of the child's residual hearing and early amplification, on first impressions it might have seemed wise to institute a rather structured period of auditory training with this child. However, in taking a more critical look at this child's behavior it appeared that the most obvious barrier was the lack of or avoidance of contact with people. After all, people are the source of language, and contact with them is essential for the acquisition of language. If we had chosen the other route, we would have ignored the developmental gap this child was showing us.

The cautionary note here is to be careful not to build on skills that are not developmentally well grounded. The first concern is to lay a good foundation so the skills you help the child develop are not fragmentary "splinter skills".

The next case that is illustrative of some of the behaviors you may see during your evaluation is D.B., 3 years old. D.B. was functioning between the 7-10 month level in motor development; between the 4-7 month in language development; between the 7-10 month level in personal-social development; and around the 7 month level in adaptive behavior. D.B.'s hearing loss was estimated to be moderate to severe loss. D.B. was quite visually impaired; however, observation of his behavior indicated that he was more receptive of visual data than of data through other senses. Our suggestion in the area of language development were as follows:

1. Oral Stimulation - using peanut butter or ice cream, placed on or around D.B.'s lips or in different positions in D.B.'s mouth. Needless to say, this was as much for helping D.B. begin to chew as for exercise of the articulators for speech.

2. Take D.B. out of the baby bed and put onto a pallet in the room where his mother is working. No more remaining on his back except when sleeping. How is he going to learn to crawl or propel himself on his back? Also when D.B. is on his stomach, eye poking and other self-stimulating behaviors are quite difficult. You may wonder how this is related to language development. I think that unless the child can explore his environment he hasn't the experience necessary for the development of inner language. Teaching a child all the sounds in various arrangements is a waste of time if he hasn't the experience to make those combinations of sounds meaningful.

3. During physical therapy exercises, use simple language labels and signals for each sequence of each exercise to help build

anticipatatory responses. When I refer to signals, I mean primative gestures such as: tapping on the child's hands when he is to give you his hands, a pull on the diaper to signal a change of the diaper, and eventually to signal that it is time co go to the bathroom; a touch to the lips with the child's hand to signal that it is time to eat, and eventually to signal that the child is hungry.

4. We suggested the use of toys that make noises, if D.B. acts upon them. This emphasizes a cause and effect relationship and begins the experience for D.B. that he can make things outside of himself happen.

5. Close periods with mother and child where child places hand on or near the mother's mouth and feels speech.

In summary,our emphasis was upon a signal language system, and our goal was to connect an experience with a signal. Since the experiential level of the child was so low many encounters with the experience were repeated before the introduction of a signal. It is my feeling that D.B. will always need to use signal communication for his language, and even this system of communication will be difficult in its acquisition. This type of communication is not as sophisticated as "signing" or fingerspelling. It is a "family formulized" system of signals that are associated with events. They are initiated by the adults and tied to the experience of the child, in hopes that he may be able to use them independently to express himself, especially in the area of getting his needs met.

This case points out the need for us to expand our rather rigidly held concept of language. Oral language is not the only alternative for these children, and for some it is no alternative at all.

The kind of language that these children will be using is not solely dependent upon their hearing mechanism. Keep in mind that the hearing mechanism only conducts nonsensical sounds to the brain. The brain makes sense of this information. It also influences the nature of the response made to the sense information.

The next case I would like to present is M.B., 6 years old. M.B. has been in contact with this program since she was about 6 months old. During the first two years of her life she appeared and tested out to have a severe hearing loss. She was also very blind, except for some color perceptio. of transparencies. Her motor system appeared to be in good shape, even though some of the milestones in this area were late in developing. She was quite a gregarious little tot. At age 1½ she was able to point to some body parts upon direction. Around 2½ years words were used with some distortion. At age 3½ years M.B. was receiving, responding to, and using oral language. It was quite interesting for us to work in the area of language development with M.B., probably because she was one of the few oral children we had in our program. Her case pointed out to us some of the more sophisticated deficiencies that can arise in the area of language development in these children. It was felt that M.B. had hearing within normal limits,

except for those frequent times when she had ear infections, and then only an air bone gap was noted. M.B. presented several interesting behaviors such as:

1. At age 5½ M.B. had a vocabulary that was appropriate for a 6 year old.

2. M.B. did use words that eluded her understanding.

3. M.B. exhibited very poor short term auditory memory, yet very good long term auditory memory. Following a sequence of very simple directions was difficult for M.B. This same behavior was also noted in her expressive language. When trying to speak in sentence form, she gave one the impression that by the time she had approached the ending of the sentence, she had forgotten what she had said in the first portion of the sentence. Consequently, the beginnings and endings of her sentences did not always match.

4. M.B. evidenced confusions in grammar and syntax.

5. M.B.'s expressive language sounded like the speech of a person with a submucous cleft palate. She did not have a submucous cleft. Her palatal arch was quite high and narrow. Whether M.B.'s velum was too short to make adequate closure with the pharyngeal walls, or whether this phenomenon was due to poor nerve innervation in the velum is not known.

6. Auditory figure ground problems were noted along with auditory distractibility.

This case was presented to reinforce the idea that if the hearing mechanism is relatively intact, it does not necessarily mean smooth sailing for the acquisition and development of oral language. I also hoped to illustrate through the presentation of this case the following points:

1. There are many different and specific levels at which the language process may break down.

2. These types of specific language disabilities need specific remedial treatment.

3. A child may have a minimal to moderate hearing loss and still exhibit the behavioral characteristics of a very deaf child.

Characteristics of Speech and Language Development that are Peculiar to Deaf-Blind Children

The characteristics I will be describing are only ascribed to the group of deaf-blind children we have had in our program. They compose a group within the category of deaf-blind children. In my evaluation,

the group of children we have seen may be more severely and multiply involved than is representative of the larger deaf-blind population.

Perhaps the most characteristic behavior in the area of speech and language development I have seen among our population is the hearing behavior which, for our own convenience,we termed "pseudo-deafness". This is the appearance of the "too deaf, to be deaf" behavior. Even in the children who were judged to have good residual hearing, this behavior was present.

Another interesting observation has been that even among the percentage of our population who have severe visual impairment and a hearing loss, they tend to be more overtly responsive to visual stimuli than to auditory stimuli. Some of the explanations for this type of behavior can be causally connected to: the type of hearing loss, damage to the brain in the auditory and integrative area, lack of experience and/or skill in learning to listen, and general lack of experience with the environment.

Another behavior that seems to be characteristic of our population in Oklahoma City is the tendency to adapt to new sounds after several presentations of that sound. This behavior was especially predominant in the most severely involved children. One receives the impression that the novel sound stimulus has been adapted to by the child, and that the sound stimulus must be changed in some way (intensity, frequency, temporal separation, etc.) to again receive the child's overt recognition.

A characteristic that is perhaps common to all deaf-blind children, and not just our population, is the lack of direct experience with the environment and the consequent lack of experience to make language meaningful. It is, at times, overwhelming to try to imagine the barriers that combined visual and hearing impairments place in front of the child's acquisition of a language system. No matter what system we present to the child, the basic association of symbol (language) with the concrete experience must take place. Who can imagine what distortions and fragmentations take place within the two sensory channels of vision and audition. We must keep in mind if our children are going to make this connection of symbol with the real item, they must be taught. This does not happen naturally in the deaf-blind child. He must be encouraged to listen, see and feel the label or language, and at the same time touch, taste, trace, smell, and manipulate the object.

A characteristic which we see in our population which has some relevance to the above, is the difficulty the child exhibits in sensing the cause and effect relationship of sound and the sound source. We can teach the child these relationships by first presenting the sound source near the child so he can pick up auditory cues, visual cues, and at the same time experience its shape, texture, smell and taste, and of course pick up any vibrations the sound source emits. This goes for the mouth as a sound source, as well as the jack-in-the-box that squeaks when a certain knob is turned. The child must be taught that the mouth of a person is a sound source that changes shape;

and that through touching the speakers mouth there are vibratory cues; and that this same mouth can make an endless variety of noise that we hope can become meaningful to the child.

There are a few more observations of characteristics we have seen among our children that I think might prove helpful. We have seen that during initial auditory training periods our children rarely respond overtly to the input. However, after the training period we consistently note an increase in vocalization. This really is not surprising at all developmentally, because this is just what the normal child does - he spends many months listening before he comes out with those precious sounds. However, when we are working with a six year old child who is not recognizably responding to auditory stimuli, we become quite puzzled. Developmentally he is infantile in his language behavior, and he must be taken through the developmental steps we appreciate in the younger child.

Amplified music is a pastime that even our most severely impaired children appreciate. There is a tendency to allow the child to listen to the music quite passively. This can become perseverative behavior. We would suggest that after the initial listening period, that an assoicated activity such as rhythms be introduced during the music period.

At the beginning of the 1970 school year, we were suddenly struck by the significant problems in interpersonal relationships that all of our children exhibited in varying degrees. I feel the problem this presents to the child's total development is a primary educational priority.

Of the children who have developed oral language in our program, all of them have had more sophisticated language problems, such as auditory memory problems, auditory closure difficulties, grammatic closure, articulation problems, etc. We are usually so excited when we see our children developing oral language that we tend to think of the intactness of language as icing on the cake. This, of course, is not the case.

Techniques and Measurement Instruments to Be Used in Speech and Language Evaluations

The above heading sounds as if I am about to present a kit in which lies treasures and tricks greater than any Fuller Brush or Avon representative ever possessed. Not so. The evaluations we conduct in Oklahoma City involve very few standardized tests. We do both short term and long term evaluations, and many in between. Our technique, and I used the word with tongue in cheek, is a diagnostic teaching approach - an approach that we hope is quite sensitive to normal child development. The first step in our evaluation is to determine where the child is functioning in all areas of behavior. We note significant gaps in development. We begin the child in a program directing his curriculum to his level of development and

sequentially move up the developmental scale, building, we hope, upon stronger foundations. We draw very few "conclusions", and do very little labeling. What we try to do is to describe the behavior of the child. Actually our program provides a continuous evaluation for the child, but at the same time provides an educational program which suits the individual child.

One of the most helpful "measurements" we have been able to get for r children in the area of speech and language evaluation and development is a definitive audiogram. This is not easily achieved. I am not so sure that "a good man is hard to find", but I am quite certain that an audiologist like the one serving as a consultant for our program is. He has worked with the children within the school environment and was able, through conditioning and repeated encounters, to provide us with this valuable measurement. Another valuable service with which he was able to provide us was a listing of frequency ranges on all our sound equipment, noise makers, and sound toys. This provides the teacher with many diagnostic as well as specific therapeutic devices. In this next step, the soon to be Dr. Larson went beyond the call of duty and presented us with the formant picture (frequency: intensity) of the vowel sounds. With this type of information the auditory training program can become one that is quite specific for each individual child with very little hit-or-miss energy being expended. There is very little information in the literature in regard to formants and speech sounds. However, there is one reference that might prove helpful in this type of study: Jeffers, J., "Formants and the Auditory Training of Deaf Children"; Volta Review: 68; pp. 418-423, 1966. The type of information with which this audiologist presented us was just what we wanted, and it is now rather hard to imagine how a program could operate without it. This type of information provides the teacher with the tools to be fairly certain of which auditory information to use to reach the child and which may not reach the child initially. No longer is the child's auditory training program one that randomly presents noise and garble. It is one that can be designed with maximum certainty of being received with minimal confusion and without being camouflaged by sounds that the child cannot use at the present. This type of information also gives the teacher the tools she needs in order to increase sensitivity to sounds which may be beyond the child's frequency of response range.

Pitfalls to be Avoided in Diagnostic and Evaluative Procedures

There are a few pitfalls to be avoided during your evaluation of the deaf-blind child's speech and language behavior. One pitfall is the diagnosis of mental retardation without a prolonged period of observation and experience. Another pitfall is that of declaring the child as "too deaf" or "too unresponsive" to sound to profit from auditory training. This does not mean that your goal for language for this child is an oral system of language. Even for the child for whom signals seem to be the best means of communication, auditory training seems to me to be an important diagnostic and educational