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ABSTRACT

Several school districts participated in a project providing orientation and mobility instruction to 50 visually handicapped students. Students received four to five lessons a week and were instructed in long cane usage. Tactual maps were used for orientation. Evaluation by their instructor and an outside expert rated 21 of 27 students as having increased in number and percent of correct behaviors. Information is provided concerning administration, staff, special aspects of the program, and psychological data; conclusions and recommendations are presented. Case records are included for all 50 students; the cane checklist, authorizing legislation, relevant forms, and mileage reimbursement policies are appended. (JD)

ORIENTATION AND MOBILITY FOR BLIND ADOLESCENTS IN PUBLIC SCHOOLS

based upon the

Final Report on Vocational Rehabilitation Administration Project RD-1168 by
Berdell Wurzburger, Project Coordinator
Daniel E. Johnson, Project Director
Charles Gilson, Mobility Instructor

March 1963 - June 1966

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Superintendent of Schools of Alameda County
224 West Winton Avenue
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January, 1969

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Chapter I

HOW THE PROJECT BEGAN

Early in January 1962, certain people who live and work in the cities along the shores of San Francisco Bay opened their mail to read the following:

"N O T I C E ...

Charles Watson, Chief, Bureau of Special Education, California State Department of Education, and Miss Georgie Lee Abel, Professor of Education, San Francisco State College, have arranged to meet with administrators who have programs for the blind in Alameda County at the California School for the Blind in Berkeley on January 30, from 3:00 to 5:00 p.m.

The purpose of this meeting is to discuss a proposed research grant for an experimental teaching of orientation and mobility to blind children in public schools.

Mr. Watson has extended this invitation to include all those who have attended our meetings to discuss education for the visually handicapped with multiple handicaps."

This group of veterans in educating the visually handicapped met, and decided that it was long overdue to show that orientation and mobility skills can be taught to blind students while they are still in school and in their own communities, and that bridges between schools and Vocational Rehabilitation Services need to be established.

Blind students were being educated academically but were not receiving orientation and mobility training until after they had graduated from high school when Vocational Rehabilitation Services would provide this instruction. During these important formative years, these youngsters were dependent upon others for moving about and were thus restricted in extending and using their education. As they became older, their habitual dependency became more entrenched.

Those at the meeting established themselves as an Advisory Committee, and seven offered to serve as an editorial committee to guide the writing of a grant application which was done by Daniel E. Johnson, Ph.D., Coordinator of Special Education, Alameda County School Department.

They proposed to show that orientation and mobility instruction could be given to blind adolescents by itinerant instructors covering a fairly broad geographical area, that this instruction could be an integral part of the student's school day, and that it could be administered from a central office with a minimum amount of red tape.

Preliminary Explorations

A review of the literature and thorough discussions with experts gave assurance that the proposal should be tried. A major hindrance to the employment of the blind is their dependence upon others for transportation to the job and for moving about after they get there (Richterman 1951, Handel 1962). Every year a great deal of money is spent simply transporting blind children and adults.

Blind persons who wish to travel by themselves must either develop skill in the long cane technique or learn to use a guide dog and since the individual gives all commands to the dog, many schools require cane travel as a prerequisite to training in the use of a dog. Although only a very small percentage (2%) of the blind are able to use dogs (Finestone 1960, p. 96), each method has its place and each requires intensive specialized instruction. A project dealing solely with orientation and mobility training for using the long cane should be of value to the vast majority of blind people, and to focus on the long cane technique is justified (Abel 1961).

The technique itself is far beyond the experimental stage (Wright 1947, Richterman 1951, Kenmore 1960), and there is no doubt that experienced instructors can teach a blind person to travel by himself without a sighted companion. The uncertainties, before this project was undertaken, lay in the administrative provisions for such instruction (Cruickshank 1959) and in the nature of the students (Kenmore 1960).

Blind junior and senior high school students need these skills as well as adults (Abel 1961, Wright 1947). Waiting to become old enough for existing training programs develops habits of being dependent whereas these youngsters should be practicing independence during those years while they are still enrolled in school. Without mobility training they are not only deprived in concept development, but they develop many poor habits and mannerisms that may or may not be overcome at a later date. Most of all, they are deprived of the physical activity that is vital to growing children.

Since mobility instruction was already available to those few adult blind persons over 16 years of age who could get to centers

where there were instructors, the feasibility of sending students to orientation centers was explored. It was found that the age requirements and the location of the centers were obvious problems, and that even such well staffed an agency as the California State Orientation Center in Albany was prepared to teach only a minor fraction of the adults in California who become blind each year, according to data obtained from interviews with Orientation Center Staff.

Bringing the students to the teachers was explored as an alternative to itinerant instruction, but this would merely shift the transportation costs and inconvenience from the staff to the students. Furthermore, habits of dependency would be reinforced by the process of taking the student to and from the place of instruction. Going to a "center" reverses the natural order of events in learning. The natural sequence is to learn one's own yard and neighborhood first, and then to branch out into the community as a whole (Doll 1953). Imperfect transfer of training would become a problem if the students were brought to a center rather than taught in their own natural habitat.

Because of the value of educating handicapped children as close to their own neighborhoods as possible, many school districts provide Resource Rooms and braille instruction for their visually handicapped students. However, mobility and travel techniques are not taught to the children in these local programs (even though sighted children learn travel skills during their grade school years) because teaching these skills could not be added to the already full-time duties of the existing staff. An orientation and mobility teacher works with one student at a time and must frequently leave the school grounds with his student. He needs to visit families to explain the program and to discover special problems faced by his students, and he must analyze the routes and landmarks in each student's environment (Abel 1961). The Resource Room teacher, on the other hand, works with several children at a time and must be available throughout the day as resource to the regular teachers and to the blind students. Even if resource teachers had all completed the 20 units of specialized orientation and mobility training beyond the usual resource teacher preparation, their major purpose--that of teaching communication skills and solving communication problems--would be vacated if they attempted to teach travel skills.

Now readiness for mobility training is an individualized matter probably maturing between ages 11 and 13 (Kenmore 1960). Hence the number of children ready for mobility instruction at any one time in local programs is too small to justify the addition of an instructor to each program. What seemed to be needed was an itinerant instructor to serve a geographic cluster of local district programs. An administrative arrangement was needed which would provide the instruction where and when it was needed (Cruickshank 1959).

"Perhaps there should be some pricking of our national conscience over the time we have let slide by with little good research on the use of the cane while generations of blind persons have been telling us that physical independence ranked equal in importance with academic background when it came to getting and holding a respected place in the community" (Kenmore 1960).

QED Quod Erat Demonstrandum (which was to be demonstrated)

Preliminary explorations in the literature and discussions with informed experts indicated that a demonstration was needed to show that it is feasible to use itinerant instructors to teach orientation and mobility skills to blind junior and senior high school children in their local communities before they become clients of Vocational Rehabilitation Services. If blind junior and senior high school students can master travel skills, they will be that much closer to adult independence. Vocational Rehabilitation counselors could then begin specific job training and placement more directly.

Seven Specific Goals

From these overall considerations evolved seven specific goals. The intent was to demonstrate:

1) That blind adolescents can be taught orientation and mobility skills in their school and neighborhood with a minimum disruption of their daily schedule.

2) That this instruction can be itinerant and can be administered from an office intermediate between local and state levels.

3) That with a minimum of red tape, itinerant orientation instructors can be provided for local resource programs which have too few blind students to require an orientation and mobility instructor of their own.

4) That travel costs, workloads, and other such data can be made a matter of record.

5) That initial answers can be found to

the question of how large a geographical area or general population an orienter can attempt to serve before quality of service declines.

6) That school and rehabilitation departments can work together so that students become known earlier to Vocational Rehabilitation Services.

7) That schools can do a better job of preparing students for vocational success by helping them towards travel independence during school years, thus reducing one difficulty later faced by rehabilitation counselors.

Educational and Geographical Setting

Rich community resources including a number of pediatric hospitals and diagnostic clinics, a concentration of experienced people devoted to developing a full rainbow of services for the visually handicapped, and a strong public school special education program built around the Resource Room plan guaranteed that the demonstration would not fail for lack of a supporting setting.

The 734 square miles of Contra Costa and 735 square miles of Alameda Counties range from the Sacramento and San Joaquin Rivers on the north and east nearly to the southern tip of San Francisco Bay on the south and together they include the cities of Richmond, Berkeley, Oakland, San Leandro, Hayward, and Fremont along the east shore of the Bay and extend eastward into the agricultural plains of the San Joaquin Valley and the industrial cities of Pittsburg, Antioch, and Martinez along the southern bank of the San Joaquin.

The two-county population when the grant began totaled about 1½ million people with representation along the full range of almost every socio-economic dimension imaginable, from the lofty homes of the wealthy in Piedmont and Montclair to the tide flat slums, from the foreign language speaking stoop-laborers in the asparagus fields to the congregations of atomic scientists at the numerous radiation laboratories, from the action-radicals of Berkeley to the ultra-conservatives in the suburbs.

Educational and research facilities abound. Within 30 miles of the headquarters for the orientation and mobility instructors are 10 institutions of higher education: Stanford, University of California, Mills College, San Francisco State College, San Jose State College, California State College in Hayward, University of San Francisco, College of the Holy Names, St. Mary's, Santa Clara and numerous junior colleges. San Francisco State College is the center of special education teacher preparation in Northern California and has a well established master's degree program in the field of education for the visually handicapped.

The California State residential school for blind children is in Berkeley and the single state orientation center for blind adults is operated in Albany by the California Vocational Rehabilitation Department, Division of the Blind. The Berkeley Red Cross has for a long time trained volunteers in braille transcribing and the Variety Club Blind Babies Foundation has social workers actively helping parents of infant and preschool blind children. California Industries for the Blind and the Opportunity Workshop for the Blind provide about 65 to 75 blind adults with sheltered employment.

Home Teacher-Counselor Services for the Adult Blind, the Blind Recreation Center, the Berkeley-Albany Transcribing Group, the East Bay Center for the Blind with its Adult Social Club for the Blind, field services, readers, state library services and a number of actively participating service clubs help provide a favorable cultural climate for aiding the adult blind.

The California Education Code beyond the foundation program provided by the state for any public school student, ($125 to roughly $350 depending on the poverty of the district) authorizes yearly excess costs of $910 for special instruction to the blind and an additional $910 for supplementary instruction, materials and services as well as $475 to pay for transporting the blind student to and from public school. The local public school districts in the two counties have used this financial encouragement to develop the Resource Room programs described in the next few paragraphs. The data given are for the fall of 1963 when this project was originated. Similar programs operated in both Contra Costa and Alameda Counties.

Resource Programs for Blind Children in the Project Region--Fall, 1963

Except for a few high school students, all blind children attending public schools in Alameda and Contra Costa Counties are integrated into classes with sighted children except for periods of braille instruction (both reading and writing) and typing instruction which is done in the Resource Room under the direction of a specially credentialed teacher. Some high school students attend high schools which have no local special staff for the visually handicapped and recently an itinerant supplementary instruc-

tion program has been organized for some of them.

The resource teacher aids the blind student in clarifying any problems that might arise from his academic subjects, consults with teachers and counselors, provides information and assistance to teachers who have had no contact with blind persons. Cooperating with school counselors, she helps the blind youngster to adapt to the public school situation, and additionally aids in realistic programming for him.

The resource teacher collects materials from the regular classroom teacher which need to be transcribed. In one of the smaller districts, the resource teacher herself does this transcribing but most districts employ a braille transcriber to do this work.

Resource Rooms are usually equipped with tape recorders, braille writers, braille textbooks, braille library books, talking books, special maps, etc. Some few are equipped with a recording booth where tape recordings can be made by student volunteers, resource teacher, or braille transcriber. Another has a Thermo-form machine which can reproduce braille copies from a master sheet.

Resource Rooms in Alameda County (1963):

Berkeley Unified School District

- Jefferson Elementary--Grades K-6
- Emerson Elementary--Grades K-6
- Garfield Junior High--Grades 7-8
- Berkeley High School, West Campus--Grade 9
- Berkeley High School--Grades 10-12

San Leandro Unified School District

- Roosevelt Elementary--Grades 1-7
- Bancroft Junior High--Grades 8-9
- San Leandro High--Grades 10-12

Castro Valley Unified School District

- Stanton Elementary--Grades K-6
- Marshall Elementary--Grades K-6
- Earl Warren Jr. High--Grades 7-8
- Castro Valley High--Grades 9-12

New Haven Unified School District

- El Rancho Verde School--Grades K-6

Resource Rooms in Contra Costa County (1963):

Pittsburg Unified School District

- Village Elementary--Grades 1-6
- Central Junior High--Grades 7-9
- Pittsburg High School--Grades 10-12

Mt. Diablo Unified School District

- Pleasant Hill High School--Grades 9-12

Walnut Creek Unified School District

- Buena Vista Elementary--Grades 1-6
- Park Mead Intermediate--Grades 7-8

All blind students from Central Contra Costa County attend elementary and intermediate classes in Walnut Creek, and high school in Pleasant Hill.

CHAPTER II

A DESCRIPTION OF THE PROGRAM

The Plan

The program began with an idea introduced by Dorothy Misbach and Charles Watson of the Bureau of Special Education into a group of specialists from agencies serving the visually handicapped which had been wrestling for a year with the problem of emotionally undeveloped blind children. This group was a ready made Advisory Committee which eagerly welcomed the concrete and comparatively simple task of adding mobility skills to existing school programs. (Incidentally, two steps have been taken by members of this group since then to help the emotionally disturbed and emotionally undeveloped blind--a day care center in Oakland for the least hopeful cases and a day class in Castro Valley for the most promising cases.)

Because these people had been meeting previously, the committee did not have to go through the fumbling which is typical of new groups. They were ready for work and quickly agreed upon the two circuits of relationships which would comprise the program for RD-1168--one between adults and agencies, and the other between adults and the blind students. The administrative plan was one aspect and the instruction of students was another.

First in the circuit of adult relationships, the Advisory Committee developed the detailed implications of the idea with encouragement from the State Department of Education, and then asked the Alameda County School Department to apply to the Vocational Rehabilitation Administration of the Department of Health, Education and Welfare for funds. When the project had been approved, two instructors were employed and working arrangements were made with local districts and resource teachers who in turn became members of the Advisory Committee. There was continual review of the daily operation of the grant by these Advisory Committee members in the districts, and this feedback was consolidated into support or criticism of policy during the Advisory Committee meetings. This flow of policy is shown in the solid arrows in the chart below. For the sake of clarity, the chart shows only the initial, clockwise direction of relationships but of course communications were two-way and alternating as soon as the instructors closed the circuit with their first contacts with the districts.

The actual instruction of the students was the second circuit of relationships in the program. These are shown by the broken arrows on the chart. Again the relationships were not limited to one direction, but students did of course react to their orientation-mobility instructors and to their Resource Room teachers and Vocational Rehabilitation counselors. Unlike the adults, however, the students did not have much opportunity for communication with each other and a body of student opinion was not generated until late in the program.

The psychologists who interviewed the students and the instructors were aware that students had opinions about orientation-mobility instruction, and when it was realized that valuable criticism and information might be obtained if students could exchange their impressions with each other, students were brought together to evaluate the program from the receiving end. We wish we had started this part of the program sooner.

The chart of relationships does not include arrows (i.e., relationships) between students and this absence was an unnecessary weakness in the program. If we had it to do again, we would have student get-togethers once each semester, and perhaps student representation on the Advisory Committee.

The chart lists most of the parts of the program and the rest of this chapter will be used to describe them in more detail.

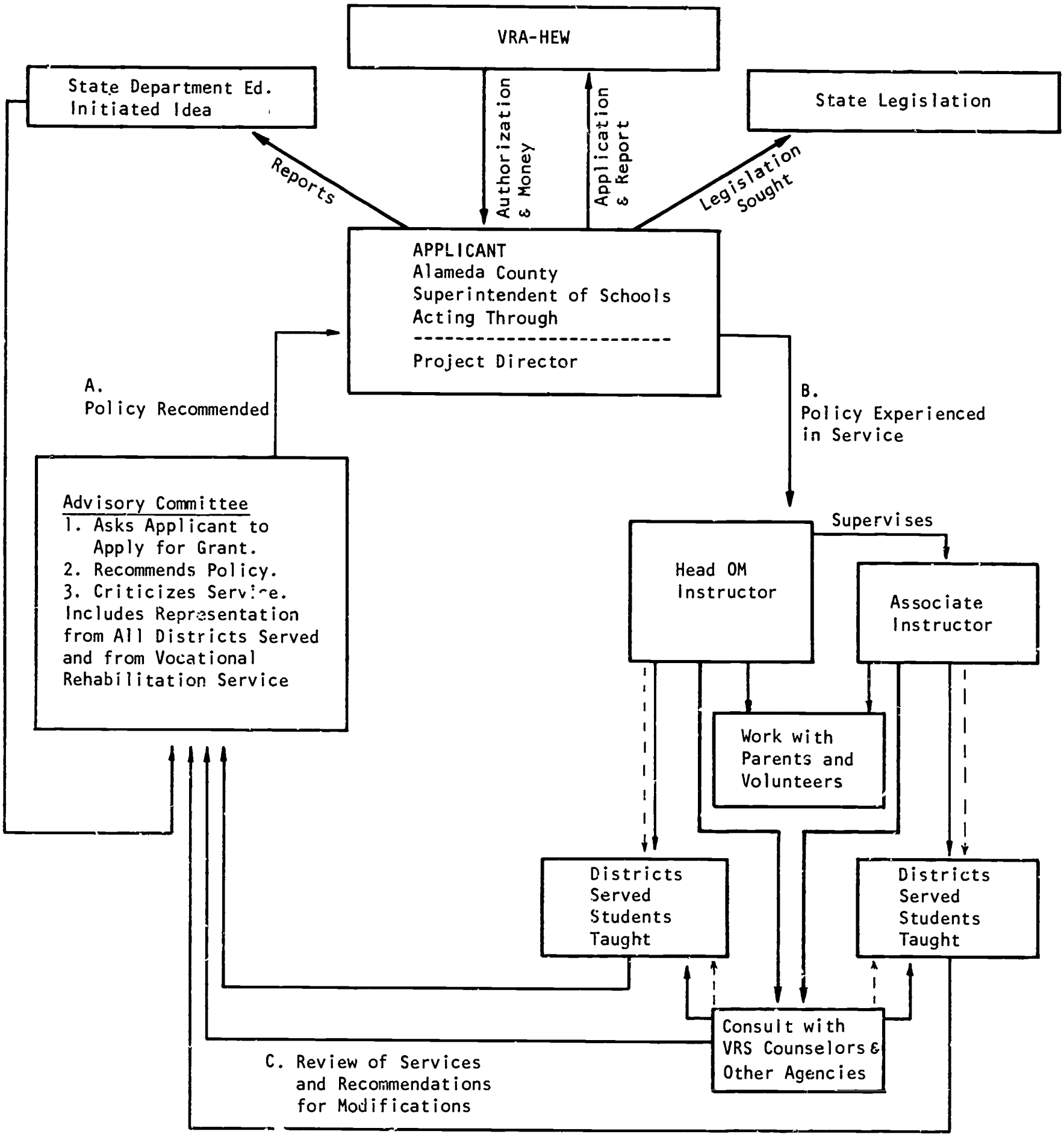


CHART OF FLOW OF POLICY AND SERVICE RELATIONSHIPS RD-1168-S

The Advisory Committee met several times in the winter and early spring of 1961-62 to instruct the author of the grant about what should be included. Some of the committee had been thinking, writing and teaching about the mobility problem for a long time and consensus was reached quickly. The eight members who served as an editorial committee were: Charles Watson, Georgia Lee Abel, Dorothy Misbach, Berthold Lowenfield, Roberta Ghertner, William Wyckoff, R. Lawrence Miller, and Daniel E. Johnson.

The task of the Advisory Committee included the following duties:

1) Determining initial need.

2) Formulating the original and renewal applications.

3) Recommending policy to the applicant.

4) Recommending personnel for employment.

5) Reviewing lists of students proposed for instruction.

6) Reviewing evaluation procedures.

7) Developing a plan to continue and to extend orientation-mobility services after the expiration of the demonstration period.

8) Enlisting support for the plan.

9) Contributing information and professional judgment.

10) Assisting the grant staff in developing concepts and directions consistent with the best thinking in the field of educating the visually handicapped.

Membership on the committee was open throughout the year of planning and 40 months of operation. As new districts were added to the program, they were invited to be represented on the Advisory Committee. Meetings were held not routinely by calendar dates but when decisions were to be made on challenging problems. Attendance was good and participation vigorous.

The strength of the committee can be judged from the responsibility and experience implied by the professional positions held by the members. Among the more prominent were Dr. Berthold Lowenfeld, then Superintendent of the State School for the Blind, Professor Georgie Lee Abel who heads the visually handicapped program at San Francisco State College, and Charles Watson, Chief of the State Department Bureau of Special Education. The full membership is listed below:

Advisory Committee 1963-1967

Georgie Lee Abel, Professor of Special Education, San Francisco State College

Oliver Bauquier, Assistant Director, Speech, Hearing and Vision Services, Santa Clara County Schools

Arthur Bloom, Principal, Pleasant Hill High School, Mt. Diablo Unified School District

Mary Cantrell, Head Nurse, Mt. Diablo Unified School District

Geri Chandler, San Francisco State College

Frank Corwin, Director of Special Services, Redwood City Schools

James Crandall, Director of Research and Development, Alameda County School Department

Katherine Croke, Coordinator of Special Education, Palo Alto City Unified School District

Kenneth Crump, Principal, El Rancho Verde School, New Haven Unified School District

Constance Del Monte, Supervisor of Special Education, Pittsburg Unified School District

Roberta Ghertner, Supervisor, Berkeley Unified School District

Charles Gilson, Orientation-Mobility Instructor for the Blind, Alameda County School Department

Milton Graham, Executive Director, American Foundation for the Blind, New York

Elmo Guilieri, Superintendent, Walnut Creek School District

Phil Hatlan, Instructor, California State School for the Blind

Daniel E. Johnson, Coordinator of Special Education, Alameda County School Department

Roy Johnson, Castro Valley Unified School District

Robert Jones, School Psychologist, Alameda County School Department

Neal Kaufman, Manuel White School, New Haven Unified School District

Tom Kellis, Resource Teacher, Berkeley Unified School District

Robert Klein, Assistant District Supervisor, Vocational Rehabilitation Services, Oakland Unified School District

Edna Laudenslager, Resource Teacher, San Leandro Unified School District

Diane Leverich, Counselor, Variety Club Blind Babies Foundation

Ed Lewis, Director of Special Services, Alum Rock Union Elementary School District

Berthold Lowenfeld, Former Superintendent, California School for the Blind

Harry Lucas, Regional Supervisor, Vocational Rehabilitation Services, Oakland

Tom Lundy, Resource Teacher, Pleasant Hill School, Mt. Diablo Unified School District

Arthur MacFail, Regional Administrator, Vocational Rehabilitation Services, Northern California

Philip Mangold, Instructor of Visually Handicapped, Castro Valley Unified School District

Floyd Marchus, Superintendent, Contra Costa County Schools

Carol McQuilling, Sequoia Union High School District

Nick Medina, Resource Teacher, Buena Vista School, Walnut Creek Elementary School District

Lee Mettier, Parkmead Intermediate School, Walnut Creek Elementary School District

Dorothy Misbach, Consultant in Education of Visually Handicapped, California State Department of Education

R. Lawrence Miller, Principal, Vannoy School, Castro Valley Unified School District

Audrey Mitchell, Director of Curriculum Development, Alameda County School Department

C. James Moniz, Director of Special Services, Mt. Diablo Unified School District

Pauline Moor, Program Specialist, American Foundation for the Blind, New York

Zella Parker, Consultant, Contra Costa County Schools

Charles Rice, Stanford Research Center

James Riley, Rehabilitation Counselor for the Blind, Vocational Rehabilitation Services, Oakland

George Rusteika, Assistant Superintendent of Curricular Services, Alameda County School Department

Ronald Schusterman, Stanford Research Institute

Philip Shafer, Regional Supervisor, Vocational Rehabilitation Services, San Francisco

Frederick Sinclair, Educational Counselor for the Blind, California State Department of Education

Jack Trombley, California School for the Blind

Al Tudyman, Director of Special Education, Oakland Unified School District

James Walker, Chief, Division of Vocational Rehabilitation

Charles Watson, Chief, California State Bureau of Special Education

Everett Wilcox, Superintendent, California State School for the Blind

Bill Wilde, Principal, Marshall School, Castro Valley Unified School District

Letty Williams, Superintendent, Marin County Schools

Belinda Wolfe, Redwood City Schools

Berdell Wurzburger, Orientation-Mobility Instructor for the Blind, Alameda County School Department

William Wyckoff, Supervisor of Special Services, San Leandro Unified School District

A. A. Zimmerman, Rehabilitation Counselor for the Blind, Vocational Rehabilitation Services, Oakland

The applicant, Rock La Fleche, Alameda County Superintendent of Schools, found that this project fit the three basic purposes of his office; to improve educational services for boys and girls, to strengthen the districts as they plan and operate those services, and

to foster efficient operations. The project made it possible with a minimum of administrative overhead to give a new dimension to district programs for blind students who would otherwise fail to receive a needed part of their education.

The Superintendent sought the concurrence of the County Board of Education, filed the application with the Vocational Rehabilitation Administration, assigned the duties of Project Director and Finance Officer to members of his staff, and employed the instructors. He made available to this project the services of the County School Department which include a professional library, publications department, research and statistical experts, specialists in school photography, psychology, special education, and school law.

Space, office equipment and clerical services were provided in the School Department of the County Office Building in Hayward, and policies governing the School Department as a whole were easily applied to this special project. The orientation-mobility instructors became active members of the County School Department as a whole, participating in staff meetings as well as in social events.

Personnel policies governing the certificated employees of the Office of the Alameda County Superintendent of Schools applied. Financial arrangements, records, and supporting daily, weekly, and monthly reports were maintained under policies of that office.

The Staff

Professional Personnel and Job Descriptions

The Project Director as 1/10 of his overall duties, was responsible for the demonstration as a whole, and planned, coordinated, and guided the demonstration on behalf of and in consultation with the Advisory Committee. He was Daniel E. Johnson, Ph.D , Coordinator of Special Education in the Alameda County School Department and also a Certified School Psychologist. During the period of the grant, he was serving as president-elect and president of the California Administ ation of Special Education.

The mobility instructors participated in determining which students to teach and explained the program to students and their parents. They instructed students in travel techniques, participated in the evaluation of the demonstration, conferred with school personnel, and kept records and made reports including the drafting of the final report.

Mr. Berdell Wurzburger's, the head orientation mobility instructor, qualifications were an M.A. with a major in special education plus training from Hines Veterans' Hospital and twelve years' professional experience in orientation-mobility instruction. The associate instructor, Charles Gilson, had training equivalent to the Hines program and three years' previous experience. Both instructors had public school credentials in physical education with majors in special education for the visually handicapped. Mr. Wurzburger, universally known as "Pete", has a general secondary credential, graduate work in school administration, and an M.A. Mr. Gilson is close to completing his M.A.

Finance Officer was F. N. Vassallo, Assistant County Superintendent of Schools, who has conducted the business office of California's fourth largest county (in terms of school enrollment) for many years.

Clerical Personnel and Job Descriptions

The secretary, Mrs. Laurel Herrick, as 1/5 of her overall duties, did the clerical work and purchasing for the project. On occasions when there was an overload, a part-time typist was employed. Justice requires an acknowledgment that Mrs. Herrick was an important part of the orientation and mobility staff and was relied upon to contribute ideas and criticism from her experience as the secretary in the Special Education Office. She made an energetic and consistent contribution, frequently beyond the call of perfunctory duty, especially when deadlines were to be met.

Consultants From Within the County School Department Staff were:

Certified school psychologist, Robert C. Jones, M.A. who interviewed a sample of the students, administering tests of memory capacity and of social maturity (Mr. Jones' findings appear later in this report); and Coordinator of Curriculum Research and Evaluation, James H. Crandall, Ed.D. who met with the Advisory Committee and project staff on matters of collection and interpretation of data.

Consultants From Outside the County School Department

The program called for a consultant in travel skills, himself a qualified mobility instructor, to observe the students periodically and give an independent evaluation of their progress. Since the consultant was not otherwise involved in this project, he presumably could give an appraisal of the students free from halo-effect. Richard

Russo and John Trombley, both experienced orientation-mobility instructors, served in this capacity. Actually so much agreement was found between the outside consultants and the instructors that this part of the program was discontinued during the third year. Vocational Rehabilitation counselors were, in effect, consultants to the project and their function is described later.

The Start

The Districts shown in the Program Chart are those named in Chapter I where the setting is described. The local administrators and resource teachers worked to fit this program into their schedules and into those of the students. Many of them served on the Advisory Committee and took part in various special aspects of the program. Their contributions to policy revision and Advisory Committee recommendations completed the circuit shown in the chart as A-B-C. Their daily contacts with the instructors created a flow of opinion and suggestions to the Project Director who frequently in his turn presented their observations to the Advisory Committee for general discussion.

Initiating the Program

The program began operation March 1, 1963, with the employment of Berdell (Pete) Wurzburger as head orientation-mobility instructor. Mr. Wurzburger, with the help of resource teachers and special administrators of school programs for blind children, then organized a trial run to test the preconceived plan before full operation was undertaken beginning with the start of the 1963-64 school year when a second orientation-mobility instructor was added. In September, 1963, full operation began.

Instruction from the grant was a service requested by the local school districts and by each set of parents, and the prior rights and responsibilities of the districts and of the parents were acknowledged and respected. Students were selected at the recommendation of local staff members, and the services under the grant were fitted into local policies and procedures. In a spirit of cooperation, the districts, parents, and students began arranging their local schedules to consolidate the work and reduce the travel time of the instructors, and this spirit of cooperation continued throughout the life of the grant. The students remained within their local framework of class schedules and the instructors functioned within each district as if they were local staff members.

Student readiness was determined, parent and local school support was obtained, and students were instructed in individual sessions. Each student had to meet the following minimum qualifications:

a) Possess no travel vision.

b) Have 5/200 or less vision on the better eye after correction.

c) Be an adolescent of either sex enrolled in a public school program for blind students in Alameda or adjacent counties. This enrollment was evidence that the student had (1) a modicum of common sense, (2) was not mentally retarded,* (3) had sufficient social attitudes and skills to cooperate in instruction, and (4) had sufficient energy and health to undergo instruction.

Data from the California State Department of Education in April, 1962, showed that 21 students in Alameda and Contra Costa Counties comprised the population described above. There were 12 fifth graders who would become qualified during the demonstration. An additional 30 qualified students lived in San Mateo and Santa Clara Counties adjacent to Alameda County. During the third year of the program, some of these students were also instructed. In all, 25 boys and 25 girls were taught during the 40 month period.

During the 40 months of the grant, no eligible blind senior graduated from high school in Contra Costa or Alameda Counties without receiving mobility instruction. Older students were given priority and younger students were given their chance to participate as time became available.

* One blind student was both enrolled in regular school and retarded. She was accepted as a trainee but failed to benefit from the orientation-mobility instruction.

The initial list from which students were chosen shows the following distribution by school districts:

School District	Initials of Student	Grade in 1962	Visual Acuity with Correction Right Eye	Left Eye
Castro Valley Unified	WG	8	none	none
	AJ	8	bare LP	bare LP
Decoto	LF	7	none	none
	DL	6	none	none
Hayward Union High School	LM	10	CF	CF
	LW	10	HM	HM
Oakland Unified	CA	11	none	none
	DB	7	5/200	5/200
	BS	9	CF	CF
	JR	11	LP	LP
San Leandro Unified	MP	10	none	none
	EL	8	LP	LP
	DN	8	NLP	LP
	JP	8	none	LP
	SP	11	none	none
	KS	11	2/200	2/200
Walnut Creek	JA	8	LP	LP
	JG	7	LP	LP
	CT	7	NLP	NLP
	PW	8	LP	LP
Mt. Diablo Unified	JF	9	4/200	NLP

CODE: LP - light perception
NLP - no light perception
CF - constricted field
HM - manifest hypermetropia

The Instruction

Instructional Schedule

The instructors spent ½ day a week in the office for organizing, reporting, and related activities, and 4½ days in the field. Several students had as few as 1 lesson but most had 4 or 5 lessons per week. Lessons were as long as the class periods in high school or from 40 to 60 minutes. During the first year, the overall number of lessons per student per week was 3; during the second year it was 3.5; and for the third year it was 1.5. Four or 5 lessons a week were found to be more profitable than 1 or 2. It was found that too much time was spent in review if the student had less than 3 lessons a week.

The instructor assessed each student's orientation knowledge and skills and surveyed his or her initial mobility habits and techniques. Instruction was then begun to correct and improve existing skills and to teach progressively more complex techniques.

Most instruction was given off the school campus. The students learned the neighborhood in which they lived, the route to and from school if it was a reasonable distance, how to cross streets, find entrances, etc. Other facets such as shopping center layout and use of public transportation were added as the skill and confidence of the students increased. Maps showing the circuits covered by teachers are shown in the chapter on results.

Curriculum

The necessary parts of independent travel for the blind can be narrowed down to two phases:

1) Orientation: The blind student by use of his or her remaining senses and memory to be able to keep track of his location.

2) Mobility: By use of a variety of skills to be able to move safely through the environment.

To ensure safe passage thru their environments, these students used a long fiberglass cane as an antenna to detect obstacles in their way. The cane gives warnings of curbs, stairs, obstacles, and changes in type of surface in time for the user to react. Clues from the cane are not only tactual and kinesthetic, but the sounds and echoes radiating from its tip give information about the surrounding space and about objects in it.

Student progress was assessed in terms of (a) ability to perform travel skills in a test situation, (b) the degree to which they used their skills in real life situations, and (c) changes in attitude including social maturity gains.

The mobility instructors determined the length of instruction needed by the individual students, and termination of instruction for any student was on the recommendation of the mobility instructor with the approval of the Advisory Committee.

It was found that tactual maps were needed to develop the students' orientation to their communities and such maps were constructed by the mobility instructors and later by volunteers with supplies provided by the grant. A detailed description of this process was reported in The Outlook for the Blind, Vol. 59, No. 2, pp.59-62, and is briefly reported in the next chapter.

Although the whole project was a demonstration of an administrative framework rather than psychological research, a few rudimentary explorations were made to see whether further research might be warranted in such matters as the relationship of sex, social maturity, intelligence, and chronological age to progress in orientation-mobility instruction. The data were gathered by use of the Wechsler Memory Scale, the Vineland Social Maturity Scale, the Wechsler Bellevue Form II Verbal Scale and from interviews with students. The low number of students involved and the limited suitability of the instruments themselves prevent the drawing of any conclusions from the data.

Independent Rating of Students Orientation-Mobility Skills

In order to answer the question, "How do you know the students are learning anything?", students were rated periodically during the instruction program by their own instructor and an orientation-mobility expert not otherwise connected with the project who sent his reports directly to the Project Director without any exchange of information with the County Orientation and Mobility Instructors. In March and June, 1963, and in September, 1963 and June, 1964, Richard Russo of the California Orientation Center for the Blind provided the independent rating reports for our orientation-mobility students. In September, 1964 and June, 1965, John Trombley of the California School for the Blind provided the reports on the students. Both the orientation-mobility consultant and the Alameda County instructor made separate evaluations on the same day.

The Mobility Skills--Cane and Proper Usage rating sheet developed by Berdell Wurzburger

was used, as well as a written report, which has been published elsewhere (see Bibliography). The purpose of the rating sheet was to increase the objectivity of judgments about student progress and to assist in the instruction of students as well as to leave a record of student strengths and weaknesses. Items were checked either "yes", "no", or were left blank. Stencils were used to record (1) the number of positive (correct) student behaviors observed and (2) the number of negative (error) behaviors observed. Because differing numbers of items were left blank at different ratings and by different raters, the raw scores were not used to compare students. Instead two simple scores were derived from the rating sheet: (1) Did the number of positive behavior items increase from the first rating to the last? (The ratings of the instructor and of the outside consultant were averaged to obtain more stable judgment.) (2) Did the proportion of errors decrease from the first rating to the last? The score was expressed as the percent of correct behaviors in the total of behaviors checked at each rating, that is, the number of positive behaviors plus the number of negative behaviors observed in a given rating divided into the number of positive behaviors.

The 27 students who were rated included 21 who increased both in the number and in the percent of correct behaviors; one who did neither; and three students who increased in the number of correct responses the raters observed them making, but who unfortunately increased their rate of errors at the same or greater rate. The other students failed to develop new positive skills but were able to eliminate errors. Of the 21 students who were on the positive side of both statistics, 9 made steady progress and 12 had plateaus in positive learnings or periods when their errors increased faster than their new correct skills.

Chapter III

SPECIAL ASPECTS OF THE PROGRAM

Vocational Rehabilitation Service

The original application of Demonstration Grant RD-1168-S under Justification of the Project, reads as follows:

"If adolescent blind persons can be taught travel skills while they are in public school, it will remove an uncertainty in present rehabilitation processes. No longer will the vocational rehabilitation counselor's work in evaluation, training, and placement stand or fall on the outcome of whether his adult blind counselee can unlearn dependency and learn to travel by himself. On the contrary, the rehabilitation counselor will know in advance that the blind counselee will be able to get to and from places of training and employment."

Throughout the life of Grant RD-1168-S, there was continual cooperation between the Alameda County Mobility Project and the State Department of Rehabilitation.

Mr. Al Zimmerman, who was the rehabilitation counselor for the blind in Alameda County, attended the Advisory Committee meetings during his tenure of service, and helped to set up additional instruction periods for a student in our initial group who needed to have optimum orientation and mobility skills in the shortest possible time.

Mr. James Riley, the rehabilitation counselor who next served the blind students in Alameda and Contra Costa Counties, and Mr. Zimmerman, were effective in getting 13 interested trainees in the orientation and mobility project enrolled as clients under the State Department of Rehabilitation for a variety of direct services.

Several of the students were shown the bus and foot routes to the Office of the State Department of Rehabilitation at 1111 Jackson Street, Oakland, California 94607. Some of the students made their own appointments for counseling service and went to the Department of Rehabilitation independently for intake and counseling sessions.

Tactual Maps

One difficulty in teaching orientation and mobility is the child's lack of knowledge about his physical environment. The child, who through early blindness does not retain any usable visual memories, frequently has an accumulation of unrelated information about his physical environment. Many blind youngsters have vague and distorted conceptions about the make-up and nature of such everyday objects such as streets, sidewalks, transportation systems, and topography. Some of our students, for example, believed that every street extended indefinitely in each direction. Some believed that every intersection has right angle corners. One boy thought that blocks were offset in a stair-step fashion and that if he did not cross streets at an angle, he would be walking into traffic.

To help the youngsters overcome the ambiguities and inaccuracies of their concepts, the instructors made tactual maps. Beginning with a simplified model of a student's own block, students were taught about the intersections of the streets that border his block and how blocks follow on either side of his street. From there, it was but a small step to teach about the blocks that surround his own and to gradually develop more involved concepts of city traveling. The idea of a street became clearer when the instructor placed model cars on the map showing the child right and left turns and demonstrating why cars must remain on the street and travel in certain directions and in proper lanes. This clarified things for those blind children who did not understand how cars could go in opposite directions on a street and not hit each other.

After these concepts had been explained and experienced through the tactual map, it was a necessary part of the learning experience that the student test the concept by exploring an appropriate area on the ground. Used alone, without field work, the raised map has little value. Furthermore, tactual maps are aids which the blind person should use less and less as his skill in moving about in society increases.

Although the two instructors in the Alameda County project made many of their own tactual maps for use by the students, the larger proportion of the maps was made by volunteer groups with materials and directions furnished by the two mobility instructors from project funds. Students of the Industrial Arts Department of San Leandro High School completed an excellent scaled map of the campus of their school and also a map of the greater portion of the city of San Leandro.

A retired civil engineer from Berkeley, Edward Thayer, put a great deal of time on a full size map of Berkeley with both print and braille labeling. Mr. Thayer was assisted by volunteers from the Berkeley Chap-

ter of the American Red Cross who also furnished the work area, and by students from Garfield Junior High School and Berkeley High School, Berkeley, California. The map was 6' X 6' and was in four pieces so that it could be used in whole or in part. The map is now available for daily use by blind students attending Berkeley High School.

The best use of tactual maps is made after the student has had an opportunity to walk over the area in question. Although there are students who require no map to conceptualize an area, and others who cannot do it by using a map, in general these maps proved to be of great use to the students, and most of them showed a definite increase in their understanding of their environment when a good tactual map was available.

The city engineers of the various cities in which we have students graciously provided scaled maps which we had copied for use as one of the basic components in tactual map construction. The tactual map should not try to show all of the possible objects in the area such as trees, poles, etc., or changes in terrain such as drop offs, declines, inclines, etc., but should show the information needed to form a basic concept of the environment, and should be as accurate as possible without going to extremes.

Additional information may be obtained from the author's article in the February, 1965, issue of Outlook for the Blind, pp. 59-62, "The Use of the Raised Map in Teaching Mobility to Blind Children."

Forms Used in the Alameda County Orientation-Mobility Project

Forms were devised to identify each public school blind student who participated in the orientation-mobility project and to obtain parents' permission for their blind child to be trained, to be tested, and to be a participant in off-campus instruction. A form letter titled, "Itinerant Instruction in Orientation and Mobility for Blind Adolescents in Public Schools", describing the orientation-mobility project and its objectives was sent to parents of prospective trainees. It described the reasons for using the cane, what skills the blind child must develop and use in order to understand and negotiate his surroundings, in what general areas mobility instruction would take place, how the project originated, and who was responsible for carrying out the project objectives.

A form designed to obtain from school records a description of the blind child's history and general physical condition included questions relating to the child's vital statistics, origins of blindness, physical condition, I.Q. tests, residence, and braille proficiency. With these basic forms, a file was initiated for each individual student.

Three forms were created to evaluate objectively each blind student's orientation and mobility skills. One form titled "Orientation at Home and Environs" records pertinent information about the blind child's ability to move about his neighborhood, his understanding of the physical makeup of his neighborhood surroundings, his basic mobility skills, and amount of any previous formal training in orientation and mobility. To provide data on degree of independence another evaluative form titled, "Orientation at School and Campus" recorded the blind student's ability to negotiate his school and campus; his and other individual's reaction to the cane; and the degree to which the blind student used human guides in moving about.

With an evaluation form or check-list labeled, "Mobility Skills--Cane and Proper Usage", the instructor recorded his observations of the trainees' various cane techniques, safety of movement, bus and automobile skills, street crossing facility, whether the student could orient well to new and unfamiliar places, and the degree of independence the student had reached.

Student Meeting

In order to obtain an evaluation of the project from the blind students themselves and give them an opportunity to compare notes with each other without adult interference, a meeting for blind students who had participated in the Orientation and Mobility Project was held in Berkeley High School Cafeteria during the morning and afternoon of Saturday, April 23, 1966.

The idea and plans of the above meeting came from F. Thomas Kellis, Resource Teacher, Berkeley High School, and Berdell Wurzburger, Orientation-Mobility Project Instructor, who with Richard Holm of Berkeley Schools and Charles Gilson formulated a list of questions which was sent to every trainee in advance of the meeting. The students in their replies raised three major issues.

1) Intersections: What type of intersection takes the most skill in crossing? What techniques do you use in getting information about the type of intersection? When should a blind person ask for help in crossing streets?

2) Cane: When and where do you use your

cane? What kind of cane do you find most useful? What are the attitudes of your family and friends regarding the cane?

3) Parents & Travel: How do parents help or hinder your traveling?

Around these questions, the agenda for the morning session was built.

A total of 35 students attended the meeting. The parents were not allowed in the meeting as we wanted the students to have as free a discussion as possible, and the teachers were not allowed in the small discussion groups for the same reason.

9:00-- 9:30 a.m. As an aid to getting acquainted, each student was given a directory in braille which listed the names of all of the students invited to the meeting. Fruit juice and cookies were served during this get-acquainted time.

9:30--10:00 a.m. Mr. Kellis outlined what the groups would do in their morning sessions and gave each student a braille program and a tactual map of the circular cafeteria which has a stairwell in its center. The groups were designed to give each student the opportunity to meet and become acquainted with as many other students as possible.

10:05--11:00 a.m. Each of the five groups was given an area of the cafeteria in which to meet. Each group had a tape recorder and elected a student to run it. Mr. Kellis appointed a chairman for each group to lead the discussion. When the groups were finished with the three questions provided, they were free to discuss any other problems dealing with orientation and mobility. The resource teachers met in another part of the building to talk over mutual problems.

Morning Panel Review

11:15--12:00 noon. The chairmen of the five groups then presented to the students and teachers the findings of their groups. After all five had presented their findings, questions from the floor were answered by the panel, and the students themselves created the agenda for the afternoon session choosing the following topics:

1) American Printing House--Clovernook--Possibility of printing a braille rock-and-roll magazine.

2) Electronic and technical braille publications.

3) Social acceptance of blind students by sighted peers.

4) Home Economics--Blind students are not allowed to take these classes in some high schools.

5) Recording of material on tape.

6) Physical Education--Are you satisfied with it in your school or do you have to go into modified P.E. classes?

7) Reader service in school.

8) How do you learn a new campus?

9) Plastic braille paper--good or bad?

10) Having to carry too much in the way of books and equipment, plus cane.

11) Summer School Program--No provision made for blind students.

12:00-- 1:00 p.m.--Lunch. Box lunches made it unnecessary to leave the building to eat elsewhere and allowed the conversations to continue.

1:00-- 1:15 p.m. Plans for afternoon groups. Composition of the five groups was changed in the afternoon so that the same students would not be together again. The students picked their own chairmen and tape recorder operators.

1:15-- 2:15 p.m. Afternoon Panel Groups discussed the 11 questions decided upon in the 11:15--12:00 session. The tapes of the large meeting and the group sessions were edited and notes taken to get the essence of the students' reactions. The results will be used in the writing of papers to be published elsewhere.

2:20-- 3:00 p.m. Afternoon Panel Review. Questions were answered by the panel and Mr. Kellis and Mr. Wurzburger. When Mr. Wurzburger closed the meeting, he asked the students to send him a written appraisal of the meeting. Fifteen replied in writing, the rest of the students later gave oral replies. All wanted more of these meetings of blind students.

As we heard these students express their point of view, we wished we had had student get-togethers each semester instead of waiting until the last semester of the project. A slogan which you may have heard elsewhere would probably be welcomed by these blind teen-agers, "No service without representation."

Dissemination of Information

Alameda County Project Members made use of

the following opportunities to let others know about the mobility demonstration.

1) National C.E.C. Convention 1965--Portland, Oregon--Paper on Alameda County Orientation and Mobility Project presented by B. H. Wurzburger.

2) Oakland Lions Club--November 11, 1964--Speech on Orientation and Mobility Project--B. H. Wurzburger.

3) Santa Clara County--Parents of Blind Children Club--Discussion of Alameda County Project--Gilson and Wurzburger.

4) Parents of Blind and Deaf Children--Pittsburg, California--October, 1964--Discussion of Alameda County Project-- B. H. Wurzburger.

5) San Mateo County C.E.C.--February, 1966--Discussion of Alameda County Orientation and Mobility Project--Gilson and Wurzburger.

6) Colorado State College--Speech to all students enrolled in Education of Visually Handicapped Courses for Summer Session July 19, 1965--Subject--Alameda County Project--B. H. Wurzburger.

7) Speech at Western Michigan University, April 5, 1966, Orientation and Mobility Trainees--Subject--Alameda County Project--B. H. Wurzburger.

8) Boston College--April 7, 1966-Discussion with Peripotology Staff-Special Education Department--Subject--Alameda County Project--number of students, lesson plans, lessons per week, etc.

9) Hines Veterans Administration Hospital --dines, Illinois--Blind Rehabilitation Service Discussion with Staff--Alameda County Project.

10) San Francisco State College--3 week Workshops--Education 261.8 Orientation and Mobility Skills for Blind Children--1963-64-65-66--Fall Sessions 1964-65--Instructor, B. H. Wurzburger. Resource and Itinerant teachers of the Visually Handicapped from all over the United States and Canada have attended these workshops and the Alameda County Project was discussed and students from the project under the supervision of Charles Gilson, were observed by these teachers.

11) Melvin, Illinois, Lions Club--July, 1965--Speech on Alameda County Project and Orientation and Mobility Aspects of Blindness.

12) Industrial Home for Blind, Brooklyn, New York--Discussion with the Director, Harold Richterman about Alameda County Project--Mutual problems encountered in both agencies with orientation and mobility instruction with blind adolescents.

13) West Coast Regional Conference on Research Related to Blind and Severely Visually Impaired Children--Sponsored by the American Foundation for the Blind--March 8-10, 1965--San Francisco, California--Paper presented by Daniel E. Johnson. "A Proposal for a State-Wide Framework of Orientation and Mobility Instruction".

14) Sacramento Society for Blind--Speech on Alameda County Project--September, 1965--B. H. Wurzburger.

15) McKinley Elementary School-San Leandro Unified School District--Talk on blindness and skills necessary to adjust to it--C. Gilson.

16) Alameda County Board of Education--Report on Alameda County Project--Gilson, Johnson, Wurzburger.

17) California C.E.C. Journal--November, 1964, Vol. 14 No. 1--Article by Alameda County Orientation and Mobility--Project Director Dr. Daniel E. Johnson--title, "Itinerant Instruction in Orientation and Mobility for Blind Adolescents in Public Schools".

18) California State Legislature--Spring 1965--Testimony on Assembly Bill 271 (Bee). An act relating to orientation and mobility training for the blind heard by the education and finance committees of assembly and senate.

19) Newspaper articles concerning Alameda County Project appeared in various issues of the Oakland Tribune on the Orientation and Mobility Program, Berkeley Gazette and Hayward Daily Review.

San Francisco State College

Cooperation Between the Project Staff and San Francisco State College

Each summer, during the first three years (1963-1965) of the Orientation-Mobility Project, the two mobility instructors were employed by the Frederic Burke Foundation at San Francisco State College in San Francisco. Berdell Wurzburger directed an orientation-mobility course for sighted teachers who came from various school systems throughout the United States.

Charles Gilson brought several of the blind students from the Alameda County Project to demonstrate their mobility skills on the college campus and in the surrounding business community. The classes of teachers were able to observe and question these blind students individually about mobility and its problems, and at times, there would be group discussions about the blind students and the class.

From time to time throughout the year, the blind students were invited to hold discussions at the college with potential Resource Room teachers. At times, students from the San Francisco State College Visually Handicapped Department would visit the Alameda Project and observe the blind students in the school and during their mobility lessons.

Photography

During the three years (1963-66) the Alameda County Orientation-Mobility Project was in operation, the photographers in the Alameda County School Department Audio-Visual Division provided a series of action photos which were used during the many occasions on which the staff was called upon to speak about the nature of the project to interested individuals and groups in the fields of education, government, and community service. These pictures were also used at San Francisco State College to describe our Orientation-Mobility Project to future resource teachers and mobility instructors of the blind.

Pictures created more understanding about cane travel than would have been derived from words alone. The pictures were arranged in a binder along with captions which explained the skills being taught. On several occasions in the California State Legislature, the pictures were used to show legislative committees what orientation and mobility means to blind public youngsters.

CHAPTER IV

FINDINGS

Administrators planning programs need to know something about geographical coverage, costs, and the nature of students served. Research workers may be interested in the rudimentary psychological explorations made as side trips from main purposes and the demonstration proper.

How much territory can an itinerant orientation and mobility teacher cover? What will it cost? Which students were taught? What did observers think about the program? What did psychological data indicate? The answers to such questions about this demonstration project are grouped together in this chapter. The progress made by the students themselves can be called "the results" of the project and are given in the following chapter.

Geographical Coverage

A total of 103,648 miles were driven by the instructors during this 40 month project. The primary areas, the two equal sized counties of Contra Costa and Alameda, have a combined area of 1469 square miles interlaced for the most part with a system of freeways which are not overcrowded during school hours; consequently highway speeds could be used for most of the mileage between students. The maps which follow show the routes followed by instructors Wurzburger and Gilson each semester of the 40 months of the demonstration.

In addition to the transportation routes of the instructors themselves, each school with blind students was the hub of a smaller transportation system which brought the students to it, and for the most part the schools indicated on the maps provide instruction to all of the blind secondary school students in the surrounding geographical area.

The routes were stringent but realistic except for Mr. Gilson's San Mateo County run during 1965-66 where two factors combined to make the route burdensome; first, the addition of the student at Pacifica took the route over the coastal hills, and second, problems of scheduling students in the cities along the west shore of San Francisco Bay resulted in doubling back and forth.

It was a purpose of the demonstration to stretch the capacity of itinerant instruction to see what was feasible, and the 1965-66 San Mateo route together with its Santa Clara extension demonstrates the extreme of what should be asked of an itinerant instructor. This is not meant as an apology because until a maximum effort is made, the actual limits of a plan have not been demonstrated. Fortunately, Mr. Gilson is energetic, cooperative and willing to extend himself.

Accompanying each semester route map is a table showing which students were taught along that route and what progress they made during their instruction in that particular school year. The number of lessons shown in the tables also indicates the total for that school year only. Students' names have been coded and are fictitious. Data are reported for each instructor separately.

Costs

The cost of providing itinerant mobility instruction depends almost entirely upon two factors--salaries and mileage reimbursements. Costs of supplies are quite small and costs for consultants and much of the clerical work were the result of the demonstration aspects of the project and would have been much lower had the instructors merely been giving service. An agency planning to employ a mobility instructor needs to provide desk space, telephone, and occasional secretarial service but no specialized building space or office equipment is needed. Capital costs are low because the "classroom" is the environment already provided to the student for other purposes and includes sidewalks, streets, and public buildings. Insurance costs were low because the blanket liability policy of the county school departments also covered the orientation-mobility instructor's work and automobile insurance was provided by the instructors out of their mileage reimbursements. No claims occurred. The budgets for the three years of the grant were prepared according to Vocational Rehabilitation Administration guidelines and the expenditures were accounted for and audited. Detailed repetition of those data would obscure the more general facts which the grant sought to demonstrate. Simplified budgeting and cost experiences are shown in Tables which follow.

The salaries of the two instructors were based upon the Alameda County School Department schedule for itinerant speech therapists which was the most similar position on the manning tables.

The senior instructor who carried many responsibilities for the operation of the grant was paid partly on the speech therapists' schedule and partly according to the coordinators' schedule which was the next higher level.

Although the salaries exceeded recommendations made by experts on the East Coast, they were probably too low compared to salaries paid to special educators (master's degree level) in California.

School administrators planning to initiate this service should probably plan to offer an extra salary step (approximately $400) above the usual starting step which a given mobility instructor's experience and graduate credits would otherwise justify. The reason is that the mobility instructor is responsible for a great deal of work beyond actual instruction. Some of this is outlined elsewhere in this report.

The amount budgeted to reimburse the instructors for mileage was based upon the regular policies in effect in the Alameda County Schools Office which are intended to cover some depreciation, insurance and maintenance as well as gas and oil (see Appendix D for a statement of this policy.) The reimbursements paid under this schedule are still less than the cost to the county of actually providing and maintaining a car for itinerant instructors and any lesser amounts would require the instructors to donate transportation

Table: Miles traveled by instructors, not including mileage to the first teaching station or to the office:

3/63 to 6/63	3/63 to 6/64	8/64 to 6/65	8/65 to 6/66
5,843	15,976	19,997	20,286
	11,756	10,602	19,548
5,843	27,732	30,599	39,834

Each year too little money was planned for the mileage costs. In the first year's budget no allowance was made for the soon apparent fact that instructors must drive many miles during lessons as well as between them. Students are driven to and from lesson areas such as shopping centers, or are followed by car as they take public transportation. The lesson periods are too short for any other arrangement.

During the second year it became evident that instructors must attend certain regional professional meetings if they are to keep in touch with developments in the field and if they are to make their contribution to conferences dealing with the needs of blind children. The third year's underestimate occurred because the area of geographical coverage was extended in order to see how much territory an instructor could cover--one of the purposes of the grant. However, we stretched farther than had been anticipated in the budget and served Pacifica, a district along the Pacific Ocean across the coast range mountains from San Mateo. The routes covered and total mileage for each semester are shown on maps elsewhere in this report.

Approximately $77,000 was spent in a 40-month period, and approximately $15,000 of this amount arose from demonstration aspects which need not be repeated in future direct service operations.

Fifty students each received an average (mean) of 107 hours of individual instruction for the sum of $62,000. There were 5369 hours of instruction altogether so that costs were $1,240 per student or approximately $11.50 per hour. By way of comparison, orientation-mobility instruction cost less than the typical $12.50 to $15.00 per hour charged by individual therapy and tutoring agencies in the Bay Area, and those agencies do not have the mileage costs which are included in the $11.50. Average mileage costs amounted to almost exactly $1.20 for each hour of instruction. For example, Family Service Agency actual costs per hour of individual counseling in the San Francisco Bay Area range around $15 to $17 although because of United Crusade subsidies a less than cost fee is usually charged to clients.

Now the California Education Code provides $475 per blind student per year to provide transportation to and from school, a total of $6,175 for a school career from kindergarten through the 12th grade. Every student who is taught to travel to and from school on his own can save the state $475 per year. This level of proficiency was developed by 11 high school students in the demonstration, 2 by the end of their freshman year, 5 by the end of their sophomore year, 2 by the end of their junior year, and 2 by the end of their senior year. Accordingly a total of 18 sets of students' travel allowances totaling $8550 were made unnecessary. This $8550 was a potential rather than an actual saving because, for a variety of reasons, several of these students continued to accept transportation from their school districts in spite of their independent travel skills.

But apart from these exceptional cases, in California the cost of providing 110 hours of mobility instruction at $11.50 per hour will be more than saved for every blind high school student who by the end of his freshman year can travel to and from school on his own. Students who achieve independent travel skill later than the freshman year

will of course save the state less than the full amount of their mobility instruction. Still, looking beyond high school into an adult life of twenty to forty productive years, every independent traveler will be spared many times the cost of his mobility instruction because without it someone would have to expend time and resources to assist the blind person to get from one place to another.

Besides the major costs of salaries and mileage are a few necessary supplies. These include canes, replacements for tips which wear out, and materials for making tactual maps. Lumberyards and hardware stores carry the map materials in stock and $10 will buy good quality serviceable materials for a map. Cane and tips for this project were purchased from:

Rainshine Umbrella Company, 7844 Canterbury, Prairie Village, Kansas, at $3.00 per cane and 25¢ per tip.

Other sources of canes are:

Aluminum canes, nylon tips, hollow shaft--small crook--Typhlocane--Precision Grinding Company, 8019 Flood Road, Baltimore 22, Maryland.

Fiberglass canes, Rainshine Umbrella Company, 7844 Canterbury, Prairie Village, Kansas.

Aluminum Canes--American Foundation for Blind Appliances for the Blind, 15 W. 16th Street, New York, New York.

About $3.00 per student per year should be budgeted to pay for public transportation fares during lessons and for the purchase of occasional snacks or other minor purchases when the lesson assignment is to find a given business establishment, a given department, and make a purchase. Amounts should also be budgeted for instructors to attend professional meetings. Several times a year, the students can be profitably brought together in a group for mutual discussion of travel problems, and amounts should be budgeted to provide a lunch, refreshments, and perhaps a consultant for these days. The motivation created by these minor expenditures and the experiences they make possible more than justify the trivial expense involved.

Relationship of Budget Categories combining applicant and grant funds to total amount budgeted.

	First (1) Year	Second Year	Third Year
Professional Personnel (2) (3)	67.3%	75.0%	78.6%
Clerical & other personnel (2)	5.7%	4.3%	3.5%
Consultants	17.3%	9.8%	6.5%
Consumable supplies (canes & maps)	1.6%	1.6%	1.1%
Travel	4.8%	8.1%	9.2%
General administration	3.5%	1.2%	1.0%
Total Budgeted	$28,270	$25,164	$25,422

1) Funds for the first "year" were extended to cover 16 months.

2) Retirement and other fringe benefits are included.

3) Professional salaries were: 1 full-time experienced instructor, 1 full-time beginning instructor; 1/10 time Project Director.

Relationship of Budget Categories, combining applicant and grant funds, as expended.

	First (1) Year	Second Year	Third Year
Professional Personnel (2) (3)	71.9%	81.6%	79.8%
Clerical Personnel (1)	3.7%	3.7%	3.6%
Consultants	6.4%	3.9%	4.9%
Consumable supplies	1.3%	1.7%	.9%
Travel	8.3%	9.2%	10.8%
General administration (4)	1.0%	-	-
Total Expended	$27,155	$24,466	$24,787
Unexpended Balance	$ 1,115	$ 735	$ 80

1) Funds for the first "year" were stretched to cover 16 months.

2) Includes retirement and other fringe benefits.

3) Professional salaries were: 1 full-time experienced instructor, 1 full-time beginning instructor; 1/10 time Project Director.

4) For year two and three, General Administration expenses total about 1% of the grant but for auditing purposes were not identified.

March 1963 - June 1963 Orientation & Mobility Students Instructor, B. Wurzburger

Student (Coded)	Location	Grade	Number of Lessons of Instruction[1]	Lessons Per Week	Results	Comments
Ada	Oakland	12	140[2]	4[3]	Excellent	Finished program. Entered college in Fall of 1963.
Angela	Pleasant Hill	9	46	5	Average	Carried over to 1963-64.
Anton	San Leandro	11	44	4	Above average	Carried over to 1963-64.
Alan	Berkeley	8	12[4]	2	Above average	Carried over to 1963-64.
Alex	Berkeley	7	7[5]	2	Above average	Carried over to 1963-64.
Adolph	Berkeley	10	10	1	Above average	Carried over to 1963-64.
Adrian	San Leandro	9	32	3	Above average	Carried over to 1963-64.
Adele	San Leandro	9	11	1	Average	Carried over to 1963-64.
Bart	San Leandro	12	71	4	Above average	Carried over to 1963-64.

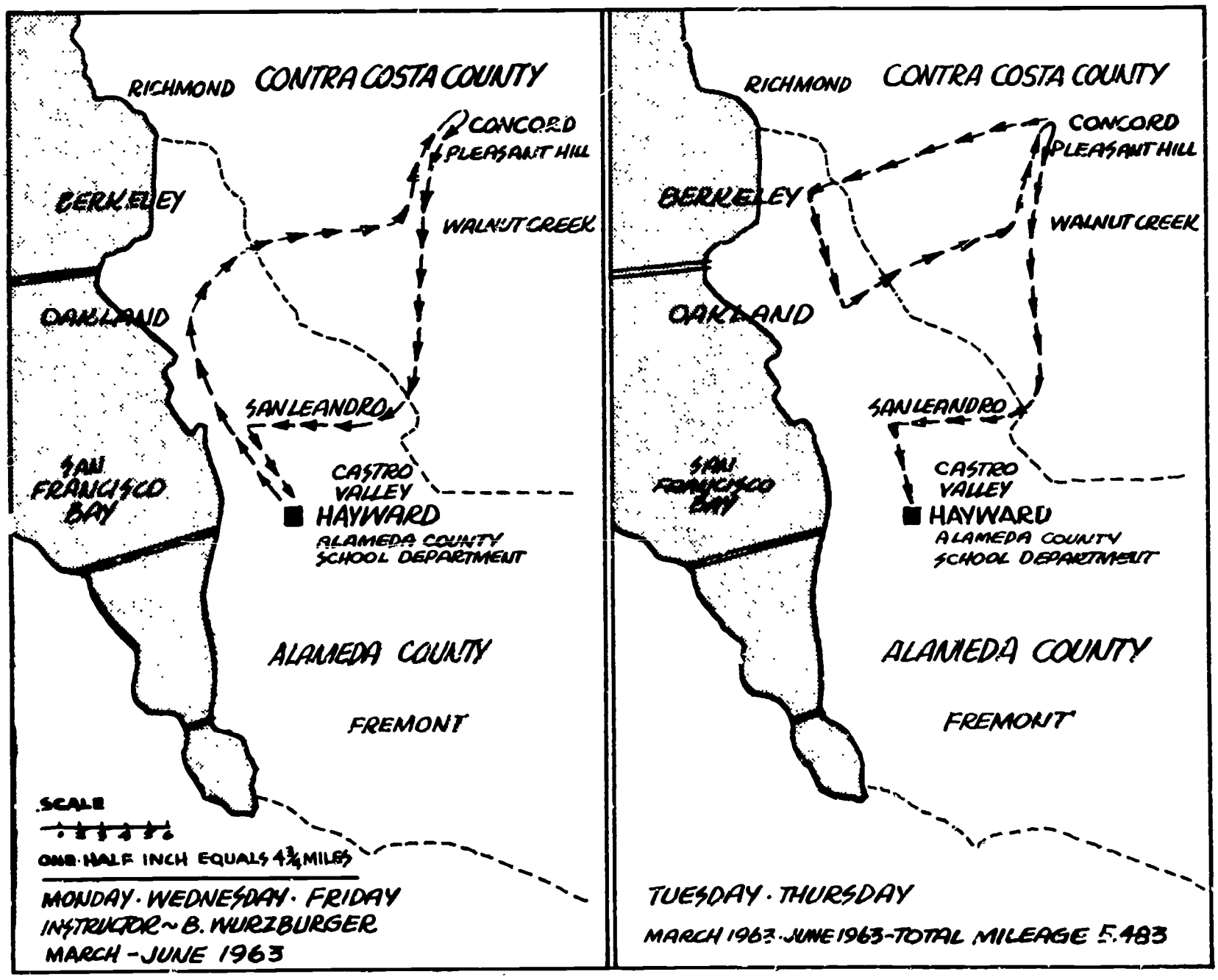
1 Periods of instruction vary from 45 to 60 minutes, depending on school schedule.

2 Additional instruction was given by C. Gilson for Vocational Rehabilitation.

3 C. Gilson gave additional instruction, 8 periods per week.

4 On May 17, 1965, this boy left school for a trip to Europe.

5 This student replaced the one who left for Europe.



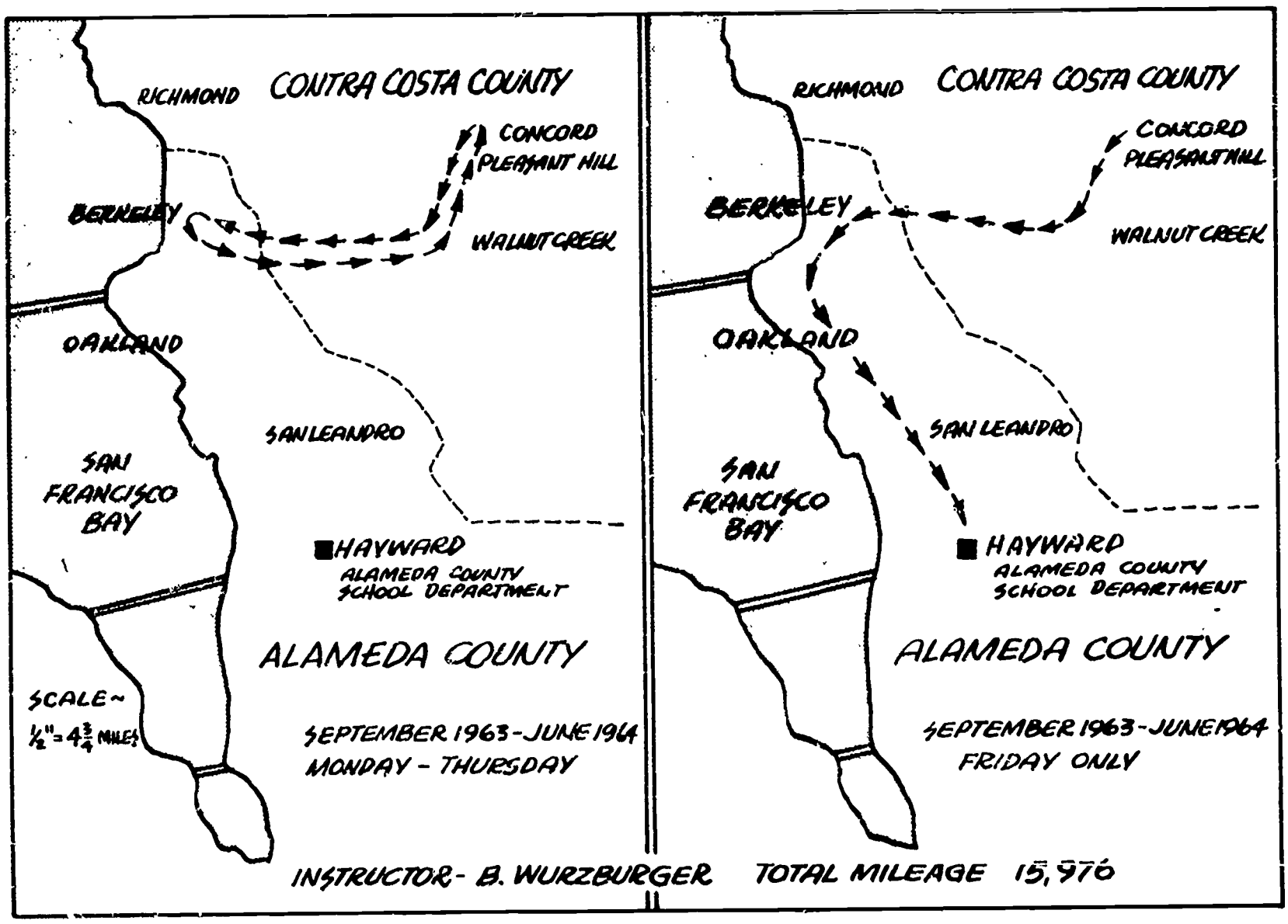
September 1963 - June 1964 Orientation & Mobility Students Instructor, B. Wurzburger

Student (Coded)	Location	Grade	Number of Lessons of Instruction [1]	Lessons Per Week	Results	Comments
Angela	Pleasant Hill	10	114	4	Average	Could possibly use more orientation & mobility training later.
Alan	Berkeley	9	145	3-5	Excellent	Progressed steadily. Good traveler.
Alex	Berkeley	8	175	5	Excellent	Progressed rapidly. Had vision until 2 years old.
Adolph	Berkeley	11	180	6	Excellent	One of the best students in the project.
Arne	Pleasant Hill	9	131	4	Excellent	Travels well. Had good knowledge of his city.
August	Berkeley	7	31[a]	2	Above average	Carried over to 1964-65 training period.
Betty	Berkeley	9	150	5	Below average	Carried over to 1964-65 training period.
Clara	Berkeley	6	30[b]	2	Below average	Too immature. Will be given another try at orientation & mobility training at a later date.
Cathy	Pleasant Hill	9	113	4	Below average	Carried over to 1964-65 training period.

[1] Lessons varied from 45 to 60 minutes depending on school schedule.

[a] Added to program on 2/24/64.

[b] Dropped from program 2/24/64.



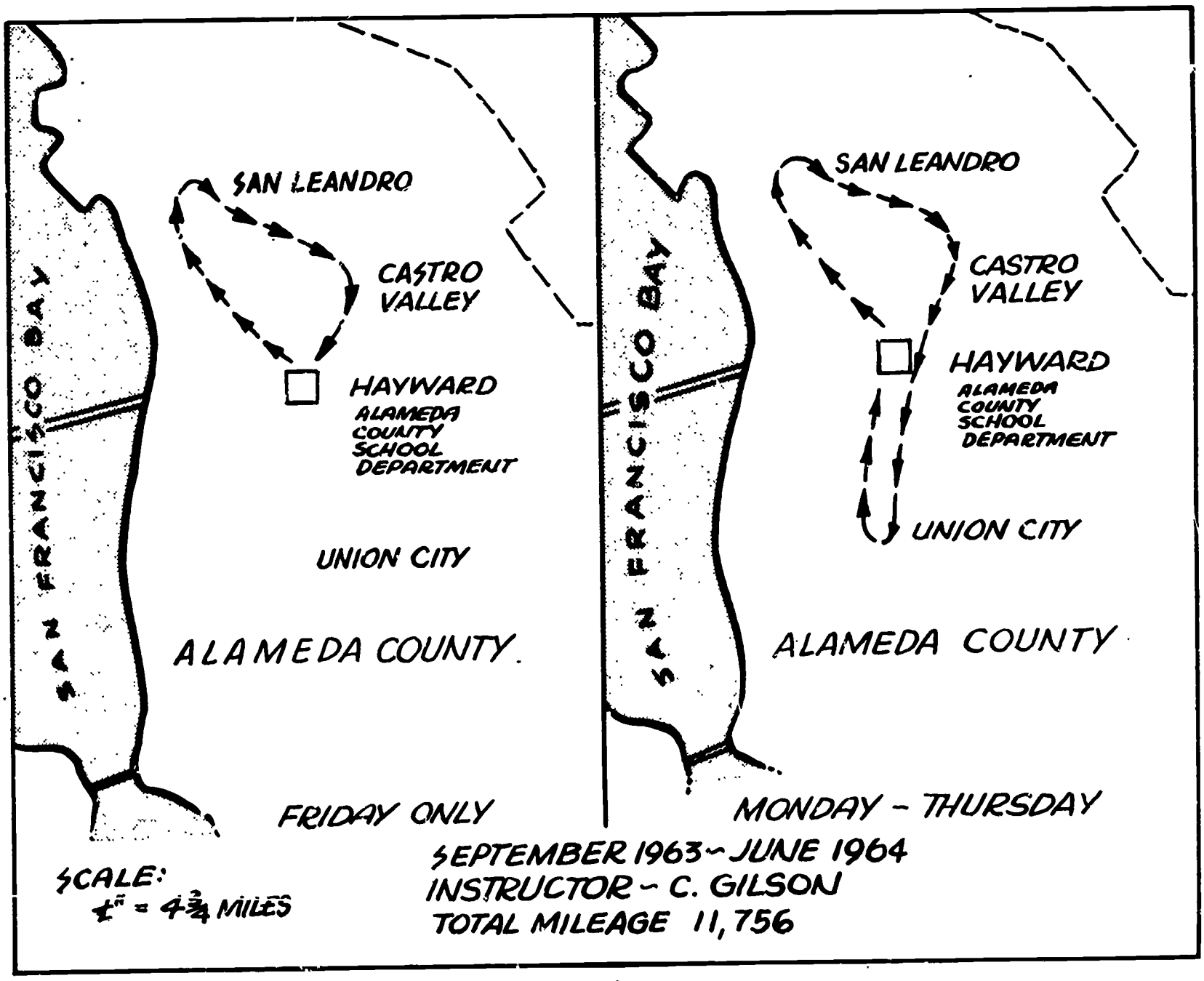
September 1963 - June 1964 Orientation & Mobility Students Instructor, C. Gilson

Student (Coded)	Location	Grade	Number of [1] Lessons of Instruction	Lessons Per Week	Results	Comments
Anton	San Leandro	12	150	5	Above average	Could have been excellent but gave less than utmost cooperation in learning.
Carla	Union City	9	90	3	Below average	Limited area for adequate instruction. Also, family problems.
Albert	Castro Valley	10	118	4	Excellent	Oriented well. Good traveler.
Bob	San Leandro	10	157	5	Average	Slow learner, poor concepts of environment. Cane skill adequate. Enroll next year.
Cleo	San Leandro	ungraded	81[a]	4	Below average	Socially immature. Retarded. Prognosis poor for orientation & mobility.
Adrian	San Leandro	10	155	5	Excellent	Uses orientation & mobility training daily. Good traveler.
Adele	San Leandro	10	67[b]	4	Above average	Dropped from program in January. Uncooperative and no desire to use cane.

[1] Lessons varied from 45 to 60 minutes each depending on school schedule.

[a] Added to orientation & mobility program in January, 1964.

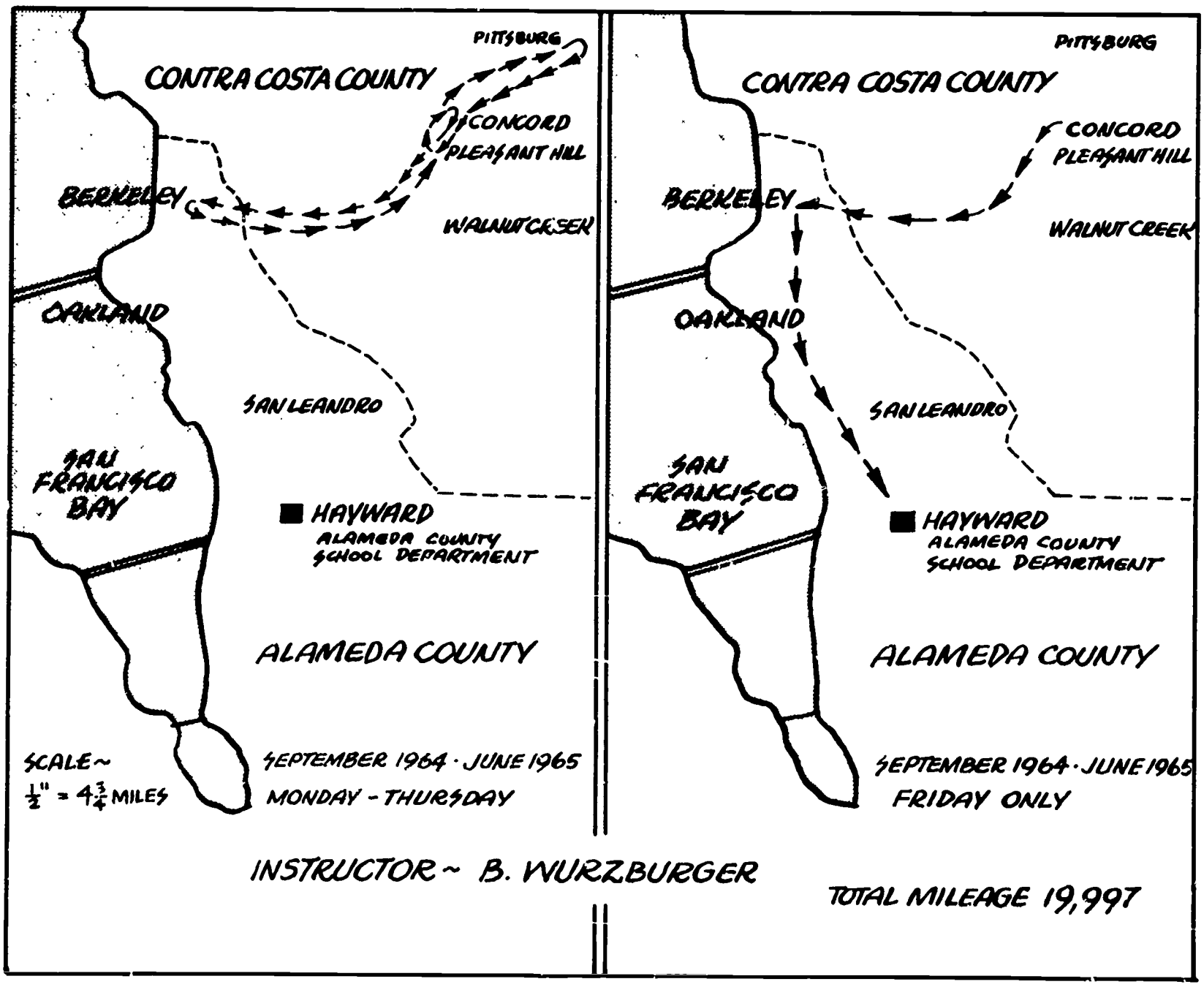
[b] Dropped from program in January, 1964.



September 1964 - June 1965 Orientation & Mobility Students Instructor, B. Wurzburger

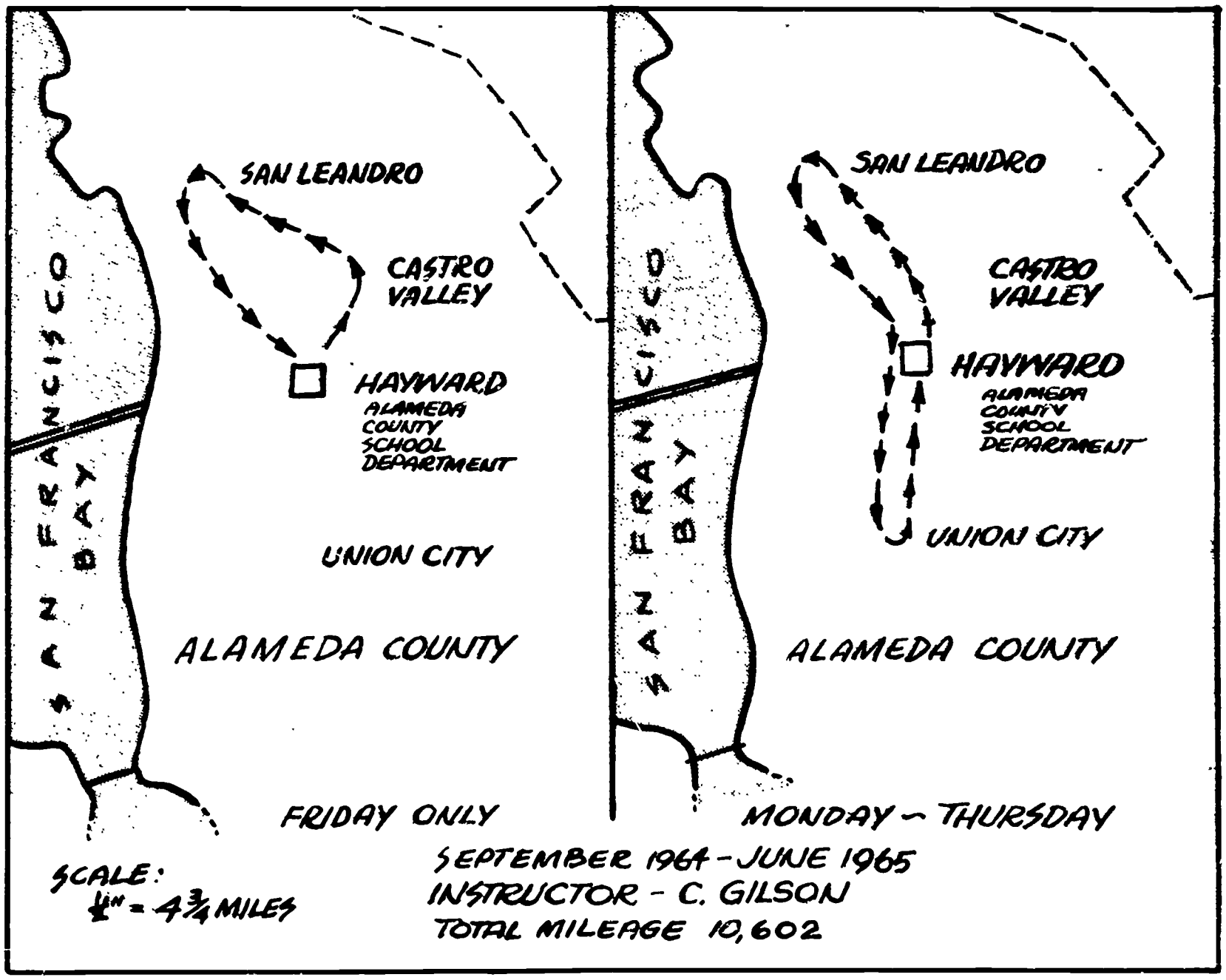
Student (Coded)	Location	Grade	Number of Lessons of Instruction	Lessons Per Week	Results	Comments
Adolph	Berkeley	12	5[a]	1	Excellent	Refresher session. Boy uses cane daily and maintains good skills.
August	Berkeley	8	164	5	Above average	Steady worker - improved gradually.
Betty	Berkeley	10	169	5	Average	Girl has a medical problem which interferes with attaining her ultimate in orientation & mobility skill.
Bruce	Pittsburg	10	128	4	Average	Boy has hearing loss which hinders his travel skills. Some slight vision which is helpful at times.
Ben	Pittsburg	8	124	4	Above average	Can be excellent traveler when more mature. Should have another year training later.
Arthur	Pleasant Hill	11	138	4	Above average	Boy had vision until 6th grade. Knows his city well. Cane technique average.

[a] This was just a brief refresher session for this boy.



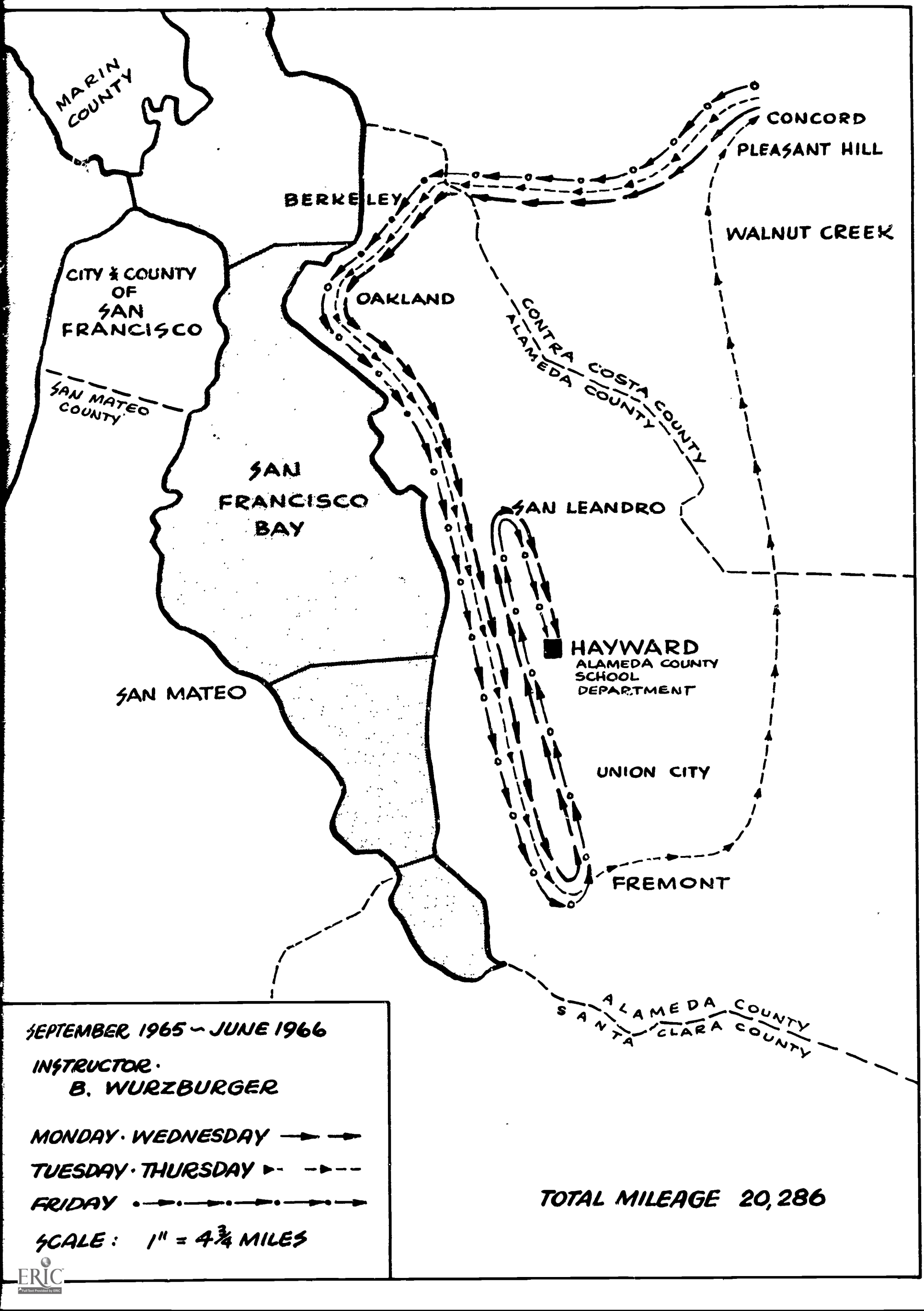
September 1964 - June 1965 Orientation & Mobility Students Instructor, C. Gilson

Student (Coded)	Location	Grade	Number of Lessons of Instruction	Lessons Per Week	Results	Comments
Anita	San Leandro	8	109	5	Average	Problems with concept of her environment. Street crossings fair. Mother restrictive.
Cheryl	Union City	9	99	3	Below average	Highly disoriented and not motivated to learn orientation & mobility skills.
Bernie	San Leandro	8	171	5	Above average	Nervous at first and became disoriented easily. Progressed later and did well.
Bob	San Leandro	11	171	5	Average	Second full year of training. Improved a great deal.
Barry	San Leandro	10	176	5	Above average	Boy had guide dog which had to be returned. Disoriented easily at first in orientation & mobility but this subsided.
Adele	San Leandro	11	58	3	Above average	Second period of instruction - finally accepted use of cane and cooperated enthusiastically.
Alma	Union City	11	82	4	Above average	Has some useful vision. Cooperative and eager. Oriented well, average cane skill.



September 1965 - June 1966 Orientation & Mobility Students Instructor, B. Wurzburger

Student (Coded)	Location	Grade	Number of Lessons of Instruction	Lessons Per Week	Results	Comments
Andrew	Berkeley	10	166	5	Excellent	This boy had some mobility instruction previously. Showed steady improvement. Could use refresher course in 12th grade.
Anita	San Leandro	9	18	1	Average	Girl received bulk of orientation & mobility training previous year. This was a review of all phases. Should have another semester in 12th grade.
Arlene	Fremont	9	127	4	Average	New school, difficult campus. Girl needs social and physical maturity before another semester of orientation & mobility training.
Amy	San Leandro	8	30	1-2	Above average	Excellent so far as we were able to go in orientation & mobility training this year. Recommend that she be enrolled next year.
Bernie	San Leandro	9	17	1	Above average	Boy received bulk of orientation & mobility instruction previous year. This was review of all phases. He should have another semester in 12th grade.
Bertha	Oakland	12	29	4	Average	Did not receive enough instruction to gauge her potential ability. She left school in November.
Bert	Pleasant Hill	9	51	2	Above average	Will become excellent traveler if present progress continues. Had vision until 6th grade. Orients well. Cane technique needs improvement. Walks too fast.
Brenda	San Leandro	8	37	1-2	Average	Girl has trouble getting oriented and remaining so. Awkward walk. Will receive orientation & mobility training next year.
Agnes	San Lorenzo	9	107	3-5	Above average	Good job first semester, but hit plateau midyear. Family problems.
Cathy	Pleasant Hill	11	61	2	Below average	Had full year orientation & mobility in 1964-65. Has great difficulty keeping oriented.
Blanche	San Leandro	8	42	2	Average	Progress slow but steady. Did better than first seemed possible. Needs full year of training in 1966-67.
Ann	Pleasant Hill	9	33	2	Average	Orients well. Poor cane technique. Coordination not too good. Should have full year orientation & mobility in 1966-67.

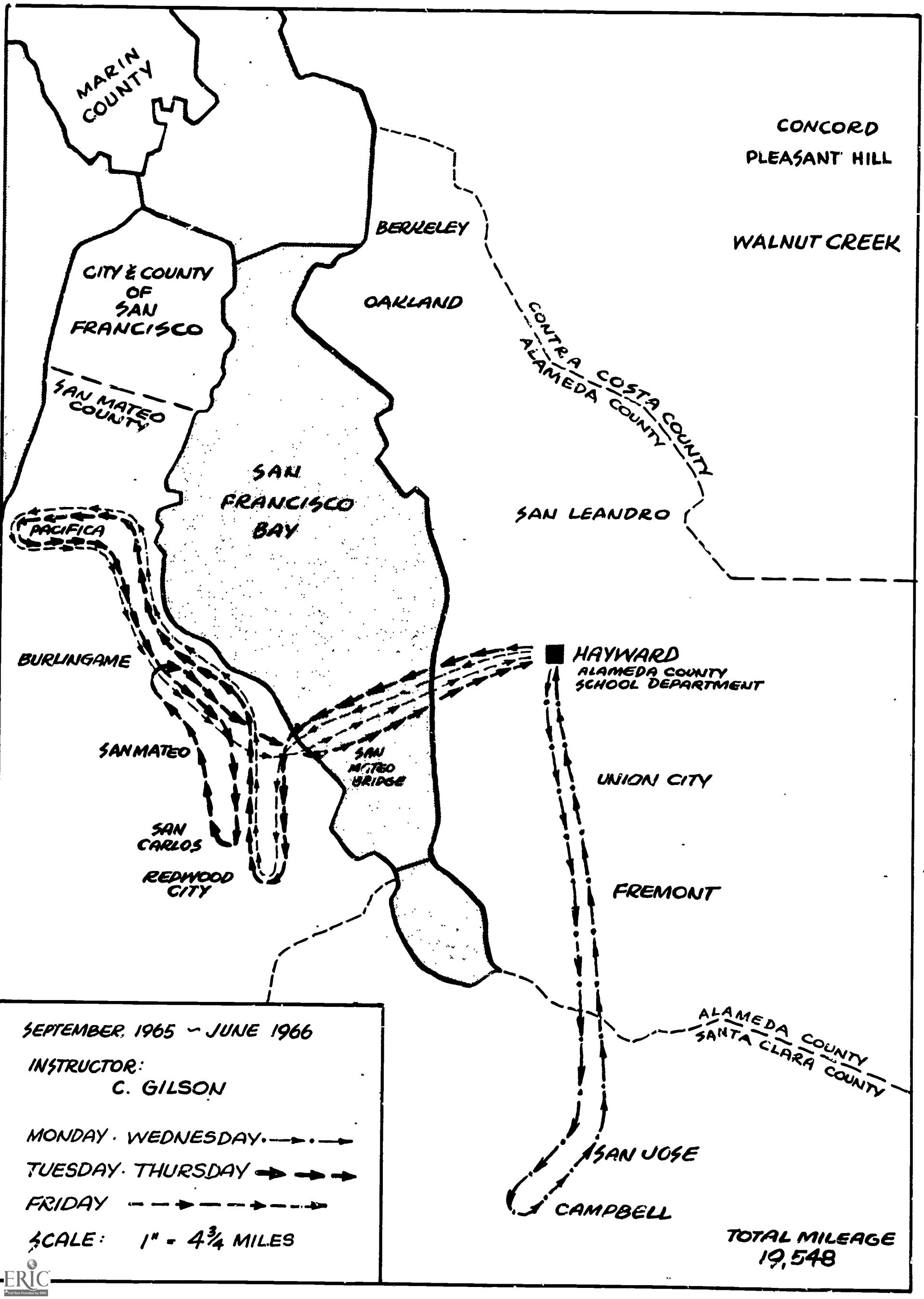

MARIN COUNTY
BERKELEY
CONCORD
PLEASANT HILL
WALNUT CREEK
CITY & COUNTY OF SAN FRANCISCO
OAKLAND
CONTRA COSTA COUNTY
ALAMEDA COUNTY
SAN MATEO COUNTY
SAN FRANCISCO BAY
SAN LEANDRO
HAYWARD
ALAMEDA COUNTY SCHOOL DEPARTMENT
SAN MATEO
UNION CITY
FREMONT
ALAMEDA COUNTY
SANTA CLARA COUNTY
SEPTEMBER 1965 ~ JUNE 1966
INSTRUCTOR:
B. WURZBURGER
MONDAY · WEDNESDAY
TUESDAY · THURSDAY
FRIDAY
SCALE: 1" = 4¾ MILES
TOTAL MILEAGE 20,286

September 1965 - June 1966 Orientation & Mobility Students Instructor, C. Gilson

Student (Coded)	Location	Grade	Number of Lessons of Instruction	Lessons Per Week	Results	Comments
Charles	Los Altos	13	13	*	Average	Oriented to junior college campus. Sole objective of this training.
Carmen	Campbell	9	55	2	Below average	Difficulty learning routes and surroundings. Lacked confidence.
Celia	Redwood City	8	67	3	Below average	Had previous training elsewhere. Has difficulty remembering routes and surroundings. Not ready at this time for orientation & mobility training.
Alfred	Campbell	12	62	2	Excellent	Good traveler, aggressive, confident, reliable. Has some vision.
Amos	Redwood City	11	79	3	Excellent	Started slowly but progressed fast. Confident and adaptive.
Chris	San Carlos	12	54	2	Below average	Showed promise early in training but lacked motivation.
Alice	Burlingame	9	37	1	Above average	Oriented well, inquisitive and mildly confident. Needs more training.
Becky	Pacifica	9	76	3	Average	Difficulty with concepts. Learned cane skills and street crossings. Lacked drive but progressed rapidly at end.
Austin	Campbell	10	57	2	Above average	Slow but steady progress. Not fully confident. Good cane skills.
Boyd	Redwood City	7	11	1[a]	Average	Was partially sighted. Lesson periods were too brief to achieve ultimate skill.
Beth	Campbell	10	53	2	Average	Hard of hearing, totally blind. Progress slow. Adequate cane skills with limited objectives
Bill	Campbell	12	56	2	Above average	Good learner. Good cane skills and adequate concepts. Not too confident. Needs more training.
Bessie	Campbell	10	53	2	Above average	Relaxed and confident. Good cane skills. Adequate environmental concepts. Some difficulty remembering.
Carl	Redwood City	9	77	3	Below average	Did not accept use of cane or training.

* 1 week of instruction at 1-3 hours per day

[a] Dropped from program May, 1966.


MARIN COUNTY
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PLEASANT HILL
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CONTRA COSTA COUNTY
ALAMEDA COUNTY
SAN LEANDRO
PACIFICA
BURLINGAME
SAN MATEO
SAN MATEO BRIDGE
SAN CARLOS
REDWOOD CITY
HAYWARD
ALAMEDA COUNTY SCHOOL DEPARTMENT
UNION CITY
FREMONT
ALAMEDA COUNTY
SANTA CLARA COUNTY
SAN JOSE
CAMPBELL
SEPTEMBER, 1965 ~ JUNE 1966
INSTRUCTOR:
C. GILSON
MONDAY · WEDNESDAY
TUESDAY · THURSDAY
FRIDAY
SCALE: 1" = 4¾ MILES
TOTAL MILEAGE
19,548

Psychological Data

Because this was a demonstration of an administrative plan and not a research study, it is with a strong word of caution that psychological data are reported at all. During the orientation and mobility instruction of these students, their individual daily schedules and their regular relationships with local staff members were kept as intact as possible. The agreements with parents and local staff were for mobility instruction--not for research--and only enough psychological testing and interviewing was done to justify the formulating of questions about possible psychological relationships.

A research design would have been rigorous precisely where this demonstration was flexible and yielding. The psychological data were gathered from a few cases which were selected on the basis of convenience and local acceptance rather than more according to the demands of statistics. Some of the Advisory Committee members believed that too many people are always overly ready to treat blind students as objects of research and that research procedures would run contrary to the attempt of the demonstration to approach these students as individuals. Consequently, the data gathered are skimpy and the tentative explorations about the relationship of sex, of intelligence, of social maturity, and age to orientation-mobility success do not warrant the drawing of any conclusions. With that warning, let us examine the data.

Sex Differences in Achievement

One clear fact is that in this project, given these students and these instructors, boys exceeded girls in orientation-mobility achievement. The mean achievement rank for boys was 17.8 $\pm$ 7.28, and for girls 33.2 $\pm$ 12.08. With N=25 for both boys and girls, the sex difference in achievement was 8.6 times its standard error of $\pm$ 1.79. All 7 of the lowest ranking students were girls and only one of the top 11 students was a girl. Of the 12 lowest ranking students, 10 were girls and of the 12 highest ranking students, 10 were boys.

Sex Differences in Length of Instruction

Although the instructors continued instruction with several girls way beyond the average 107 lessons, there was a tendency (significant at the 5 percent level, Chi square = 3.945) for girls to receive fewer hours of instruction than boys. The sequence of events was that when a girl was observed to be making very slow progress, her number of remaining lessons would be shortened to allow another student to have a chance. Low achievement came first and then the foreshortening of the number of lessons--not the other way around. To see whether time would help, one girl was continued in instruction until she had had 319 lessons. Her final orientation-mobility achievement ranked 37th.

	Boys	Girls
less than 100 lessons	10	17
over 100 lessons	15	8

Sex Differences in Motivation

The instructors observed that when given an opportunity to become more independent, the girls were less motivated and that the girls seemed to have a more flacid musculature than the boys. For them especially, blindness seemed to be an "adequate expression of anxiety" (Cutsforth, 1951). It was enough that they were blind, and they lacked the drive that the boys seemed to have. On the other hand, they may have experienced a situational anxiety arising from being taught by men. Orientation and mobility instruction requires a considerable amount of physical contact and since both of our instructors were males, these contacts may have been more distracting to these rather socially immature adolescent girls than to the boys.

Our data and methods were sufficient to cause us to raise but not to answer such questions as the following:

Is this sex difference in achievement to be expected generally when orientation-mobility training is offered to teen-agers? Would female instructors obtain different results? What cultural and child rearing practices are associated with this apparent difference between blind boys and girls? Could they, or should these cultural influences be modified? When is a good time in the life span of a congenitally blind woman to offer her orientation and mobility instruction? Do parents tend, overtly or covertly, to discourage blind girls from traveling without a guide? Did the boys have readiness experiences which the girls did not have?

Sex Differences in Age and Grade

Age and grade differences seem to be related to the difference in orientation-mobility achievement between boys and girls. The 25 boys had a mean age of 15 years and 10 months when they began orientation-mobility instruction, and the girls 14 years 11 months. One of the boys was a 19 year 1 month old junior college freshman and one of the girls was a 12 year 3 month old fifth grader. One girl was a 12 year 3 month old

ungraded mentally retarded student. If these three exceptional instances are omitted and only junior and senior high school students are counted, the mean grade at beginning of orientation-mobility instruction was 9.7 for boys and 9.2 for girls. The modal grade was 10 for boys and 9 for girls.

	Mean Ages	
Grade	Boys	Girls
12	18-3 (N=4)	17-0 (N=2)
11	17-4 (N=3)	16-5 (N=1)
10	16-4 (N=7)	16-1 (N=2)
9	14-9 (N=4	14-6 (N=12)

The twelve best achievers among the girls had a mean age of 14-11 and the 12 poorest 14-0. The twelve best achievers among the boys had a mean age of 15-10 and the poorest 16-1. Does this mean that age is important up to a certain point and not after that? Should the starting age for cane instruction be 14-6 for girls? Or even 15-0 for either sex? The project staff and Advisory Board believe students should be started younger than 14 and that the orientation-mobility curriculum be divided into levels of difficulty, the simpler levels, or basic skills, of course, being given to the younger children.

The orientation-mobility instructors believe that students entering a school (ninth graders) are more disoriented and have greater mobility problems than students who have been there a year or more. Consequently, when it is said that the girls achieved less in orientation-mobility training, it must be remembered that the girls were younger, were in a lower grade, tended to be in a strange school, whereas the boys tended to be in a familiar environment, were more motivated, and had a like-sex instructor.

Blind girls in this study were getting through high school at younger ages than were the boys. Even though the N was small, this observation was consistent for all four high school grades. Girls were less socially mature and made less progress toward independence than the boys but they were at least not being held back in school. Misplaced sympathies may have given the girls a greater number of unearned social promotions. If so, a more objective approach would have resulted in the girls having been held back at least as much if not more than the boys had been.

Social maturity as measured by the Vineland Social Maturity Scale could be expected to increase as independence in travel increases, and the Vineland was administered twice to 14 students, once early in their orientation-mobility training and again at the end of it. A rank difference correlation of -.10 was found between gain from initial to final Vineland Social Quotients and rank in orientation-mobility achievement which is not significantly different from zero.

These 14 students made a mean gain of 5.8 social quotient points with a standard deviation of $\pm$ 7.9. The mean orientation-mobility achievement rank for the group was 26.9 $\pm$ 13.8. Social quotient gains ranged from a low of 3 to a gain of 28 points.

These rudimentary data raise such questions as the following: Do some students accelerate considerably in social maturity during orientation-mobility instruction whether or not they excel in mastering travel skills?

Social maturity might be a readiness condition for orientation-mobility training and the initial Vineland Social Maturity Scale raw scores for the first 24 students were compared with their final rank in orientation-mobility achievement. The rank-difference correlation was .61 which is significantly greater than zero at the 1% level of confidence. The hypothesis for further study is that adolescents already high in social maturity before they undertake mobility instruction will tend to become the best travelers. Perhaps this is related to some approach-withdrawal or introvert-extrovert dimensions of personality on which data were not obtained. Seventeen of the Vineland interviews were conducted by School Psychologists Robert C. Jones and the balance by Daniel E. Johnson. In every case, the interviews were with the trainees themselves.

For this sample of 24 cases, the mean initial Vineland raw score was 79.4 $\pm$ 7.75. Its mean orientation-mobility rank of 24.1 $\pm$ 16.25 was not significantly different from the population mean rank of 25.5 $\pm$ 13.8.

Incidentally, a Vineland raw score of 79.4 has a social age value of 10.6 years which shows that these students were about as socially retarded as are blind students in general as reported by Doll (1953, 465 and 527). However, before the Vineland is used as a screening test for orientation-mobility readiness, some careful research should be done because of the overlap in Vineland

scores of the high and low achiever found even in this small sample. The 5 best and 5 worst orientation-mobility achievers among the 50 in this study had mean initial Vineland raw scores of 84.5 and 71.5 respectively. But the very best orientation-mobility achievers had the same initial Vineland raw score as the next to poorest achiever! There is a possible sex-linked difference here since 4 of the top 5 were boys and all of the poorest 5 were girls.

In his report on the Vineland, Robert Jones wrote:

The total number of blind students tested and interviewed was 17. Two of the 17 were dropped from mobility training and were re-interviewed. One student was dropped from mobility training and could not be re-interviewed. A separate report on that student is in her folder (Code name, Adele). In one case the social quotient rose 4 points, in the other case the social quotient rose 7 points. Whether these changes are "real" changes or not is subject to serious question; for example:

1) It is very difficult to get the "truth" from these students because in their desire to seem "just like everybody else" they color their answers. When one examines them more exactly concerning the meaning of their answers, one often finds nearly the opposite of what was first conveyed.

2) The 4 point and 7 point changes may be statistically insignificant.

3) The students may have been trying to please the examiner.

4) The "teaching effect" of the first interview may have led the student to learn certain things he thought the examiner felt were important (although this is still change).

5) Many of the children express either disinterest or disapproval of activities in which they would have to compete socially.

6) Testing these children with the Vineland Scale becomes difficult because if the child has ever done something similar to what the examiner is talking about, the child is likely to report that "Yes, I do that". It is essential with these children to determine whether this is something they have just started learning, or whether it is something at which they are thoroughly competent.

7) Many of these children do not yet seem to realize the extent of their limitation and their ideas about what they would like to do in the future are not very realistic.

8) Anyone planning to utilize the Vineland Social Maturity Scale with blind students should acquaint himself with the sample Vineland interview with a blind adult in: Doll, Edgar A., "The Measurement of Social Competence", Educational Test Bureau, Educational Publishers, Inc., 1953, pp. 335-346. Doll states that other evidence suggests that the social competence of the blind in general is reduced about 40% as compared with sighted subjects.

Memory Strength, Social Maturity and Progress in Mobility

It seemed reasonable that memory strength would be related to success in learning orientation and travel skills. Consequently, Psychologist Robert Jones interviewed project trainees in the fall of 1963 and again in the spring of 1964 using the Wechsler Memory Scale. The decision was made to substitute the verbal scale of the Wechsler-Bellevue Intelligence Test for Adolescents and Adults, Form II, (the test from which the WISC was derived) after Mr. Jones had reported on the inadequacies of the Wechsler Memory Scale for this population. The Stanford Ohwaki-Kahs Tactile Block Design Intelligence Test for the Blind which was being developed in a project across San Francisco Bay from Hayward, was considered as a replacement but it would have required more time and money than was available. However, Daniel E. Johnson visited the Ohwaki-Kahs project and with William Dauterman arranged for the orientation-mobility project trainees to have an opportunity to be included among the Ohwaki-Kahs subjects.

Mr. Jones' report included the following statements:

Psychologist's Observations

Blind students and the things learned while testing them by Bob Jones, 3/30/64.

First of all, the Wechsler Memory Scale does not seem an adequate way to measure these children. For most of the children, the "personal and current information" section is too simple and is almost insulting. The question relative to who the mayor is, is unfair since many of the children are brought by bus to a town other than the one in which they live. In some cases (Castro Valley) there is no mayor as such.

One point of interest was the fact that most of these children did better on the digit-span test than they did on the test of memory for a short story selection. This difference,

if it is a difference, suggests that these children's minds work much more naturally with numbers, since they probably have difficulty with the visual imagery involved in remembering a story about things and people in action settings.

On the last subtest of the Wechsler Memory Scale it is interesting that most of these children missed the association "crush-dark".

One of the things that is most touching about working with these children is their effort to appear "just like anyone else". When questioned about certain areas where they have had limited experience, they will call on specific instances and isolated examples in order to avoid, if possible, saying "no, I don't usually do that", etc.

There is an underlying bitterness in these children. A good number of the group feel resentful because their peers don't include them in activities--or seem to "stop calling me--or (stop) coming over". One 14 year-old girl was hurt and resentful because her "best friend didn't have any time for her any more because of 'boys'." Another 17 year-old boy is becoming a professional cynic--he has decided that he does not "like" or "approve" of activities which he is probably afraid to try to join. He is, in fact, opposed to mandatory public education. He feels it is an invasion of his rights. What he is in fact doing is saying, "It's not that my blindness keeps me from doing things --or makes me afraid to do things--I simply don't care to do those things."

Most of these boys and girls need "someone to talk to". By this, I mean someone outside of their family or friends. Probably some counseling relationship would be useful --p . ided it was not attempting to be psychoanalysis--or, on the other hand, totally "client-centered".

These children seem to need a more real, or less contrived, relationship than the Rogerian technique provides. However, "psychotherapy" does not seem to be what most of these children need. Possibly a "counselor" or "clinical friend" comes closer to fitting the need.

In two cases, though, the child was significantly emotionally underdeveloped, so that one might in a sense call the child "disturbed". More accurately, these two children might be called experientially starved and emotionally deprived.

Impressions

1) It seems very clear that the selection of the Wechsler Memory Scale for use with these students was a mistake. The visual section must be thrown out, making the resulting scores only relatively comparable to other standard measures. Further, the memory scale is, in its first parts, somewhat embarrassing to administer because of some of its insultingly simple questions. (For example: "What is the name of the place you are in?" and "In what city is it?")

2) It would seem better to substitute a combination of the subtests of the verbal section of the WISC. Perhaps, because of these students' handicap, the best combination would be:

Similarities
Arithmetic (read the written section)
Digit Span
Vocabulary

The first three subtests are the most desirable because they seem more "abstract". However, if the four subtests could be administered, a pro-rated verbal I.Q. could be figured. If time did not permit, then the similarities test (general concept formation) and the digit span test (memory, auditory, imagery, immediate auditory recall) would seem most pertinent to answer the questions we have about how this group of children may differ among themselves relative to the kinds of abilities that are important in mobility training (that is, memory and ability to form generalizations).

3) The effects of anxiety in the test subjects was apparent during the memory testing. Some of the students "blocked". Others showed clear signs of being under "pressure".

4) The best part of the memory scale seemed to be the digit span test. (Possibly these students are more comfortable with memory tasks not involving visual imagery or visual memory.) Remembering a story is much more a task of pure auditory recall to the blind student because he cannot bring forward the mental visual images of the action of the story. Numbers seem much more easy for these students to remember. One of them noted that the blind are the original "digit dialers" because they have to change all letter prefixes into numbers in order to use the dial.

In spite of the weakness found in the use of the Wechsler Memory Scale with the highly unusual population, a positive relationship was found between memory power and rank in orientation-mobility achievement. For 16 cases, the mean memory quotient was 102 $\pm$ 12.3. These same subjects had a mean orientation-mobility achievement rank of 23.5 $\pm$ 18.3. The correlation (R) between these two

ranking of .55 is significantly different from zero at the 5% level of confidence indicating that initial memory skill will in general be helpful to students undergoing orientation-mobility instruction, but also indicating that the association is not sufficiently strong to justify denying a student instruction if he should happen to score low on the Wechsler Memory Scale.

General Intelligence and Orientation-Mobility Achievement

The verbal scale of the Wechsler-Bellevue Intelligence Scale for Adolescents and Adults, Form II, and the Vineland Social Maturity Scale were administered by the Project Director who was a certified school psychologist to 11 trainees during the winter of 1964-65. These 11 were all of the students who happened to be undergoing orientation-mobility training at the time. Seven were boys and 4 girls. Ages ranged from 13-9 to 19-0. Wechsler-Bellevue, Form II, weighted scores ranged from 39 to 69 and Wechsler-Bellevue verbal I.Q.'s from 91 to 130 showing that this sample had normal or better verbal intelligence. Vineland Social Quotients, on the other hand ranged from 21 to 74 quotient points below the I.Q.'s. Social quotients for this group ranged from 45 to 108. Median I.Q. was 113 and median S.Q. was 62. The mean orientation-mobility rank was 25.5 and the mean I.Q. 110.7 $\pm$ 14. Five scored in what Wechsler labels the "average" range, 2 in the "bright normal", 3 "superior" and 1 "very superior".

The rank difference correlation (R) between Wechsler-Bellevue verbal I.Q. and orientation-mobility achievement for these eleven subjects was .21 which is not significantly different from zero.

The gains in social quotient for this sample between a Vineland interview early in their orientation-mobility training and one late in their training ranged from -3 to +28 social quotient points. The mean S.Q. gain was 6.0 $\pm$ 8.9. The R of Wechsler-Bellevue verbal I.Q. and gain in Social Quotient from first interview to the second was .11. Mean gain in social quotient was 6.0 $\pm$ 8.9 social quotient points.

Incidentally the Wechsler-Bellevue digit span test proved to have insufficient top for one of these students, and as a group their ability to hold numbers in mind for immediate recall (digit span) is unusually well developed. The same can be said for their common sense judgment (comprehension subtest) which is often considered part of social intelligence. In 3 cases, the comprehension subtest was the highest, and in 7 cases, the digit span was the peak score. In 5 cases, arithmetic was the lowest score, indicating that although these children can hold numbers in mind (digit span) they do not think quantitatively.

Faculty Opinion About the Program

Local Resource Room teachers were enthusiastically in favor of the orientation-mobility program, and those adjacent to but outside of the geographical area served frequently suggested that the orientation-mobility routes be extended one step farther to include their own students.

Since these teachers of the blind could be assumed to be biased, a sampling was made of the opinion of regular teachers in the local schools who were observers of the program but not actually involved in it.

At the end of the 1963-64 school year faculty members in four separate high schools who taught subject matter courses to one or more of the orientation-mobility students were given an opportunity to complete a questionnaire. Nineteen responses were received from twenty-four requests.

The questionnaire with its introductory paragraph is shown below and composite replies to the questionnaire are reported in the paragraphs which follow it.

As a teacher of this blind student, you are in a position to give an opinion related to the effectiveness of the orientation-mobility program presently conducted under a Health, Education & Welfare demonstration grant. Will you please check an answer to each of the following questions? Your comments can be written on the reverse side of this sheet. Thank you.

1) Towards the end of this semester, did the student seem to travel

quicker?	Yes__	No__	Uncertain__
more independently?	Yes__	No__	Uncertain__
more safely?	Yes__	No__	Uncertain__

2) Was the student sometimes tardy to your class? Yes__ No__

If so, did tardiness decrease as mobility training progressed?
Yes__ No__ Uncertain__

3) Did you notice a growth in general poise or social maturity as mobility training progressed? Yes__ No__ Uncertain__

4) What are some of the values you see in

the program?_____

_____

5) What improvements should be made in the program?_____

_____

6) Do you think travel skills should be taught to teen-age blind students?
Yes__ No__ Uncertain__

7) Do you believe that orientation-mobility training should be part of the public school instruction of blind high school students?
Yes__ No__ Uncertain__

(Optional) Signature_____

The results showed strong and at points unanimous support for the project. The number of teachers checking each question does not total 19 because of occasional items left blank.

1) Towards the end of this semester, did the student seem to travel

quicker? Yes--13 No-- 3 Uncertain--2
more independently? Yes--11 No-- 2 Uncertain--4
more safely? Yes-- 9 No-- 3 Uncertain--5

2) Was the student sometimes tardy to your class? Yes-- 4 No--14

If so, did tardiness decrease as mobility training progressed?
Yes-- 1 No-- 2 Uncertain--1

(Three respondents wrote in comments that tardiness is not related to mobility.)

3) Did you notice a growth in general poise or social maturity as mobility training progressed? Yes-- 5 No-- 2 Uncertain--10

4) What are some of the values you see in the program?

"Builds self-confidence?" (six comments)
"Lets them know we are interested."
"Increased freedom."
"Independence." (four comments)
"Safety." (three comments)
"Efficiency in movement."
"Responsibility."
"Increased feelings of security."
"I cannot evaluate this." (two comments)

5) What improvements should be made in the program?

Seven replies urged a younger start.

e.g. "Start training earlier."
"This student needed this training much earlier."
"Take junior high students while they are enthused and before walking patterns are established."

Other comments were:

"Excellent as is."
"More of it."
"I am not familiar enough with the program to evaluate it."
"Perhaps you should add an indication that the students are handicapped. It is difficult to literally walk into these people in the hall. Embarassing for both parties."

6) Do you think travel skills should be taught to teen-age blind students?
Yes--19 No--0 Uncertain--0

7) Do you believe that orientation-mobility training should be part of the public school instruction of blind high school students?
Yes--18 No--0 Uncertain--1

One reply stated, "Yes, but not at the expense of the local budget".

Only one comment was written on the obverse side of the questionnaire, and that one merely testified that the respondent was the counselor of the student and that he was responding on the basis of information gained through a close student-teacher relationship. He favored the program.

Quite clearly regular secondary school teachers who had a chance to observe the program favor it strongly. Unanimously they want it made a part of blind children's schooling, however they believe high school is too late to begin. They observed that blind students moved more quickly, more safely and more independently after orientation-mobility instruction. In their opinion orientation-mobility instruction brought with it increased self-confidence and freedom for the students, as well as safer and more efficient movement.

Based upon this sample, administrators who are planning orientation-mobility programs can expect faculty support, although some teachers would hesitate to finance the program at the expense of the local school budget.

CHAPTER V

STUDENT PROGRESS--THE RESULTS

The administrative plan and the costs of the program show that orientation-mobility instruction can be given on an itinerant basis, but the critical question remains--what did the instruction accomplish for the students?

In order to answer that question, a brief description of each of the fifty students was abstracted by the two instructors from the file of data accumulated during the project. These descriptive statements appear in the order of their rank in final orientation-mobility skill achieved, beginning with the best and proceeding to the least successful student. Ranks for all 50 students were assigned by the two instructors jointly through consensus. By the end of the program, almost all of the students were well known to both instructors and the ratings of the outside consultant and other progress reports were used to help make the rankings reliable and valid in the absence of statistical tests.

Besides rank in achievement, age and grade in school are given for each student at the time he started orientation-mobility instruction. So that negative, as well as positive, statements could be published, all the student names have been coverted to code names. Rank 50 was assigned to a mentally retarded girl and rank 49 was assigned to a fifth grade girl. Both of these two lowest ranking students had been admitted to the training as exceptions to the standards established for the project, but the fact that both exceptions were failures is too skimpy evidence to justify concluding that the admission criteria should be used generally in other projects.

After the instructors had ranked the students, they assigned qualitative labels as follows:

Ranks	Descriptive Label
1-- 9	Excellent in orientation-mobility skills.
10--26	Above average.
27--42	Average.
43--45	Below average.
46--50	No significant progress in learning acceptable orientation-mobility skills.

The sex differences and hours of instruction for each of these qualitative bands were as follows:

Rank	Number of Boys	Number of Girls	Median Grade at Start Boys	Median Grade at Start Girls	Average Number of Orientation-Mobility Lessons
1-- 9	8	1	10	12	142
10--26	11	6	10	9	107
27--42	6	10	10	9	101
43--45	0	3	-	9	66
46--50	0	5	-	8	70
1--50	25	25	10	9	107

Readers are warned against drawing conclusions from these data because there are so few cases and because this was a demonstration and not an experimental program. For example, the fact that the single mentally retarded student failed to benefit does not mean that other mentally retarded students will fail. And again, interpretation of sex differences probably ought not to be made because both our instructors were males and teen-age girls may have been affected emotionally by the physical contact which orientation-mobility instructors must make with their students. Readers are invited, however, to form a qualitative impression from the descriptions of student success and failure which follow.

Name:	Adolph
Age:	16-9
Vision:	None
Hours of Instruction:	195
Grade:	10
Rank:	1

Adolph received a minimal amount of orientation and mobility instruction in 1962-63 with the bulk in 1963-64 and 8 lessons in 1964-65.

This student displayed the highest standards in both orientation and cane usage. He is now capable of moving about in his environments safely and adequately. Prior to orientation and mobility instruction, this boy's sphere of unsupervised movement was limited to his home and yard.

He uses his cane daily in all his activities where moving about is necessary. While at the public high school, this student set the precedent of using his cane when moving about the campus. This precedent has been observed by all blind students who have attended this school. He and the resource teacher at this school are to be congratulated for setting a standard of achievement in orientation and mobility skills that is excellent. This student uses public transportation in traveling about the Bay Area on a regular basis.

Name:	Adrian
Age:	14-8
Vision:	None
Hours of Instruction:	187
Grade:	9
Rank:	2

Adrian received some orientation and mobility instruction in 1962-63, but the bulk of it was given in 1963-64. This boy had good orientation and mobility skills before receiving any formal instruction. These skills were performed without the use of a cane so were limited in scope.

When first given the cane, there was great resistance from this student as he felt if he had a cane in his hand, it made him more dependent instead of more independent. This attitude changed rapidly however and he is now an enthusiastic cane user.

This was one of the outstanding students in the Alameda County Mobility Project and he displayed an exceptional ability in both orientation and mobility.

He travels daily to and from school using his cane, and no longer uses the special bus provided for the blind students. He uses public transportation to travel around the Bay Area and will use it to commute 40 miles round trip daily to a job during the summer of 1966. (Events which were in the future when these evaluations were written, have since transpired.)

Name:	Alan
Age:	13-3
Vision:	None
Hours of Instruction:	157
Grade:	8
Rank:	3

Alan received some orientation-mobility instruction in 1962-63 and the bulk in 1963-64. He had received some orientation-mobility instruction in various college workshops. This boy walked from home to the elementary school he attended. He was transported by cab to the junior high school but by the end of the instruction period, could get to school by using public transportation.

This boy proved to be an excellent student in learning orientation-mobility skills. He oriented well and acquired an excellent cane technique. The cane has proved to be a useful tool and is used daily in his school activities, going to and from school, and in his free time. He travels to an adjacent large city on public transportation weekly.

The parents of this boy have helped to form a healthy outlook regarding his becoming an independent blind adult, with orientation-mobility training having top priority. This student by his actions will do more to educate the public on the worth of the blind than any other means I can think of.

Name:	Albert
Age:	17-6
Vision:	None
Hours of Instruction:	118
Grade:	10
Rank:	4

Albert was enrolled in the program of orientation and instruction in 1963-64. This was his second year at this high school, so orienting him to the school had been partly accomplished previously. This boy also was familiar with his neighborhood on a limited basis, but could not walk to school unaided.

The progression from school and campus,

routes to and from school, and residential and business areas was rapid. The area of his travel scope was widened to include adjacent cities. This student uses public transportation in getting from his home city to these adjacent areas.

He still uses his orientation and mobility skills in traveling to and from school, around school, and in his movement about his environment. He is an excellent user of the cane and orients exceptionally well.

Name:	Ada
Age:	17-5
Vision:	None
Hours of Instruction:	140
Grade:	12
Rank:	5

Ada received her orientation-mobility instruction in the March-June, 1963, segment of the program operated by the Alameda County School Department, and also received instruction from the Lighthouse for the Blind in San Francisco under a contract from Vocational Rehabilitation Services.

Prior to any instruction, this girl did not travel about independently except in her own home and yard, and to a limited degree in the high school she attended. She oriented well and developed a good cane technique. The progression from school, to residential area, to business district, to the use of public transportation was rapidly, yet safely, accomplished. By the end of the instruction period, the route from home to San Francisco State College, a distance of 20 miles, was easily and safely accomplished.

Name:	Alex
Age:	12-8
Vision:	None
Hours of Instruction:	175
Grade:	7
Rank:	6

Alex had some useful vision until the 6th grade when it was suddenly lost due to retinal detachments. With visual concepts to refer to, orientation proved to be easily assimilated by this student.

This boy has good muscular body control and developed a good cane technique as a result. The instruction in orientation and mobility skills began on a limited basis in the 7th grade during 1962-63 and the bulk of instruction was given in 1963-64. Prior to orientation-mobility instruction, Alex knew his neighborhood and was allowed some freedom to travel about in it, but boundaries were set by his parents at the busy arterial streets which surrounded the area in which he lives.

This boy uses his cane daily in moving about the school campus, and is capable of going to and from school--12 miles distance--by using public transportation.

Name:	Alfred
Age:	18-3
Vision:	5/200 Left Eye
Hours of Instruction:	62
Grade:	12
Rank:	7

Alfred received his orientation and mobility instruction in 1965-66. This student had received a few hours of instruction from an unqualified person prior to instruction from the Alameda County School Department staff member, and there were some techniques he acquired which had to be unlearned, and new ones substituted.

This boy knew his way around his high school, so the instruction in this area was minimal. Most of the orientation and mobility instruction was given in the residential areas of the school district and an adjacent larger city. Alfred is capable of traveling about the large city in which he lives, either afoot or on public transportation.

The blind students at the school he attends move about without using a cane, and this boy was among those. As a result, his cane technique did not develop as it could have, but it was adequate.

Name:	Amos
Age:	16-6
Vision:	None
Hours of Instruction:	79
Grade:	11
Rank:	8

Amos received his orientation and mobility instruction in 1965-66. He was not new to this school so little time was needed in orienting him to the school and campus. This boy also had a good mental picture of his neighborhood and walked about it to a limited degree without any formal instruction.

The residential area adjacent to the school and the business district of a nearby city were used to give the student the necessary diversity

Amos oriented well and developed a good cane technique. The congested areas presented no problem which he could not handle. Another semester of instruction should be sufficient to prepare this boy for independent travel. He is capable of traveling within the city in which he lives, but a little more instruction could give him a wider experience in mastering orientation and mobility problems which occur when traveling in unfamiliar cities.

Name:	Andrew
Age:	14-5
Vision:	None
Hours of Instruction:	166
Grade:	10
Rank:	9

Andrew received a semester's instruction in orientation and mobility skills at the California School for the Blind in 1964-65. The instructor from the Alameda County School Department began working with the boy before school opened in September, 1965, as he was new to this public high school.

Prior to September, 1965, this student was able to travel about his neighborhood, but due to a lack of skill in crossing streets correctly, he was not allowed to cross streets.

There was steady progress in this boy's acquisition of skill. The orientation to his environment was the most difficult aspect for him to acquire. The cane technique displayed by this boy was not quite what I hoped it would become, but it gives him sufficient tactual stimulus to perform at a high level of skill. He uses his cane daily in his school and in his community, and he can use public transportation in going to and from school.

Name:	Anton
Age:	16-7
Vision:	None
Hours of Instruction:	199
Grade:	11
Rank:	10

Anton received some orientation and mobility instruction in 1962-63 but most of his instruction was given in 1963-64. This student was fairly mobile when he was enrolled in the program. He could walk to school unaided, but his skill was basic and did not involve the use of a cane.

This student was endowed with all the necessary equipment to become an excellent user of the "long" cane. He did not reach his potential however, due to his idea that using a cane was degrading and unnecessary. This feeling diminished in 1963-64 and he made rapid progress.

The city in which this student lived was well known to him, so orientation was no great problem; it was getting the boy to use his cane properly that proved most difficult. He now uses a cane daily in his pursuit of an education at the local junior college.

Name:	Arne
Age:	14-9
Vision:	None
Hours of Instruction:	131
Grade:	9
Rank:	11

Arne received his orientation and mobility instruction in 1963-64. This boy was capable of moving about his neighborhood and school environments prior to receiving orientation-mobility instruction, but since this mobility did not involve the use of a cane it was unsafely and slowly performed. He oriented very easily to the high school and adjacent area. This student lives in one city but attends high school in an adjoining school district.

The residential and business district phase of instruction was given in the city. This student showed excellent skill in both orientation and cane usage. Since receiving his orientation and mobility instruction, however, he does not make much use of his

skill. He does not carry a cane while moving about at school and as a consequence his ability has deteriorated.

Name:	Bessie
Age:	16-2
Vision:	Light Perception
Hours of Instruction:	53
Grade:	10
Rank:	12

Bessie received her orientation and mobility instruction in 1965-66. She exhibited good mobility skills in moving about her home and the school prior to the orientation-mobility instruction.

The usual pattern of instruction was followed; school, campus, and residential area adjacent to school. The business district of a large city was used for some of the lessons in the later stages of the instruction.

This girl did a good job in orienting to her environment. There was a lack of experience in environmental perception but this void was soon filled to some degree.

She exhibited a good cane technique most of the time, but at times would lapse into an irregular cane tip arc sequence. Another semester of orientation and mobility instruction is advisable to give her more experience in the use of traffic sounds, signal controlled crossings, etc. She can do an acceptable job of traveling in these areas now, but I believe she would be more confident in her ability with more practice.

Name:	Arthur
Age:	18-8
Vision:	None
Hours of Instruction:	138
Grade:	11
Rank:	13

Arthur received his orientation and mobility instruction in 1964-65. This boy had normal vision in one eye until the 6th grade, when a detached retina resulted in total blindness.

He had visual concepts which are very useful to him. The city where he resides was familiar to him and it proved to be of little challenge to move about it freely and safely.

The use of public transportation to Oakland, Berkeley and public transportation within these two cities occupied a great deal of time in the orientation and mobility instruction program. This boy exhibited excellent orientation skill and better than average cane technique. Within reason, he is capable of traveling in any situation he encounters.

Name:	August
Age:	13-8
Vision:	None
Hours of Instruction:	195
Grade:	7
Rank:	14

August was first enrolled in the orientation and mobility program while in junior high school in 1963-64. The main part of the instruction came in 1964-65. This boy is inquisitive, and was well oriented to his home and to the elementary school he attended. Independent movement was confined to these areas prior to orientation-mobility instruction.

This student was very immature in everyday experience when first in the program. He made steady progress in conceptualizing his environment and had an avid interest in learning more about it.

He developed a good cane technique and learned to use all available stimuli to promote safe travel within his environment. The school was new to the boy and after orienting him to it, he progressed into the residential and business areas of his city.

This student is capable of traveling independently in both the residential and business areas and can now use public transportation with skill and safety.

Name:	Austin
Age:	15-5
Vision:	None
Hours of Instruction:	57
Grade:	10
Rank:	15

Austin received his orientation and mobility instruction in 1965-66 on a two day per week basis.

This boy knew his school and campus when he entered the program, so little time was spent on instruction in this area. The residential areas near his home and in an adjacent large city were next on the progression process. The business district of this large city was used to give this student experience in moving about in congested pedestrian and vehicular traffic.

This student did an excellent job in both the orientation and cane skills area. He is capable of travel within the residential and business district of the city in which he lives, but needs more experience in both areas plus use of public transportation, to be capable of truly independent travel.

Another semester of orientation and mobility instruction should suffice to give him the necessary skill for independent travel.

Name:	Barry
Age:	16-7
Vision:	None
Hours of Instruction:	173
Grade:	10
Rank:	16

Barry received his orientation and mobility instruction in 1964-65.

This boy had received a guide dog in the summer of 1964 but the dog evidently was not well trained, for it performed erratically and was finally taken back.

This student did fairly well in the orientation and mobility program with his greatest lack of skill in the area of orientation. He used the cane with skill and grace and became a fairly proficient traveler by the time his instruction period had terminated. The entire orientation-mobility program was presented to him including the use of public transportation.

He secured a new guide dog in the summer of 1965 and uses it or his cane in his daily travels to and from school and within his community.

Name:	Bart
Age:	17-8
Vision:	None
Hours of Instruction:	71
Grade:	12
Rank:	17

Bart received his orientation and mobility instruction when the Alameda County Mobility Project began in March, 1963, so there was only time enough for a limited number of instructional periods.

This boy possessed good orientation and mobility skills prior to his formal instruction, but these skills were only useful in moving about within his home or school.

He developed a good sense of orientation, and had an average cane technique. The cane technique was of sufficient worth to give him adequate body protection and tactual information.

This student could have used another semester of instruction but it could not be given due to his graduation from high school in June, 1963. He was instructed in all phases of the orientation-mobility program, including use of public transportation, but more experience in each of the phases would have been helpful. He now uses public transportation in commuting some 30 miles from home to college on a daily basis.

Name:	Adele
Age:	14-4
Vision:	None
Hours of Instruction:	136
Grade:	9
Rank:	18

Adele received her initial orientation and mobility instruction in 1962-63, but also received a semester of instruction in 1963-64 and again in 1964-65. She had average orientation and mobility skills in getting around school or home, but she tried to use these skills, minus a cane, to move about in her neighborhood with little success.

This girl has not fully accepted the idea of using a cane to gain a safer and more adequate method of moving about in sighted society.

The girl had some problem in coordinating hand and foot movements but ended the pro-

gram with an acceptable cane technique. The orientation phase of her instruction was no problem as she is extremely intelligent. Adele completed all of the phases of the orientation-mobility program. She does not use her cane except on rare occasions, but was capable of safe independent travel on the completion of her instruction in orientation-mobility.

Name:	Agnes
Age:	14-4
Vision:	Light Perception, Both Eyes
Hours of Instruction:	107
Grade:	9
Rank:	19

Agnes received her orientation and mobility instruction in 1965-66.

Being a freshman, she was new to her school. Her mother had made a tactual map of the school which proved to be of great help to this girl in getting acquainted with the school layout. She was extremely mobile and traveled around her immediate neighborhood without the use of a cane. This skill was limited in its use so she was enrolled in the orientation-mobility instructional program and proved an able student. Because of her desire to become independent and the conflict with her father's overprotectiveness, this girl at times seemed to be ambivalent about mobility.

She was experiencing problems at home during the entire instructional program, and the emotional upset she was undergoing prevented her from becoming an excellent student. She can, and has, walked from home to school, a distance of a mile. She is capable of traveling almost wherever she wishes, including the use of public transportation.

Name:	Alice
Age:	14-5
Vision:	None
Hours of Instruction:	37
Grade:	9
Rank:	20

Alice received her orientation and mobility instruction in 1965-66 and was average in her orientation and mobility skills. Before training began, she exhibited no problem in getting around her prior school, but her home environment was not sufficient to allow her to complete the residential phase of her orientation-mobility program. Another semester or year of instruction should be given.

The student was new to the high school and was first oriented to it. The campus and adjacent area were also included in the beginning phases of her instruction.

She did an excellent job on orientation, but her cane technique needs much improvement. It is the instructor's opinion that this student will become a proficient blind person with another year of instruction. She can safely travel in the residential area in which she lives, but should not yet attempt to travel in congested areas with all its busy foot and vehicular traffic and associate complexities.

Name:	Ben
Vision:	None
Age:	13-7
Hours of Instruction:	124
Grade:	8
Rank:	21

Ben received his orientation and mobility instruction in 1964-65.

This boy already was familiar with the school he attended, but it was reviewed to see how well he knew the physical layout. The next phase of instruction covered the residential area of the city where he lived, followed by the business district.

He did a good job orienting to his environment and retained a great deal of information about the city in which he lives.

His cane technique was usually good but on occasions, it would deteriorate to where it was not indicating terrain changes. The boy is capable of traveling in both the residential and business areas in the city of his residence. There was no public transportation available to use for instruction in this phase.

Name:	Alma
Age:	16-5
Vision:	Light perception, right eye

Hours of Instruction: 82

Grade: 11

Rank: 22

Alma received her orientation and mobility instruction in 1964-65. She was a slow learner and took a long time to assimilate the knowledge she acquired.

The girl was first oriented to her school since she had problems in moving about it safely, and then was oriented to the campus and adjacent areas.

The residential areas near her home were used to give her the necessary variety of experiences for a well rounded program. She received the entire program of instruction except the use of public transportation, and is now capable of safe and independent travel.

This girl had a good cane technique. In 1965-66, she attended California School for the Blind.

Name: Bernie

Age: 13-5

Vision: None

Hours of Instruction: 187

Grade: 8

Rank: 23

Bernie received the bulk of his orientation and mobility instruction in 1964-65 with 17 hours of additional instruction in 1965-66. He had average orientation and mobility skills prior to formal instruction. His initial independent travel was limited to school and to his home.

This boy displayed average ability to conceptualize his environment and in his use of the cane. The school and campus were used as the beginning phase of his instruction, with residential and business areas of his city following in order.

He makes good use of aural clues but needs a little maturation, socially and physically, to make him a good independent blind person. The boy has the necessary skill and intelligence to travel independently in any residential or business area. The use of public transportation presented no problem to this student.

Name: Amy

Age: 13-8

Vision: None

Hours of Instruction: 30

Grade: 8

Rank: 24

Amy received her orientation and mobility instruction in 1965-66. Prior to formal instruction, this girl displayed adequate orientation and mobility skills and had no problems in moving about the elementary school she attended. She was also aware of the environment adjacent to her house, but her movement was confined to a few houses in either direction. The minimal number of hours of instruction in 1965-66 justify a full year of instruction on a five day per week basis in 1966-67.

This student was a newcomer at this school in 1965-66 and needed to be oriented to it. The campus and adjacent residential area were also covered. The residential phase should be reviewed before advancing to the next phase.

The girl displayed an unusually good sense of orientation and developed a good cane technique. She uses her cane daily in her school routine. The limits of her travel would be within a perimeter of several blocks from her home.

Name: Bert

Age: 15-8

Vision: None

Hours of Instruction: 51

Grade: 9

Rank: 25

Bert received his orientation and mobility instruction in 1965-66. The total hours of instruction were not sufficient to provide a wide variety of orientation-mobility experiences. One additional semester of instruction may suffice to bring his orientation and mobility skills to the desired point.

This is a well coordinated boy who had some vision until the 6th grade. The visual concepts he retains are useful so orientation was easily accomplished. He was mobile prior to instruction, but did not use a cane to provide tactual stimuli and protection.

He now has a good cane technique but needs to use it to develop it to a greater degree. He does not use the cane in moving about school, but none of the other blind students use their canes at this school either. I hope this precedent is soon broken. This boy uses public transportation to travel to a distant city on several occasions per week.

Name:	Bill
Age:	18-5
Vision:	None
Hours of Instruction:	56
Grade:	12
Rank:	26

Bill received his orientation and mobility instruction in 1965-66. The school this student attends was not new to him so little time was spent in its vicinity other than to introduce the cane technique. This boy was capable of traveling about his home and school prior to his orientation and mobility instruction, so we advanced through the residential phase and into the business district area of the city in which he resides.

In the beginning, the boy had problems with orientation, however, he developed this skill in the later stages of the program.

His cane technique was good and provided a safe path for him as well as giving him useful information. This boy is capable of independent travel in most areas of his city, including the use of public transportation.

Name:	Angela
Age:	15-0
Vision:	Light Perception
Hours of Instruction:	160
Grade:	9
Rank:	27

Angela received her orientation-mobility instruction in 1962-63 and 1963-64.

Her cane technique was not of sufficient caliber to provide safe coverage for the body. There was a definite hostility toward the cane itself which this girl perceived not as a useful tool, but rather as a badge of blindness. There was average skill in orientation.

This girl was able to get about her home and yard with some degree of skill before instruction began. The radius of her travel environment was enlarged to include the city in which she lived. The potential to become highly independent is evident, but the desire is lacking.

Name:	Bob
Age:	16-9
Vision:	None
Hours of Instruction:	328
Grade:	10
Rank:	28

Bob received two full years of orientation and mobility instruction starting in 1963-64 and continuing in 1964-65. This boy had shown problems in orientation and mobility in moving about his elementary school and his home prior to instruction.

This student was slow in acquiring useful concepts of his environment and as a result, it took an extremely long time to get required results. He finally did acquire ability to travel safely in his environment, and traveled 40 miles round trip, five days a week, to hold down a summer job in 1965. He will have the same job in the summer of 1966.

There was definite evidence of lack of everyday experience in this boy's background and it took a long time to get him ready to use the orientation and mobility instruction he received.

Name:	Anita
Age:	13-8
Hours of Instruction:	133
Grade:	8
Rank:	29

Anita received the bulk of her training in 1964-65 with additional work the following year. There was a steady progression in learning orientation and mobility skills. The instruction began in the junior high school building and progressed to the campus and then into residential areas and business districts.

This girl's mother does not allow her to use her skills to any great degree on an independent basis. The instructors had personal

contact with the mother on numerous occasions and pointed out the degree of the girl's skill. They encouraged the mother to allow the girl a greater degree of freedom to use her orientation and mobility training. This girl uses her cane daily in her school activities and has a good cane technique in all aspects. She is proficient in the use of public transportation.

She will be moving into high school this fall but should have no problems in adjusting to the new situation. She is capable of walking to high school from her home, as the distance is within a reasonable limit.

Name:	Ann
Age:	15-2
Vision:	None
Hours of Instruction:	33
Grade:	.
Rank:	30

Ann received her orientation and mobility instruction in 1965-66. She was entering high school as a freshman and did not know the school plant layout but orienting herself to the school and campus was easily performed by this girl.

The remainder of the orientation and mobility instruction was given in a city adjacent to the small town in which she lives since the town did not present much in the way of a variety of experience possibilities.

Another full year of orientation and mobility instruction is necessary to complete all of the phases of the instruction.

This girl has proven she can orient and reorient herself well. The cane technique displayed is not good, but this can be attributed to the limited instruction period. She is capable of independent travel only in her immediate neighborhood or the residential area used for the main part of her instruction.

Name:	Arlene
Age:	14-2
Vision:	Light Perception
Hours of Instruction:	127
Grade:	9
Rank:	31

Arlene received her orientation and mobility instruction in 1965-66. She was beginning her first year at this school and the first few weeks were spent in orienting her to the school campus. Although the girl was familiar with her home and its yard, everything else in her immediate neighborhood was unfamiliar. The distance from her home to high school is only two blocks, but she could not negotiate this route unaided prior to orientation-mobility instruction.

Therefore, the route from school to her home was the next area to be covered and proved to be within the student's ability to accomplish. Residential areas and business districts were also included in her orientation and mobility instruction. The physical layout of the city in which she lives prevented her instruction from having a smooth continuity. The area is in transition from a rural area to that of a large suburban city and gaps exist in sidewalks, streets, etc.

The girl uses her cane in her school and in going home from school. I believe she would profit by another semester of orientation and mobility instruction in her junior or senior year when social and physical maturity are more pronounced.

Name:	Boyd
Age:	13-0
Vision:	None
Hours of Instruction:	11
Grade:	7
Rank:	32

Boyd received his orientation and mobility instruction in 1965-66. Due to scheduling difficulty there was only time to work with this boy on 22 occasions of a half an hour each. He shows some potential in the acquiring of orientation-mobility skills. He travels around home and school well enough, but does not possess sufficient skill to operate outside of these limited areas.

This boy is recently blinded due to optic atrophy and hydrocephalia. There is some difficulty in his adjustment to blindness and until this difficulty is resolved, little progress will be made in his acquisition of good orientation and mobility skills.

A full year of instruction should be given as soon as it is feasible.

Name:	Becky
Age:	14-6
Vision:	None
Hours of Instruction:	76
Grade:	9
Rank:	33

Becky received her orientation and mobility instruction in 1965-66 on a three day per week basis. Prior to her enrollment in the program, she did not travel independently except in school, her home, and yard.

The community this student lives in was not of sufficient size to provide all of the necessary experiences for a well rounded program of instruction. There was some instruction in the business district but it was not of sufficient length or breadth to be considered completed.

This girl did not orient to her environment with any great degree of success. The cane technique she displayed was good and gave her the necessary tactual information. The reception of aural clues was excellent in most instances, but full use was not made of these sounds. She should limit her travel sphere at this time to the residential areas of her community.

A semester of orientation and mobility instruction at a later date is recommended.

Name:	Bruce
Age:	16-4
Vision:	Some Light Perception, Both Eyes
Hours of Instruction:	128
Grade:	10
Rank:	34

Bruce had received some orientation and mobility instruction in 1963-64 while a student at the California School for the Blind. He received his orientation and mobility instruction from the Alameda County Project in 1964-65.

There was a hearing loss in one ear which made sound location and discrimination difficult.

The school was new to this boy in 1964 and some time was spent in orienting him to the school and campus. The residential area adjacent to the school and the downtown area of his city were used to complete the training sequence. The boy had a fair cane technique and modest orientation skill. The hearing loss will make it difficult for him to localize sounds sufficiently well to make street crossings at a traffic signal. He can however, safely operate in the residential area of the city in which he lives.

Name:	Bertha
Age:	16-6
Vision:	5/200 Both Eyes
Hours of Instruction:	29
Grade:	12
Rank:	35

Bertha received her orientation and mobility instruction in 1965-66. This student had sufficient vision to operate in most areas with little or no difficulty. The problem came when she was outside and facing the sun. The glare of the sun on the sidewalk denied her the remaining vision and made her, in effect, totally blind.

The cane gave her protection against the low objects which she could not discern due to glare. Although her cane technique was not as good as it could have been, it did provide protection and some useful information.

This girl oriented well and moved about in all areas of her city of residence with no problem. The addition of more instruction would be helpful in determining her visual acuity. Some of this instruction should be given at night to see how she reacts to darkness or semi-darkness.

Name:	Beth
Age:	16-1
Vision:	None
Hours of Instruction:	53
Grade:	10
Rank:	36

Beth received her orientation and mobility instruction in 1965-66. Besides being totally blind, this girl has a severe hearing impairment in both ears and neuro-muscular involvement of the left leg.

She had a great deal of difficulty in ori-

enting to her environment and in remaining oriented once stability was established. Little use could be made of aural clues. Her cane technique was average but it provided adequate protection and some tactual stimulus.

This girl could use another semester or year of orientation and mobility instruction. I doubt whether she will ever be entirely independent due to her severe hearing loss. Her sphere of travel at this time should be limited to her school, her home, and to its near environment.

Name:	Betty
Age:	13-11
Vision:	None
Hours of Instruction:	319
Grade:	9
Rank:	37

Betty received her first year of orientation and mobility instruction in 1963-64 and the second year in 1964-65. This girl exhibited some problems in her early orientation and mobility skills, but I believe they stem from a medical problem. During 1963-64, a new medication was tried which resulted in varying degrees of mental inefficiency, especially in the motor reflex area.

This girl has had all the phases of orientation-mobility instruction, including home, school, residential business, and public transportation. Betty had trouble in the orientation phase of the instruction and while she did not entirely eradicate the problem, she made great progress. She exhibited a good cane technique and uses her cane in school.

There is a question of mobility limits for this student due to medical complications. I would hesitate to state that she is capable of independent travel in all areas due to the possibility of a seizure and subsequent disorientation.

Name:	Carl
Age:	14-2
Vision:	None
Hours of Instruction:	77
Grade:	9
Rank:	38

Carl received his orientation and mobility instruction in 1965-66. He was an entering student at this school so orienting him to it was the first order of business. The route from school to home was next given priority.

This boy displayed a lack of aptitude for orienting and reorienting himself to his environment. There was little progress made during the year in remedying this lack of orientation skill.

He did not accept the cane as a useful tool, but rather as another badge of blindness. Another full year of orientation and mobility instruction is indicated. He can walk from school to home but cannot reverse the route. Travel in a residential area is the limit of this student's ability.

Name:	Blanche
Age:	14-9
Vision:	None
Hours of Instruction:	42
Grade:	8
Rank:	39

Blanche received her orientation and mobility instruction in 1965-66. Since she was entering this school for the first time, time was spent orienting her to the school and campus. The girl was mobile within her own home, but was not too well oriented to the yard of her home.

The residential area adjacent to the campus and her own neighborhood area were used to provide the environment for the rest of her instruction.

She did not orient too well in the beginning but, by the end of the instructional period, had shown great improvement. Her cane technique was adequate but could be improved. Another year of orientation and mobility instruction is indicated. At present, this girl is capable of traveling only in a quiet residential area, with no busy streets to cross.

Name:	Brenda
Age:	13-7
Vision:	None
Hours of Instruction:	37
Grade:	8

Rank: 40

Brenda received her orientation and mobility instruction in 1965-66. She has always had great difficulty in keeping oriented, and the school and home were the limits of her independent movement. She was a new student at this school so the first lessons were spent in orienting her to it. This took a great deal of time, but she finally mastered it.

The residential area adjacent to the school and the neighborhood in which she lived were used to provide the remainder of her instruction experience.

This girl has difficulty using her remaining senses to orient or reorient herself. There was improvement in this area however. The cane technique is average. Another year of orientation and mobility instruction should be given to insure adequate orientation-mobility skills. The skills she has at present are only adequate for use in a school or home environmental situation.

Name: Charles

Age: 19-1

Vision: None

Hours of Instruction: 13

Grade: 13

Rank: 41

This student was seen by the Alameda County School Department instructor just prior to his entrance in junior college in the fall of 1965. The main concern of the student and instructor was in orienting the boy to the college campus.

Although this boy used a cane, the technique employed was poor. He should receive an extended orientation and mobility instruction program at the adult blind facility in Albany, California. At this time, this young man does not have the skill to travel adequately in the sphere of the college campus.

Name: Chris

Age: 18-6

Vision: None

Hours of Instruction: 54

Grade: 12

Rank: 42

Chris had previous orientation and mobility instruction at the California School for the Blind. The Alameda County School Department instruction came in 1965-66.

This student had difficulty in orienting to his environment. There seemed to be no interest in learning orientation and mobility skills. The boy had a poor cane technique which showed little improvement.

This student did not use his cane except during the instruction period. Since there was no practical use made of his orientation and mobility skills, such as they were, little or no progress was shown. This boy would not be considered skillful enough to travel independently except in the quiet residential area in which he lives.

Name: Carla

Age: 14-11

Vision: None

Hours of Instruction: 90

Grade: 9

Rank: 43

Carla received her orientation and mobility instruction during 1963-64. This girl could get around the intermediate school she attended in an adequate manner, but the neighborhood she lived in was unfamiliar to her except for the houses adjacent to her own. The year she received her instruction was her first at this school and the orientation to the school and adjacent area took a little longer than usual to complete.

The orientation and mobility instruction was given in a small town as well as in a large adjacent city, since the town did not contain the necessary physical layout to give a well rounded program. This girl has been exposed to moving about in congested vehicular and pedestrian traffic, but she is not proficient in this phase and needs a great deal of instruction in this environment. The independent use of public transportation is not within her ability at this time.

This student did not progress to the extent we would have liked. There was a great deal of family conflict which interfered with her reception of orientation and mobility skills. She is now a student at the California School for the Blind.

Name: Carmen

Age: 14-0

Vision: None

Hours of Instruction: 55

Grade: 9

Rank: 44

Carmen received her instruction in 1965-66. Prior to this, the scope of her mobility was limited to her home and yard. The small number of hours of instruction indicate that the process of developing adequate orientation and mobility skills have only begun. The residential phase of the program is the point to which this girl had progressed by the end of the instruction period; therefore another full year of instruction on a five day per week basis is recommended.

This student had difficulty in conceptualizing her environment. The lack of orientation made any real progress impossible. She is not capable of independent travel at this time.

The tactual information relayed to her by the cane was not utilized, and she tried instead to depend on the tactual information from her feet and her aural clues. She did poorly in the orientation and mobility program as a result.

Name: Carolyn

Age: 13-9

Vision: None

Hours of Instruction: 51

Grade: 7

Rank: 45

Carolyn received her orientation and mobility instruction in 1963-64. She had some problems in moving about her school. Her home and the adjacent houses were the limit of her travel sphere prior to this instruction. By the semester's end in January, 1964, it was clear that further instruction at this time was unfeasible.

This student had a difficult time trying to conceptualize her environment and did not do well in this phase of her instruction. There was little desire on her part to gain more skill and independence. She was capable of traveling only in the neighborhood in which she lived.

The instructor was of the opinion that some social maturity on this student's part would help her to see the desirability of independent movement. The girl is now a student at the California School for the Blind.

Name: Cathy

Age: 15-3

Vision: Light Perception, Both Eyes

Hours of Instruction: 174

Grade: 9

Rank: 46

Cathy received her initial orientation and mobility instruction in 1963-64. In 1964-65, she attended a school for the blind outside the State of California. In 1965-66, she was again in the Alameda County Orientation and Mobility Project.

This student has great difficulty in orienting to her environment. The greater portion of the instruction was spent on this phase, with the cane providing her protection and a limited amount of useful tactual information.

I do not believe this girl will achieve full independence unless her attitude of talking about her problems instead of working to correct them is altered. The desire for independence is lacking. At the present time, she cannot walk from home to school without getting disoriented, even though it is only 2-1/2 blocks away.

Name: Celia

Age: 12-4

Vision: None

Hours of Instruction: 67

Grade: 8

Rank: 47

Celia received her instruction in 1965-66. She was able to get around her school independently prior to her enrollment in the orientation-mobility program. Because of the small number of hours of instruction, the process of developing adequate orientation and mobility skills has only begun. Another full year of instruction should be given.

This girl had great difficulty in orienting to her environment and this, along with a poor memory as to turns and street sequences

on her assigned routes, kept her from making a great deal of progress.

This student exhibited a good cane technique, but without the necessary spatial orientation needed it was not of great use to her. She is still in the residential phase of the orientation-mobility program, and any independent travel would have to be restricted to this area.

Name: Cheryl

Age: 14-0

Vision: None

Hours of Instruction: 99

Grade: 9

Rank: 48

Cheryl received her orientation and mobility instruction in 1964-65. She has always shown a great lack of success in conceptualizing her environment, be it home or school, and made little progress in correcting this deficiency.

The cane technique displayed by this student was average, but without the orientation to make her truly mobile it was of little use to her.

This girl was dependent on other people at her school to get to and from her classes after a year of instruction. Another year of orientation and mobility instruction is indicated for her senior year. She is not capable of independent travel except within the confines of school or home.

Name: Clara

Age: 12-10

Vision: None

Hours of Instruction: 30

Grade: 5

Rank: 49

Clara received her orientation and mobility instruction in 1963-64. She was admitted to the program on a probationary basis, and after one semester it was decided to terminate her instruction.

This student is socially immature and is not ready to accept orientation and mobility instruction at the present time. There were psychological problems present which prevented her from accepting herself as a 13 year old girl. In her mind she preferred to think of herself as a young child.

Another trial period of orientation and mobility instruction should be attempted to see if progress could be made in getting her to become more independent.

Name: Cleo

Age: 12-3

Vision: None

Hours of Instruction: 81

Grade: Ungraded MR

Rank: 50

Cleo was accepted for orientation and mobility training on a trial basis from January to June, 1964. Prior to the training period, this girl showed very poor orientation and mobility skills, and could not move about her school or home in adequate fashion.

She displayed some progress early in the instruction period and then reached a plateau from which she was never able to move.

The girl did not display sufficient intelligence to profit from further orientation and mobility instruction so she was dropped from the program in June, 1964.

The instruction she received was helpful to her in a limited way, but she could not move about her own home independently even after her instruction program.

CONCLUSIONS, GENERAL IMPRESSIONS AND PLAN

Number of Students per Instructor

The ratio of students to instructor should be in the 5 to 6 range for a full schedule. We felt that instruction in orientation and mobility could be made to fit into the school day or the school day plus one hour after the end of the school day.

The distance each instructor is required to cover in each day's instruction will, to some extent, limit the number of students served.

If the students are located in one central area, the number of students served will be higher, but the number served will decrease as the amount of time the instructor spends driving between various schools increases.

Lessons per Week

The best learning will occur when the student is given daily orientation and mobility lessons five days a week.

The results of 1 or 2 or even 3 lessons per week are not as productive as 4 or 5 lessons per week.

The difficulty found with 1 or 2 lessons per week is that a great deal of each lesson period is spent getting the student to the point where he was at the end of the previous lesson. If a student received lessons on Tuesday or Thursday, we found the four day space of non-instruction between Thursday and Tuesday resulted, as a rule, in a poor performance on Tuesday. One lesson per week is better than no instruction at all, but the carry-over in skill from one week to the next is minimal.

Cooperation with School Administrators and Teachers of Visually Handicapped

The resource teacher or itinerant teacher of the visually handicapped student is the logical person to serve as liaison between the mobility instructor and the administrators in the local schools.

We in the Alameda County Project have had excellent cooperation on the part of all administrators of schools, school districts, and department heads.

There have been isolated students who were not served by either itinerant or resident type of resource teacher, and in this situation the mobility instructors made personal contact with the administrators of these schools to inform them of the service available to their blind students. It was provident that both mobility instructors were well grounded in the general nature of education of the visually handicapped. An instructor who knew only cane skills would be of less value to the school program.

A continual flow of information is needed to make an orientation-mobility project successful. The Department of Special Education in Sacramento made available to Alameda County the registers of visually handicapped students in all of the counties served. These registers were used in conjunction with personal contact with resource programs and other agencies to insure our data on students eligible for orientation and mobility instruction was complete. In addition, the constant exchange of information on the student's progress in the orientation and mobility program between the mobility instructor and the resource teachers experienced during this project and the congenial rapport between project and local school staffs helped the program accomplish its goals.

Grade Level at Beginning of Orientation-Mobility Instruction

When the Alameda County Project was begun it was decided by the Advisory Committee and the project staff that instruction would be given with priority to the older students, especially those in grade 12. We have followed this pattern and have only on two occasions gone below grade 7. These two exceptions were made because the two students were high in age compared to their grade level.

One of these exceptions received 30 lessons and the other 81 lessons. Both students were girls and both were terminated because of lack of evident improvement. One was socially immature as well as educably retarded and the other was mentally retarded.

Age of Onset of Blindness

The congenitally blind child lacks the visual memories of his environment which the adventitously blinded child frequently retains and the blinded children in this study were better oriented and more independent than the congenitally blind ones. Undoubtedly, early learnings are important and mobility readiness skills and concepts should be taught systematically from infancy onward to help the congenitally blind child develop an understanding of his environment through non-visual experiences.

The orientation and mobility instructor should be concerned with the formative years of a blind child's life, because a great deal of the information needed by the blind child to become an efficient mobile blind adult can be more easily learned and learned with less embarrassment in those ages when all individuals are expected to crawl, climb, and explore. The amount of accurate spatial concepts a blind student has available to him determines to a great degree the amount of success he will have in learning orientation and mobility skills. Mastery of basic orientation and mobility skills are necessary to any blind student before he or she attempts to acquire the complex orientation and mobility skills needed for independent adult travel.

The staff of the Alameda County Project believes that teaching basic or readiness orientation and mobility skills to blind children should begin in the kindergarten or first grade if not earlier.

The parents of blind children should be informed of their role in helping their child acquire basic orientation and mobility skills. Perhaps there should be some sort of workshop or short course devised to give them the necessary understandings and skills to fulfill their task.

The resource teachers, if time permits and if they have proper training, can teach some of the basic orientation and mobility skills, but the nature of Resource Room teaching and travel training are so different that a resource teacher ceases to function as such when he undertakes to teach advanced travel skills.

The skilled orientation and mobility instructor should be able to function all along the lengthy developmental process of the blind student's acquisition of orientation and mobility skills and it is insufficient to assign such duties to individuals who do not know the developmental problems of blind children. The Alameda County Project instructors functioned in both the basic and complex orientation and mobility skills area, but the bulk of the instruction dealt with the more complex situations.

Demonstration of Orientation and Mobility Skills--Boys vs Girls

From the statistics we have accumulated from the Alameda County Project, it would seem that boys in our sample were more proficient in acquiring orientation and mobility skills than were the girls (althougn perhaps men mobility instructors are most successful with boys).

The staff members of the Alameda County Project are of the opinion that mobility is of less concern to a girl, at least during the formative years of life, than it is to a boy, and consequently the girls were less diligent students.

Although both blind boys and girls were found on the average to have much less muscular development and coordination than their sighted peers, the girls in our study had less physical stamina and muscular coordination than did the boys, and perhaps this fact had something to do with the distinct sex difference in achievement.

Most of the public schools in the Bay Area insist on putting the blind students into modified physical education classes where activities of sedentary nature are the rule rather than the exception. There is a definite need for more exercise and physical activity for the blind students attending public schools. Without proper physical condition, excellent orientation and mobility skills will not be attained by the blind student.

Costs

Itinerant mobility instruction can be provided at costs per hour of individual teaching which are equal to or less than other costs per hour of other services which require an individual relationship between an exceptional child and an adult. The cost of mileage reimbursement to the instructors is included in that generalization. Furthermore, if blind children can learn to travel early in their high school career and are able because of those skills to forego special transportation, the cost of their mobility instruction can be actually saved out of transportation costs. The costs per position in this grant included some costs relating to the grant alone, but even a high estimate of the cost of one position would be less than $15,000.

The Regional Plan Works

Without school districts having to enter elaborate contracts, and without matching funds or personnel, children in a large, multi-county area received mobility training over a three year period. Administrative overhead was at a minimum and relationships between state, regional and local staffs were cordial and efficient. A maximum of use of the specialized skills of the mobility instructor was made and they were not expected to perform general functions as might have occurred had they been staffed at local district levels.

How Many Mobility Instructors are Needed

In this project a 1470 square mile region with a population of 1-1/2 million people was served by two instructors and no blind students in this population graduated from high school during the 40 months of the grant without receiving orientation-mobility instruction. During one year of the project, the area served was increased to 2000 square miles. The population density in the Bay Area is much greater than the average for the nation as a whole, but on the other hand most of the blind people in the country live in areas of this or greater density.

In very thinly populated regions, the itinerant plan might have to be combined with a residential program during summer or other months with the teacher visiting individual students during other parts of the year to help them with the specific problems in their own communities. But apart from exceptions caused by population sparsity here and there, the two hundred million people who will someday inhabit the U.S. could be served by less than 300 itinerant mobility instructors at a cost of less than $15,000 per position--all costs included. By adjusting locations and by having sparsely populated areas served by instructors who would live in one part of their region one year and in another part the next, almost all of the blind secondary school students in America could be taught independent travel skills at a yearly cost of less than 4½ million dollars, less than the cost of one liberty ship or about the price of two jet bombers. This is a high estimate which assumes that in a population of two hundred million, 300 orientation-mobility positions will be necessary at a cost of $15,000 per position.

The actual costs found in our project were less than $13,000 per year per position and these included costs peculiar to the project. With costs of $13,000 per position and assuming a population of 180 million requiring 240 positions, the cost for a nationwide coverage would be $3,130,000.

In each state or zone, one of these positions would be a coordinating one with the function of adjusting the areas covered by the individual teachers in the zone to fit the ever changing clusters of students. Of course, it is necessary to build into this plan gradually as orientation-mobility instructors become available from the four institutions which train them (Boston College, Western Michigan University, San Francisco State College and California State College at Los Angeles). The necessary appropriations could begin with the present programs and gradually increase over a period of 7 or 8 years to reach a nationwide coverage. Until some rational plan is adopted which will bring advanced training in independent travel skills to all blind and secondary students, occasional here-and-there coverage will only tantalize men of good will with what might be done with a couple of million dollars and a systematic plan.

A P P E N D I X

APPENDIX A

MOBILITY SKILLS--CANE AND PROPER USAGE
(A checklist to record student achievement.)

The checklist which follows was created by Berdell Wurzburger before any students were instructed and was revised once after a trial use in the field. The revised form is reported here. It has previously been published in Wurzburger's article, "Form for Evaluating Mobility Training & Performance", pp. 281-290 of Proceedings of The Rotterdam Mobility Research Conference.

As he observed the student, the rater checked whether the statements about him were true (yes), or not true (no). The form was used very early in each student's instruction period to develop base line data from which progress could be measured. Thereafter, evaluations were made three times during the school year by the student's orientation-mobility instructor and by an independent observer who was not part of the project staff and who could be presumed to be free from the bias and halo effect which sometimes accompanies a close teacher-student relationship. These consultants were Richard Russo of the California Orientation Center and John Trembley of the California School for the Blind. Their judgments were found to be in rather close agreement with those of the instructors and during the latter part of the grant, the outside "audit" was discontinued.

There was greater degree of agreement between judges on the items involving a combination of many simultaneous behaviors (Items 9 to 14) than there was on the separate parts of these complex behaviors (Items 1-8). In a rating process, it is more common to find high inter-judge agreement on simple, specific behaviors and lower agreement on the general more complex tasks. Our findings were the opposite: There was high agreement as to whether the students could apply their skills to complicated field problems, but considerable disagreement on such items as whether cane grip was too tight or too loose. Perhaps this is analogous to such other physical activities as golfing or bowling where there can be disagreement between various "pro's" about form but where the results speak for themselves, they are in virtual agreement.

The form which is shown here is marked - and + to give the key to which items were judged accomplished (+) and which were not yet mastered (-). For rapid scoring, stencils were made by cutting out all of the + squares for the positive key, and by cutting out all of the - squares for the negative key. A strip of cellophane tape on the front and on the back kept the key firm but transparent. Scores were the number of plusses, the number of minuses and the percentage of correct items. Since a varying number of items were left unmarked, comparisons were made by dividing the total number of items marked into the number right which yielded the percentage of correct behaviors, a statistic which allowed comparisons between students and between separate ratings of the same student.

In addition to being a device to make judgments about student progress somewhat verifiable, the checklists served as reminders to the instructors as they made their lesson plans.

CODE: (+) means correct or positive value
(-) means incorrect or negative value

Alameda County School Department
Rock La Fleche, Superintendent of Schools
224 West Winton Avenue, Hayward, California

MOBILITY SKILLS--CANE AND PROPER USAGE

Student's Name_____ _____ School_____

	Date	Yes	No
1. Student introduced to cane (material, length, what it will or will not accomplish)	Date_____		
2. Grip - correct		+	-
too tight		-	+
too loose		-	+
index finger maintains proper position		+	-
correct thumb position		+	-
3. Wrist action - proper		+	-
too rigid		-	+
too relaxed		-	+
wrist prouates or supinates		-	+
Cane tip - proper control		+	-
bounces too high between taps		-	+
drags between taps		-	+
4. Arm position - proper		+	-
off center to cane hand side		-	+
over-centered		-	+
arm and hand carried too high		-	+
arm and hand carried too low		-	+
hand too close to body		-	+
elbow away from body		+	-
elbow against body		-	+
elbow straight		+	-
elbow bent		-	+
5. Arc - correct		+	-
cane tip being dragged		-	+
cane tip too high		-	+
arc too narrow: left____ right____ both____		-	+
arc too wide: left____ right____ both____		-	+
student's body stays behind arc		+	-
student clears properly before stepping off curb		+	-
student uses narrower arc in congested areas		+	-
arc widens in unfamiliar areas		+	-
arc is correct when following shore line or curb		+	-
if arc incorrect, is it consistently so		+	-
other arc fault - describe:_____			+

	Date	Yes	No
6. Does student get out of step often		-	+
if so, at what moment:			
after cane strikes object		-	+
when cane sticks in grass or other material		-	+
after stepping up or down from curb		-	+
other - describe:_____			
_____			
7. Does student's cane detect drops or other changes in terrain		+	-
8. Gait and body carriage - correct		+	-
gait too slow - cautious		-	+
gait too rapid - reckless		-	+
gait slows in pace when in unfamiliar area		+	-
gait slows when in congested area		+	-
shoulders are properly aligned		+	-
"cane hand" shoulder turns too far forward		-	+
there is unusual body posture		-	+
if so, describe:_____			
_____			
head is not in normal position		-	+
if so, describe:_____			
_____			
gait is constant		+	-
if not, describe:_____			
_____			
slow gait increased in pace as ability increased		+	-
when not in use, arm is relaxed		+	-
when not in use, arm is rigid		-	+
carrying any large object (such as briefcase) causes unusual variation in gait		-	+
if so, describe:_____			
_____			
student maintains fairly straight line walking down the street		+	-
student has a zig-zag line of travel		-	+
if so, is it caused by improper arc			
other causes - describe:_____			
_____			
9. Stairs			
student locates stairs adequately and safely		+	-
ascends and descends without handrail		+	-
traverses stairs using "no touch" method		+	-
traverses stairs using "touch" method		+	-
too much shuffling of feet to get tactile information		-	+
has proper posture in descending stairs (shoulders slightly back of line of balance)		+	-
stair techniques should receive more attention		-	+
if so, describe:_____			
_____			
10. Automobile and bus travel			
uses proper safety techniques for entering and leaving auto		+	-
any problem in placing cane in car or bus		-	+
locates bus seat graciously		+	-
enters and leaves bus quickly and safely (should enter and leave by front entrance)		+	-
pays his own fare in bus meter		+	-
portions of student's technique need attention		-	+
if so, describe:_____			
_____			

	Date	Yes	No
11. Street crossings			
uses sounds available to him		+	-
heavy traffic sounds cause student anxiety		-	+
uses sounds to keep line of travel correct		+	-
veers when crossing streets: right____ left____		-	+
has difficulty in telling when traffic signal changes		-	+
indicates tension during street crossings		-	+
uses landmarks in street crossings		-	+
relies on traffic sounds		+	-
finds proper position for starting by finding straight-edge, etc.		+	-
seems more relaxed and proficient when crossing a street that is familiar		+	-
has unusual body position when poised for crossing		-	+
if so, describe:_____			
12. Contact with the public			
solicits too much aid in familiar areas		-	+
solicits too little aid in totally unfamiliar areas		-	+
denies or accepts aid graciously		+	-
solicitation of aid has diminished as ability increases		+	-
if so, describe:_____			
exhibits feeling of being "noticeable" when moving about in sighted society		-	+
if so, describe:_____			
if information is desired, takes the dominant position and gets the data without a lot of verbal exchange		+	-
reorients himself if he becomes disoriented through any cause		+	-
13. Orientation in unfamiliar areas			
has difficulty remembering street sequences		-	+
has difficulty reversing a familiar route		-	+
has difficulty remembering turn sequences		-	+
uses sun to aid in confirming direction of travel		+	-
uses wind and absence of wind as indicator of the type of structures alongside him as he walks		+	-
retains a normal amount of landmark information (i.e. gas station on certain corner, bakery two doors north of a corner)		+	-
uses odors in confirming his orientation		+	-
14. Miscellaneous			
student possesses some degree of object perception		+	-
uses object perception to an advantage		+	-
reflexes are adequate to react to cane and other stimuli to ensure safe movement		+	-
student has an adequate concept of his environment		+	-
if so, what evidence:_____			

_____

signature and title

APPENDIX B

CALIFORNIA LEGISLATURE--1965 REGULAR (GENERAL) SESSION

ASSEMBLY BILL No. 271

Introduced by Assemblyman Bee

January 14, 1965

Referred to Committee on Rules

An act to add Article 16 (commencing with Section 6471) to Chapter 6 of Division 6 of, AND TO AMEND SECTION 13151 OF, the Education Code, relating to orientation and mobility instruction for the blind, ~~and making an appropriation therefor~~.

The people of the State of California do enact as follows:

SECTION 1. Article 16 (commencing with Section 6471) is added to Chapter 6 of Division 6 of the Education Code, to read:

Article 16. Orientation and Mobility Instruction for Blind Minors

6471. Orientation and mobility instruction ~~shall~~ may be provided to public ~~secondary~~ school students who are totally blind or who are so deficient in travel vision that they need to ~~learn specialized orientation techniques and to develop skill in the use of mechanical aids in order to travel independently outside of such limited and familiar environments as their homes~~. learn specialized techniques in order to travel independently.

6472. To be eligible for orientation and mobility instruction under this article, a student shall meet all of the following:

~~(a) He shall be at least 12 and not more than 21 years of age.~~

~~(b) He shall be enrolled in a public junior high school, high school, or junior college.~~

~~(c)~~

(a) He shall be enrolled in a public elementary or secondary school.

(b) His vision shall not exceed the limits of visual capacity as established by the State Superintendent of Public Instruction.

~~(d)~~

(c) He shall be enrolled for orientation-mobility instruction at the written request of his parent or guardian.

6473. A student shall be eligible under this article ~~for a total of three, though not necessarily consecutive, semesters of individual orientation-mobility instruction except that a com~~ when a committee composed of the orientation-mobility instructor, the resource or supplementary teacher of the blind, and a special ~~education administrator may determine that in less than three semesters, the student has achieved independence in travel skills or has proven unable to benefit from further instruction. A semester of instruction begun before the student's 21st birthday may be completed~~. education administrator so determine.

6474. Orientation-mobility instructors shall meet ~~the~~ minimum ~~standards specified in Sections 6820 and 13195, and shall have had specialized preparation as prescribed by regulations adopted by the Superintendent of Public Instruction~~.

~~6475. Orientation-mobility instructors shall do the following:~~

~~(a) Give individual instruction to eligible students~~.

~~(b) Consult with other educators on how to develop the visually handicapped pupil's readiness for instruction in independent travel skills~~.

~~(c) Confer with parents and with other specialists and agencies in how to help students enlarge and apply their travel skills~~.

~~(d) Develop raised maps for use by their students~~.

~~(e) Report on these activities annually to the State Superintendent of Public Instruction~~.

~~6476. A superintendent of a unified school or high school~~ standards for a designated service credential to be established in accordance with Section 13151.

6475. Standards for orientation-mobility instruction shall be established and enforced by the Superintendent of Public Instruction.

6476. A superintendent of a school district, a county superintendent of schools, or a superintendent of a state school for the blind may apply to the State Superintendent of Public Instruction for authorization to add one or more positions of orientation-mobility instructor to his staff, and shall submit evidence that his educational unit shall serve a population large enough to ~~ensure a continuing~~ justify a need for such a position. A county or district application shall be certified that districts in the geographical area described in the application have agreed in writing to accept orientation-mobility service from the district or county filing the application.

6477. The State Superintendent of Public Instruction shall:

~~(a) In consultation with the State Department of Rehabilitation~~,

(a) Make anr al budget arrangements to administer the provisions of this article.

(b) Obtain whatever matching funds are available.

(c) Advance funds to pay the full actual costs of the authorized positions, including salary, retirement, supplies, travel, administration and other costs not to exceed a budget agreed upon in advance by the operating superintendent and the State Superintendent of Public Instruction.

6478. The State Superintendent of Public Instruction shall include in the budgeting of any money appropriated for this article an amount to provide professional and clerical assistance in order to administer the provisions of this article such as consultation, processing of applications, coordinating,,supervising the quality of instruction, and budgeting.

The State Superintendent of Public Instruction shall adopt regulations to administer the provisions of this article.

6479. County superintendents of schools are authorized to apply for and to add to their services the position and ~~function~~ functions of orientation-mobility ~~instruction~~ instructor as defined in Section 6474 and are authorized to enter into agreements with districts and other county superintendents of schools to provide orientation-mobility instruction to pupils in those districts and counties.

~~Sec. 2. There is hereby appropriated from the General Fund the sum of one hundred twenty thousand dollars ($120,000) to the Superintendent of Public Instruction to~~

~~effectuate~~ ~~the~~ ~~purposes~~ ~~of~~ ~~this act~~. ~~He~~ ~~shall~~ ~~allocate~~ ~~such~~ ~~sum~~ ~~for~~ ~~the~~ ~~1965~~ ~~1966~~ ~~and~~ ~~1966~~ ~~1967~~ ~~school~~ ~~years~~ ~~not~~ ~~exceeding~~ ~~forty~~ ~~thousand~~ ~~dollars~~ ~~($40,000)~~ ~~for~~ ~~the~~ ~~1965~~ ~~1966~~ ~~school~~ ~~year~~ ~~and~~ ~~eighty~~ ~~thousand~~ ~~dollars~~ ~~($80,000)~~ ~~for~~ ~~the~~ ~~1966~~ ~~1967~~ ~~school~~ ~~year~~. The ~~unencumbered~~ ~~balance~~ ~~in~~ ~~the~~ appropriation ~~made~~ ~~herein~~ ~~shall~~ ~~revert~~ ~~to~~ ~~the~~ ~~unappropriated~~ ~~balance~~ ~~of~~ ~~the~~ ~~General~~ Fund.

Sec. 2. Section 13151 of said code is amended to read:

13151. The State Board of Education may issue credentials limiting the service authorized by such credentials to service in the schools or classes specified on the credential.

The State Board of Education may issue credentials limiting service to orientation-mobility instruction provided for in Sections 6471 to 6479, inclusive. Standards for such credentials shall include a baccalaureate degree from an institution approved by the State Board of Education and such specialized and professional training as the State Board of Education may require.

APPENDIX C

MISCELLANEOUS FORMS

Mr. Rock La Fleche, Superintendent
Alameda County School Department
224 West Winton Avenue
Hayward, California

Dear Mr. La Fleche:

I hereby give permission for my son or daughter

_____
Name

_____
School County

to take part in the Orientation and Mobility Instruction for Blind Adolescents in Alameda and Contra Costa Counties.

This permission grants the instructor the privilege of off-campus instruction under his direct guidance. Lessons will be given on a one-teacher to one-student basis.

Sincerely,

_____
Signature of parent or guardian

_____
Date

Alameda County School Department
Rock La Fleche, Superintendent of Schools
224 West Winton Avenue, Hayward, California

Date_____

Student_____ _____ _____
Last First Middle Date of birth
Parent or Guardian_____
Address_____ Phone_____
Students Age_____ Sex _____ Height _____ Weight _____
School now attending_____ Grade____ Resource Teacher_____
Age at onset of blindness and cause:_____
_____
Visual acuity: O.S. _____ O.D. _____
Hearing acuity: Right _____ Left _____
I.Q. test (type)_____ Results_____
General physical condition:
Body type: Obese _____ Normal _____ Thin _____
Physical stamina: Good _____ Average _____ Poor _____
Posture: Good _____ Average _____ Poor _____ (If poor, describe)_____
_____
Reaction time: Good _____ Average _____ Poor _____
Tactual ability: _____
Braille reading proficiency:_____
Date instruction began:_____

_____
Name Title

Alameda County School Department
Rock La Fleche, Superintendent of Schools
224 West Winton Avenue, Hayward, California

Please answer the following questions as fully as possible.
Please type your answers on regular 8 x 11 typewriter paper.
Begin your answer sheer in the following manner:

Name_____
School_____ Grade _____
Resource or itinerant teacher_____

1. How capable do you consider yourself of going alone where you wish to go, and when you wish to go? If you like, rate yourself on a scale of five ranging from 1. very capable; 2. capable; 3. average; 4. poor; 5. very poor

2. Do you feel you have had enough orientation and mobility training or do you feel you could use more training? If you wish more training, what area or areas would it be in?

3. How were you introduced to the "long cane" method of mobility?

4. What would you like to have accomplished in orientation and mobility, but did not do for some reason?

5. If you could have any three questions answered about orientation and mobility, what would they be?

List: 1.
2.
3.

6. Do you feel well acquainted with the physical makeup of your school and campus? Explain.

7. When you arrived at your present school for the first time, what if anything worried you the most? Did the complexity of the buildings and campus cause you considerable worry? Why?

8. Do you feel more at ease about moving around the school buildings and campus now that you have had some time to get used to it?

9. Have any of your regular classroom teachers commented on your ability or lack of ability in moving about the school and campus? If so, what did they say?

10. Do you carry your cane and use it in moving about your school campus?

11. It seems to many people engaged in public school instruction of blind students that the blind student has to carry a great variety of objects besides the cane. For example, portable typewriter, braille writer, briefcase, or braille books. Would you say you are in agreement with their opinion?

12. If you agree with the above statement, what would or could you do to solve this problem?

13. Do you have to carry so many objects with you during your school day that you find it difficult to use your cane?

14. Do you feel any embarrassment about carrying and using your cane?

15. Do you intend to continue using the "long cane" or are you thinking about acquiring a dog guide?

16. How do your parents feel about your going out alone with your cane? Do they place any restrictions on your travel? If so, what?

17. Is your feeling about the cane and its use in moving about safely the same as it was before you started? If there is a change, describe it.

18. Do you think you could have used more instruction in the basic orientation and mobility skills before using the cane?

19. List five subjects you would like to discuss with the other students present at our meeting on April 16, 1966, at Berkeley High School, 9:30 a.m. to 3:30 p.m. The subjects do not have to be in any way connected with orientation and mobility.

A.
B.
C.
D.
E.

ORIENTATION-MOBILITY INSTRUCTION

Alameda County School Department, Hayward, California

Month ____ Students																																	Total
Month ____ Students																																	

APPENDIX D

MILEAGE REIMBURSEMENT POLICIES

ALAMEDA COUNTY SCHOOLS
Rock La Fleche, Superintendent
224 West Winton Avenue
Hayward, California

ADMINISTRATIVE PROCEDURES

Procedure Number (Revised 2-1-61)

IV Reimbursable travel expenses.

1. Travel within County.

a. The following rates per mile will be allowed to cover travel by private car on assigned official business within the county. (Travel to adjacent counties and Sacramento may be included on "In County Expense Claim" at the .05 or .06 rate.)

For standard autos of over 200 cubic inch engine displacement:
13¢ per mile for the first 100 miles each month
10¢ " " " " second 100 " " "
9¢ " " " from 201/500 " " "
6¢ " " " over 501 miles " "

For compact autos of 200 or less cubic inch engine displacement:
11¢ per mile for the first 200 miles each month
7¢ " " " from 201/600 " " "
5¢ " " " over 601 miles " "

b. Mileage to first destination should be computed from the County Superintendent's office or assigned headquarters unless the first destination is nearer to the staff member's home than it is to the assigned headquarters.

c. Expense of dinner meetings and registrations (not dues) is allowable if attendance is authorized by Superintendent's Cabinet.

d. Submit a monthly "In County Travel Expense Claim," on Form F-M-8 by not later than the 10th of the following month to the Business Office.

2. Travel "Out of County."

a. Request authorization of meeting attendance on Form F-M-7 from County Superintendent.

b. Execute Tax Exemption Certificate before purchasing public carrier transportation ticket as political subdivisions are exempt from paying Federal excise taxes.

c. Submit after each meeting an "Out of County Travel Expense Claim" Form F-M-28 to the Business Office.

(1) Attach the following vouchers:
(a) Public Carrier Receipt. (Travel outside of County by automobile will be reimbursable at .05 or .06 per mile rate only when specifically authorized. In such cases, it will be recommended that several staff members travel in the same car. Staff members may travel by private

automobile at their option and request reimbursement for public carrier fare in lieu of auto expense.)

(b) Lodging receipts. (Do not include tips and charges for personal services.)

(c) Registration receipts and other miscellaneous expense receipts if authorized.

(2) Itemize each meal as follows as to date and amount paid. Cost of meals should not exceed the amount shown:

3-15-61 .. Breakfast ...	$1.30 -	($1.55 out of state)	($1.90 aboard train)
" .. Lunch	$1.75 -	$2.00 out of state	($2.15 aboard train)
" .. Dinner	$2.70 -	$3.20 out of state	($3.40 aboard train)

(a) Maximum allowance for meals on a daily basis will be $5.75 within state.

(b) Maximum allowance for meals on a daily basis will be $6.75 out of state.

(c) Maximum allowance for meals on a daily basis will be $7.45 while aboard a train.

(d) Maximum allowance for lodging and meals on the American plan will be $12.75 per day.

(3) Expense accounts shall show time of departure from and return to headquarters. Should the time of departure be after 7 a.m. or the time of return be prior to 7 a.m., no allowance for breakfast may be claimed. Should the time of departure be after 12 noon or the time of return prior to 12 noon, no allowance for lunch may be claimed. Should the time of departure be after 7 p.m. or the time of return prior to 7 p.m., no allowance for dinner may be claimed.

(4) Itemize each day's hotel charges.

(a) Maximum allowance for hotels per day will be $7.00, except in cases of travel outside the state.

(5) Itemize all other miscellaneous expense, i.e., baggage transfer, taxi and limousine expense, etc.

(a) A maximum allowance of $1.00 may be claimed, without itemization, for incidental traveling expense during each twenty-four hours or major fraction thereof, starting at the time of departure from and ending with return to headquarters. A major fraction of twenty-four hours is defined as twelve or more hours.

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