DOCUMBET RESUME

	DUCUABAT RESURE
BD 146 368	CE 013 177
UTHOR TITLE	Lewis, James P.; And Others '. A Preliminary Survey of the Postsecondary Educational
INSTITUTION POB DATE NOTE	Status of Physically Disabled Adults. Pennsylvania State Dept. of Education, Harrisburg. Aug 77 42p.
BDRS PRICE DESCRIPTORS	HF-\$0.83 HC-\$2.06 Plus Postage. Access to Education; *Adults; *Ancillary Services; *Architectural.Barriers; Educational Attitudes; Educational Background; *Educational Needs; Educational Opportunities; Educational Planning; Educational Problems; Employment Experience;
IDENTIFIBES	Institutional Facilities; Needs Assessment; Physical Design Needs; *Physically Handicapped; *Post Secondary Education; State Surveys; Statewide Planning; Student Attitudes; Student Needs Pounsylvania

ABSTRACT

A state-wide survey was conducted in Pennsylvania to assess the postsecondary educational status of physically disabled adults. It focused on seven guestions: (1) What is their educational status? (2) What are their postsecondary educational objectives? (3) What is their employment' status? (4) What architectural conditions are available to help them pursue postsecondary educational training? (5) What special supportive services are needed to help them pursue postsecondary education/training? (6) How many of them live on campus while attending class? and (7) Are guidance and counseling services available to them? Data was obtained from 1,081 respondents to a guestichnaire which was mailed to 3,078 physically disabled adults in the state. The findings were these: (1) Thirty-three percent attended college, trade, or business school full or part time; (2) of the forty-four percent who never attended, about half would like to attend; (3) thirty-seven percent were unemployed; (4) architectural conditions and the availability of supportive services were rated low by the respondents; (5) about half lived on campus while attending class; and (6) career information, job placement services, and, educational aid and aptitude testing were available to the majority. (This report concludes, with several recommendations pertaining to architectural conditions, supportive services, vocational training, chronic unemployment, and special services. The questionnaire is appended.) (EE)

A Preliminary Survey of the Postsecondary **Educational Status of Physically Disabled** Adults

Prepared by James P. Lewis Educational Research Associate Besearch Coordinating Unit Division of Research/ Bureau of Information Systems Pennsylvania Department of Education

Darry Kehrer Coordinator for Disabled Adults Bureau of Equal Opportunity Pennsylvania Department of Education

Beatrice Leiby intern Research Coordinating Unit Division of Research Bureau of Information/Systems Pennsylvania Department of Education U S DEPARTMENT OF HEALTH. EQUCATION & WELFARE

EOUCATION & WELFARE NATIONAL INSTITUTE OF EQUCATION THIS DOCUMENT HAS BEEN REPRO DUCED EXACTLY AS RECEIVED, FROM THE PERSON OF ORGANIZATION ORIGIN. ATHIG IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRE-SENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OF POLICY

FERMISSIGN TO REPRODUCE THIS ATERIAN HAS BEEN GRANTED BY

 \mathcal{D}_{\bullet} Ma

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND THE PRIC SYSTEM CONTRACTORS

August 1977

Commonwealth of Pennsylvania Milton J. Shapp, Governor

Department of Education Caryl M. Kline, Secretary

Bureau of Information Systems Seon H. Cho, *Director*

Bureau of Equal Opportunity Conrad Jones, Director

> Pennsylvania Department of Education Box 911 Harrisburg, PA 17126

> > Ş

3

TABLE OF CONTENTS

•	•				- *	•		, BC
LIST O	F TABLES	·		••••		• • • • • •	• •	iv
ACKNOW	LEDGMENTS		• • • • •	· · · · ·		· · · · · · ·	• •	VÍ.
SUMMAR	Y	* . * .	• • • • • •	•			, , ,	vi
BACKGR	OUND		, ·	and in the second second	*	÷		1
₽ .4	۰.			· · · ·	•	,	••	
Kev	iew of Literatu	ure	••••	•••••	• • • •	• • • • • •	• •	2
OBJECT	TVE	• *• /• ••• *•	• • • • ,•	••••	••••	• • • • • •	• • ,	3
PROCED	URAS	• • • • • •		· · · · ·	••••	• `• • • • •	• •	4.
Pop	ulation	• ••• • • • • • • • • • • • • •	/ • • • • • • •	• 🔪 ; • . •	•••••	• • • • • . •	• •	4
	pling Procedure Postsecondary				• • • •	• • • • • •	•••	5 5
Def	initions Used	in This Study	<i>· · · · ·</i>	• • • • •	••••	• • • • • •	• •	7
FINDIN	GS	••••	•••••••••••	•, • • • •		•,••••	••	.7 <i>′</i>
	sonal History I				S		• • -	7
,	earch Question	1×	1 ·	••••		، مرتبع مرتبع المرتبع (مرتبع المرتبع ال المرتبع المرتبي	• • • [•]	/
CONCLU	SIONS	•••	•••,••	• • • • •	••••	••••	• • •	18 .
RECOMM	ENDATIONS	• '• /• /• • • •	, ,	••••,•	• • • •	•••••	••	.20
REFERE	NCES (`	• • • • • •		· · · · · ·	• • • • •	• • • • • •	•••	23
AFREND	IX A: POSTSECO	MDARY SURVEY		• • • • • •		·· · · · · · · ·	• •	24' .
	A State	i and i a		. 🔹	, b -	¥ *		
1: 2:					•		*	• /
	· / .	-	•	· · ·		•	_*	
	/	<i>.</i> .	•	· · ·		• ;		
· · · · ·		· · · · ·	•	• 1•	* a	· :		
, /		• •	<u>ه</u> د	• •		•	,	
		•	• • • • •	• •		•		•
-•• · /	/			•	- , -	"···	•	•
/ · /	· ·		•		•		~	•
· / /.	· · · ·		· · · · ·	,		a a a a a a a a a a a a a a a a a a a	- ·	
\mathbf{y}	°4	•	• •	• •			• •	
/ / / • ,	• •	•	` 4		, t	mu.	•	•

LIST OF TABLES

• }

Table		Page
	Referrals and Actual Sample	6
2.	Age Level of the Physically Disabled	8
3.	Educational Level of the Physically Disabled	8
4,	Type of Physical Handicap by Sex	9
<u>َ</u> جُ	Education Status of the Physically Disabled	11 、、
· 6:	Like to Attend College, Trade or Business School	<u> </u>
. 7	What Type of Program Would You Like to Attend?	1,2
8.	Reason for Not Attending College, Trade or Business School	12 .
9.	Employment Status of the Physically Disabled	13
10.	Occupational Classification of the Physically Disabled	13
11.	Architectural Conditions	14 .
12.	Supportive Services	16
13.	Campus Living While Attending School	18
14.	Guidance and Counseling	19

ACKNOWLEDGMENTS

. The authors express their appreciation to all of the individuals, agencies and institutions that contributed to this survey.

We especially thank, for their much-needed assistance, Thomas Galante, university advisor for disabled students, University of Pittsburgh; Vivian Begali, director of adult handicapped programs for United Cerebral Palsy of Pennsylvania; Mal Weaver Bartram, executive director, United Cerebral Palsy of Schuylkill, Carbon and Northumberland counties; and Elizabeth McCann, director of programs, Easter Seal Society for Crippled Children and Adults of Pennsylvania. The following persons assisted in surveying delegates to the Covernor's Conference on Handicapped Individuals: John Styder, the Governor's Advocate for the Physically Handicapped, Office for Human Resources; Alma Kitchen, administrative assistant, the Pennsy vania Covernor's Conference on Handicapped Individuals, Office for Human Resources; Donna Sampsell, teacher of the hearing-impaired at Central Susquehanna Intermediate Unit 16; and students of the Department of Communication Disorders at Bloomsburg State College.

We also extend our appreciation to George E. Brehman for reviewing this survey and for his many contributions. In addition, the following persons reviewed the report. Carroll A. Curtis, director, Research Coordinating Unit for Vocational Education; Robert D. Gates, vice-president for supportive services, Edinboro State College; John McGrath, executive secretary, Governor's Committee on Employment of the Handicapped; and William E. Graffius, executive director, Easter Seal Society for Crippled Children and Adults in Pennsylvania.

The Vocational Education Information Network at Millersville State College deserves recognition for its valuable help in researching Kelated studies and the review of literature.

Finally, we extend our appreciation to George Severns, adviser for the physically handicapped, detention homes and home-bound instruction for the Pennsylvania Department of Education, for information used in writing the background material. The purpose of this survey was to assess on a statewide basis the postsecondary educational status of physically disabled adults.

This study, which examines the educational needs of the physically disabled, focuses on the following questions: (1) What is the educational status of the physically disabled? (2) What are the postsecondary educational objectives of the physically disabled? (3) What is the employment status of the physically disabled? (4) What architectural conditions are available to help the physically disabled pursue postsecondary educational training? (5) What special supportive services are needed to help the physically disabled pursue postsecondary education/training? (6) How many physically disabled students live on campus while attending class? (7) Are guidance and counseling services available to the physically disabled in the postsecondary institution?

The target population was physically disabled adults in Pennsylvania. A total of 37 per cent (1,081) of the 3,078 referrals participated in the survey. Data were obtained through a mail-influence filled out by the respondents. The questionnaire included questions pertaining to the age, sex, educational level, physical disabilities, present status of employment and education as well as questions dealing with the interest in pursuing further education, a checklist of guidance and counseling services, supportive services and architectural conditions that may or may not have been available at various postsecondary schools.

The conclusions derived are: (1) A total of 33 per cent of the physically disabled population sttended college, trade or business school full or part time. (2) Of the 44 per cent of the physically disabled who never attended a postsacondary institution, about half said they would like to attend. (3) A total of 37 per cent of the physically disabled group was unemployed. (4) In general, respondents gave a low rating to the availability of architectural conditions for the disabled in the postsecondary institutions. (5) Supportive services for the physically disabled in the postsecondary institutions also were given a generally low rating. (6) Approximately half of the physically disabled lived on campus while attending a postsecondary institution. (7) The majority said that career information, job placement services, and educational aid and aptitude testing were available while they were attending postsecondary institutions.

The recommendations for this study are concerned with architectural conditions, supportive services, vocational training, chronic unemployment and special services. Postsecondary institutions should review each recommendation in terms of changes that can take place immediately with little financing or major architectural redesign. Other changes that require long-range planning and financing could be inifiated and continued for a longer period of time. Public Law 93-112, Section 504, Nondiscrimination Under Federal Grants Guidelines, should be considered in the development of long-range plans. In addition, each postsecondary institution should conduct a local needs assessment, as described in this report, in order to be more specific to the needs of the physically disabled student. The needs of physically disabled adults in postsecondary education served as an impetus for this project. Physically disabled adults showed considerable concern about the quality of postsecondary education. They indicated a need for improvement in the postsecondary institutions, both architectural and supportive.

At the Pennsylvania Governor's Conference on Handicapped Individuals, needs of the disabled in the educational, social and economic sense were discussed. Plans to implement changes in these three areas, as well as others, were drawn up.

BACKGROUND

In the social and economic areas, a major issue was architectural barrier legislation. There was a general feeling that federal, state and local legislation. should be amended to make architecture barrier-free.

Transportation accessibility was also a major issue at the conference. A proposed plan calls for more rigorous enforcement of existing laws regarding transportation accessibility. Also, handicapped individuals felt more liberal, public subsidies should be enacted for accessible transportation.

, In the area of education, the majority of issues concerned supportive services needed by the physicarly disabled in postsecondary educational institutions. A need was expressed for comprehensive transportation and mobility training services for postschool-aged disabled adults.

Guidance and counseling services were included in educational recommendations. It was felt there was a need for better counseling for both preschool- and postschool-aged physically disabled persons.

On November 29, 1975, the Congress of the United States passed significant educational legislation in the Education of All Handicapped Children Act, which covers children from 17 to 21. The act states that the new monies available for Public Law 94-142 must be used to supplement and enhance those programs already in existence. It is very likely that one will see a significant expansion of services to the young adult, who was previously underserved or not served at all.

The Pennsylvania Department of Education's Bureau of Equal Opportunity in the Office of Higher Education, in conjunction with the Bureau of Information Systems' Research Gordinating Unit, conducted a statewide survey to determine the educational needs of disabled adults. From survey findings, plans will be made to provide programs and services that the physically disabled adults need. It is hoped that architectural barriers may be minimized and past problems related to this dissolved.

As shown by the Pennsylvania Governor's Conference on Handicapped Individuals, there is much concern regarding architectural conditions, transportation accessibility and meeting the special needs of the physically disabled individuals in both accial and educational settings. These issues coincide with those in the Postsecondary Survey (Appendix A) for physically disabled adults.

Review of Literature'

The following review of literature is based on information which relates to the objectives stated in this research study. The information is divided into two major areas: (1) architectural conditions and (2) needs of the disabled.

Architectural conditions are a major concern of physically disabled adults wishing to attend a postsecondary school. A study by the Center for Vocational, Technical and Adult Education (Frank, June 1975) dealt with architectural barriers to physically disabled persons.

Results of the study showed the needs of the physically disabled person were not being adequately met in some districts. Not all buildings are accessible to all types of disabled people. Some districts provided only partially modified conditions (exterior, interior and special access conditions).

Along these same lines, during the spring of 1974, the Colorado 'Commission of Higher, Education developed a statewide plan for elimination of architectural barriers to public postsecondary institutions (State Plan for Removal of Architectural Barriers to the Handicapped in Colorado Higher Education.) This plan recommends that existing facilities at various universities be renovated so as to make them accessible and totally barrier-free. Included under this plan was the requirement that entire new campuses be accessible to the disabled.

Legislation has been proposed to deal with inappropriate architectural conditions. In hopes of improving architectural conditions among buildings and facilities covered by laws, the Architectural and Transportation Barriers Compliance Board (1973) has taken steps to insure compliance with Public Law 90-480. This law authorizes various departments to set accessibility standards for all buildings and facilities designed, constructed, altered or leased by the federal government. The board investigated those buildings or facilities that were covered by the law but didn't comply.

Other concerns of the physically disabled besides architectural barriers deal with special needs physically disabled adults require in order to function easily in a postsecondary institution.

A study; <u>Comparative Needs Analysis of Support Services for Nonhandicapped</u> <u>and Handicapped Persons Seeking Postsecondary Education from a Community College</u> <u>System</u> (Graham, Grady, Martin and Gibbs, June 1974), showed that the handicapped's needs are significantly greater than those of the nonhandicapped student. They include federal loans, aptitude testing, jobs, medical benefits and work experience. The personal needs of the handicapped were also significantly higher, especially as they relate to taking tests, reading and study skills and personal goals.

The National Technical Institute for the Deaf (Williams, 1971) recognized the need to provide deaf citizens an opportunity for postsecondary education and training. Only upon analysis of the needs of the students can meaningful educational experiences and supportive services be designed for deaf people and people with other handicaps.

-9

The Texas Education Agency, the Texas Rehabilitation Commission and the American Association of Community and Junior Colleges were asked to identify existing individualized supportive services within the continental United States and Texas. According to McClanahan and Hastings (1975), supportive services for the deaf and visually impaired were fairly well known, but little was known of the availability and location of well developed programs of individualized supportive services for the physically limited student.

From various reports and research reviewed, one finds the needs of the dism abled individual can be defined from three points of view: (1) as understood and expressed by the disabled person; (2) as evaluated and interpreted by the rehabilitation counselor; and (3) as established and imposed by various employment situations. None of these three can justifiably stand alone as a single determinant of 'the needs of the disabled

A study, <u>Development of a Core Guidance Curriculum to Meet the Needs of Handicapped Students at East Los Angeles College</u> (Rada, June 1975), recognized the psychological need of the handicapped to be trained with normal students. Rada also realized problems facing the disabled person include inadequate counseling and tack ' of special assistance. He found that most colleges tacked detailed information on this special segment of their student population.

Another major problem was that disabled students have found advancement into higher education difficult because of unavailability of programs oriented to their special needs. These special needs range from special parking and mobility guides to social services.

It is evident that concern for the physically disabled in obtaining a postsecondary education without too much difficulty is nothing new. Many inspitutions across the state realize the problems the physically disabled face.

The general findings in these reports are that many buildings are inaccessible to the physically disabled and are not barrier-free and that special needs of the disabled are being overlooked.

OBJECTIVE

The overall objective of this study is to determine the educational needs of the physically disabled. This study included the following research questions concerning the physically disabled?

1. What is the educational status of the physically disabled?

2. What are the postsecondary educational objectives of the physically disabled?

3. What is the employment status of the physically disabled?

4. What architectural conditions are available to help the physically disabled pursue postsecondary educational training?

- 5. What special supportive services are needed to help the physically disabled pursue postsecondary education/training?
 - Now many physically disabled students live on campus while attending class?
 - Are guidance and counseling services available to the physically disabled in the postsecondary institution?

PROCEDURES

Population

The population for this study was physically disabled adults who were residents of Pennsylvania and who belong to one of the following three major groups; (1) graduates of postsecondary schools; (2) those attending postsecondary schools; and (3) those who never attended postsecondary schools.

Mentally alert, physically disabled adults were those who met the following criteria:

- <u>Nonambulatory</u> those individuals who, for all practical purposes are bound to wheelchairs, regardless of cause.
- <u>Semiambulatory</u> those individuals who walk with difficulty or insecurity such as a person who uses braces and/or crutches, amputees, arthritics, spastics; pulmonary and cardiac cases.
- <u>Sight Disabled</u> people who are totally blind or whose sight is impaired to the extent that movement in public areas is insecure and hazardous.
- <u>Incoordinates</u> those where disabilities leave them with faulty coordination or palsy from cerebral injury, spinal injury or peripheral nerve injury.

<u>Hearing Disabled</u> - those who are deaf or have a hearing handicap to the extent that they might be insecure in major public areas or in industrial situations because they are unable to communicate or hear warning signals.

The method of obtaining the data was a mail-in questionnaire filled out by physically disabled adults. The questionnaire included questions pertaining in the age, sex, educational level, physical disabilities, present status of imployment and education of the adult as well as questions dealing with the interest in pursuing further education, a checklist of guidance and counseling services, supportive services and architectural conditions that may or may not have been available at various postsecondary schools.

Initial referrals for the study were obtained from selected school districts, state-aided colleges and universities in Pennsylvania, rehabilitation centers and other agencies and organizations for the physically disabled. The referrals were

contacted by mail for their participation in the project. In some cases, survey forms were mailed to individual persons. "In others, such as selected school districts and colleges, the forms were malled to administrators, who in turn distributed the forms to appropriate persons." This was done for the sake of confidentiality.

Sampling Procedures

A cover letter sent with the survey form explained the reasons for the study and where the forms were to be returned. A self-addressed, stamped return envelope was also included. The forms were mailed to contact persons from the referral source, who then distributed the surveys to the appropriate persons. Several forms were translated into Braille by the Pennsylvania Association for the Blind for the convenience of the blind persons completing the survey. The survey period was January 5 to March 22, 1977.

The sample selected attempted to reflect a cross section of the physically disabled adult population in Pennsylvania. The sampling sources are listed in Table 1.

All sampling sources were chosen because their clients were likely to fit, into one of the educational or disability groups listed under Methods and Procedures. In addition, these sources were chosen because of their interest in the survey and their willingness to cooperate.

Table 1 (page 6), presenting the number of referrals and respondents, shows that approximately 37 per cent of the referrals responded to the survey. It should be noted that 20 forms were received too late, and 100 surveys were returned because of incorrect addresses. A total of 52 per cent of the respondents were referred by agencies who serve the handicapped. Twenty-nine per cent of the respondents were persons who had attended regional forums and the Governor's Conference on Handicapped Individuals.

Table 4 (page 9), shows that the nonambulatory and semiambulatory made up 44 per cent of the sample. Nineteen per cent were sight disabled, 14 per cent were incoordinates. Only six per cent of the sample were hearing impaired.

It needs to be recognized that the findings of this study are necessarily somewhat tentative. The obtained sample constitutes only 37 per cent of the referral population. Because of the limitations of the data, it is important to examine critically the findings for each of the disability groups.

It is also important to note that the survey instrument described below would have been strengthened by including "is not needed" or "should not be available" in question eight (see Appendix A).

The Postsecondary Survey Instrument

- The <u>Postsecondary Survey</u> form used in this study was developed by a consortium composed of staff from the Pennsylvania Department of Education's Bureau of Equal Opportunity in the Office of Higher Education and the Governor's Advocate for the Physically Handicapped. The State Ad Hoc Committee for the Physically Handicapped in Pennsylvania reviewed the form, which was field tested at the Pennsylvania Governor's Conference on Handicapped Individuals.

This instrument seeks to learn the adult's age, sex, educational level, veteran's benefits (if any), type of physical disability, present status of employment and present status of education, Other items were concerned with the disabled adult's interest in attending college, trade or business school and a comparison of guidance and counseling, supportive services and architectural conditions available at the institutions of higher learning. Space was provided at the end of the survey form for additional comments.

TABLE 1 🥱

REFERBALS AND ACTUAL SAMPLE

9	1.	Refe	rred	Respon	dent
Sourie		N	% `	<u> </u>	%
elected School Districts		70	2	• 17	" <u>?</u>
pecial Secondary Schools for the Handicapped	<u>ı</u>	275	4 9 [°]	/ 80.	7
Scranton Oral School for the Deaf		i.	•		
Western Pennsylvania School for the Blind				· _ · /	
Gertrude Barber School	•	~ ` ·		•	•
Pennsylvania School for the Deaf			· · · · · · · · · · · · · · · · · · ·	÷ *	,
Pioneer School, Pittsburgh	· · · ·			•	,
		•			د .
tate-Aided Colleges and Universities	1 👝 🛄	125	4	45 `	. 4
	•	••	•		
sociations for the Handicapped	•••	258	8	60	' 6
Adult. Handicapped Association	• -			•	× ,
Paralyzed Veterans of America	•	, `		۰ ،	
Wheelchair Basketball				- '	
			۰.	, •	
gencies Who Serve the Handicapped	\$1 \$	1,750	· 57 `	- 561	52
Pennsylvania Easter Seal Society	· . · ·	1,100		• 501	52
Vocational Rehabilitation Center	•	•	2 1		
United Cerebrah Palsy		,	3 -	- 11 - - 1	<u> </u>
Boreau of Visually Handicapped		_		• _	
Dureau or vramily nanorcapped	-	· · · ·		•	•
ersons Who Attended Regional Forums and the		6Ò0	20	318	. 29
overnot's Conference on Handicapped Indi-	•		• 20	مر 2TO	- 29
duals	4.	` * -	· · ·	х н	•
LUUGLO	•••	•	· .	, • -	•
OTAL		2 070	100		
		3,078	100 .	1,081	100
	<u> </u>		` <u>-</u> -		<u> </u>
			· · · · · ·	•	

Definitions Used in This Study

- <u>Supportive Services</u> assistance for the physically disabled adult through counseling, tutoring, financial aid, etc.
- <u>Machine Reader (Qpticon)</u> a reading system for the blind. This system
 s a portable, battery-powered unit which converts regular ink print
 into a readable, vibrating tactile form.
- Mobility Guide a person who assists the blind with tasks such as traveling to classes, attending meetings, social activities, etc.
- Mobility Helper a person who helps the physically deabled by pushing a wheelchair, carrying them upstairs, etc.
- Architectural Barriers any condition that restricts the ability of a person with a functional limitation caused by impairments of sight, hearing, incoordination, semiambulatory or nonambulatory disabilities to approach, enter and leave a building, circulate through the public building, use the toilet facilities and participate in educational programs without assistance.

FINDINGS

al History Data

Table 2 (page 8) summarizes the age levels of the physically disabled. A total of 69 per cent of the group arg in the prime ages (18-36) for postsecondary education/training.

Table 3 (page 8) indicates that 35 per cent of the physically disabled are high school graduates and 22 per cent received a four-year college degree. A total of 47 per cent have one or more years of college, and 25 per cent are now attending a college, trade or business school. The individual group with the highest per cent of college graduates is sight disabled with 37 per cent. The lowest individual groups are incoordinates and other with 12 per cent each.

Though not shown in Table 3 it was found that 42 of the disabled qualified for veterans' educational benefits but only 22 received the benefits.

Research Question Findings'

• The following findings reflect outcomes as they relate to each of the seven research questions posed earlier.

<u>Research Question 1</u>. What is the educational status of the physically disabled? <u>Research Question 2</u>. What are the postsecondary educational objectives of the physically disabled?

Postsecondary Survey Items 5 and 7 were used to elicit answers related to Research Questions 1 and 2. The results of Table 5 (page 11) reveal that 27 per cent of the physically disabled population are attending college either full or part time. The sight disabled have the highest percentage (49) of those attending college. Six per cent of the physically disabled are attending trade or business school full' or part time, and 16 per cent of the disabled were college, trade or business school graduates: A total of 44 per cent of the physically disabled never attended a college, trade or business school. Seven per cent dropped out of postsecondary educational programs.

TABLE	2

	Nonamb	alatory	Semiar	nbulator	y <u>Sight</u> D	disabled	Incoor	dinates	Hearin	g DIsa	bled	01	her.	Grand	Total	
. Level	N	7	N	<u> </u>	<u> </u>	~ ~ ~	N	2	N	%		N	%	N	%	
(^{18–24} 25–30	, 5 7, 56,	23	61 52		94	5 1	45 • 40 ·	32 0	, 1	9 32 2 20	· \	88	49 ¹	364 221	35 - 21	•
31-36 37-42	41 27	16 11	30) _{`,} 14`	13	8 1	26 11	18		6 '10 3 5		21 15	12	137 84	13. 9	~
43-48 48+	26 43	11 \ 17	20 32	• •	6 ∽3≩	*3 18	ະ 8 12	6 8 ·	· 1	8 13 2 20		9 14	6 8	77 147	8 14	,
TOTAL	2 50	100	. 210	5 100 _,	184	100	142	100	-6	0 100	•	178	100	1,050	100	

AGE LEVEL OF THE PHYSICALLY DISABLED

TABLE 3

EDUCATIONAL LEVEL OF THE PHYSICALLY DISABLED

•	Nonamb	ulatory '	Semiant	ulatory	Sight I	Disabled	Incóor	dinates	Hearing	Disabled	01	her	Grand	Tota!
evel	N,	%	N	7	N	. % .	N	7	<u>N</u>	*	N	2	* N	7
. 9		19	14	8	· · 5	3	16	15	6	13	10	0	. 88	11
10	13		· 11	7	: 1	· 1 ·	' <u>3</u>	3	• •	/	.3	2	31	<u>1</u>
11 -	3	?	<u> </u>	7	·	2	2	· 2	2	4	. 4	4	25	
12	56	28	· 58	35	- 41	26	• 45 [·]	° 43	18	`38	43	`41 *	261	-
GED	5	2	. 4	2	. 2	1 /	۰5	5	· · 1	2			17	2
`13	 16 	8	1 5	9 [`]	20	·13	. 9	. 9	· ^ ^5	11	13	, 12	. 78	·
14	. 1 2	• 6 '	17`	10	13	8,	7	7	4	9	ʻ 13	12	[°] 66	1 9
15	16	., 8	. 4	[•] 2	14	9	4	4	~ 2	4	΄7	7	47	. 6
1 6	, 38	°20 💡	32	20	~ 59	37	13	12	· • 9	19 ·	13	12	164	22
OTAL	: f	100 "	. 166	100	·	100 .	10/	.t. ·						
, turi	196	100	. 166	• 100 · .	´ 158	100	· 104	. 100-	47	, 100	106	100	77 <u>7</u>	100
			·····	<u> </u>		~~~~~~								
'1	5	· · · .			•		•					•		

16

٩.

ٽيني س	•	Female		Mal	le/	, To	tal
Туре	ر. مربعة مربعة	N	. 7	N	[7 .]	<u>, N</u>	. %
Nonambulatory	ŗ	92 [°]	34	- 181	66	273	26
Semiambulatory	· ·	86	45 -	107	55/	193	18
Sight Disabled		87	45	· 107.	•5\$	194	19
Incoordinates		70	48	/.77.	5 2	147	14
fearing Disabled		33	49 🔍	/. 34	/51	67	. 6
Other	• • •	86	49 °	,91	51	177	17
RAND TOTAL	* • .	454	43	597	57	1,051	100

TYPE OF PHYSICAL HANDICAP BY SEX

The findings in Table 6 further indicate that of those persons who never attended college, trade or business school, 43 per cent stated they would like to attend and 57 per cent said they would not like to attend.

• The types of programs the physically disabled would like to enroll in are shown in Table 7. Forty-two per cent stated they would like to attend college; 29 per cent indicated they would like to attend business school; and 29 per cent stated they would like to attend a grade school.

The reasons for those physically disabled persons not wishing to attend a college, trade or business school are shown in Table 8. Twenty-nine per cent of the total physically disabled population indicated that the reason they did not pursue postsecondary education was because they could not meet admission requirements. An inspection of each disability group reveals that this was the primary reason in four of the disability groups and the secondary reason in one of the disability groupse

It is interesting to note that only nine per cent of the respondents said that architectural barriers were the reason they did not pursue postsecondary education. However, it is necessary to examine each disability group individually to understand the unique needs of each group. For example, 16 per dent of the nonambulatory group said architectural barriers was their reason for not pursuing postsecondary education, but none of the sight disabled listed this as a reason.

Research Question 3. , What is the 'employment status of the physically /handicapped?

The findings for Survey Item 4 in Table 9 (page 13) show 37 per cent of the physically disabled group are imemployed. The nonambulatory unemployment rate is 48 per cent, the highest for the total group. The hearing disabled unemployment rate is 24 per cent, the lowest for the total group. Fifty-one per cent of the physically disabled group are employed full time. The hearing disabled subgroup has the highest employment rate and the semiambulatory the lowest, 71 and 42 per cent respectively.

According to the occupational classifications of the employed physically disabled found in Table 10, 39 per cent were the professional, technical and managerial types of jobs and 29 per cent were service jobs. Less than one per cent were in processing, structural work and farming, fishing or forestry; machine trades and bench work had three per cent or less. Those who held jobs classified as "miscellaneous" comprised 17 per cent of the group. The bulk of jobs in this category were in sheltered workshops featuring rehabilitative activities.

Research Question 4. What architectural conditions were available to help the physically disabled pursue postsecondary educational training?

Table 11 summarizes the responses to Survey, Item 8 on architectural conditions. Concerning reserved parking, 54 per cent of the disabled group said it was available and 46 per cent said it should be available. A total of 63 per cent said elevators for upper-level classrooms were available. Some 40 per cent of the group said modified water fountains were available and public telephones were available to 37 per cent. About 60 per cent said modified study tables and nonglare lighting were available. Approximately 50 per cent of the group said modified toilets and showers, clearly marked and accessible warning devices and building entrances accessible to the disabled were available. Forty-one per cent said there were walks and ramps for the disabled and only 18 per cent said special cafeterias were available. Braille signs received the lowest rating of availability (seven per cent). A total of 17 per cent of the disabled group said nonslip floors were available.

Research Question 5. What special supportive services were needed to help the physcally disabled pursue postsecondary education/training?

Table 12 summarizes the responses to Survey Item 8 relative to supportive services. Concerning basic reading and math, 82 per cent of the physically disabled stated that these services were available. Seventy-nine per cent indicated that tutor services were available and 47 per cent stated interpreters were available. Forty-four per cent responded to notetakers being available. Thirty-nine per cent said self-care aides were available; 29 per cent said machine readers (Opticon) were available; and 53 per cent indicated human readers were available. Braille or taped texts were available for 45 per cent of the group and athletic and social programs were available for 69 per cent. Approximately 38 per cent of the physically disabled population stated that mobility guides and mobility helpers were available. Finally, 22 per cent said special transportation on campus was available.

Research Question 6. How many physically disabled students lived on campus while attending class?

In Table 13, the data for Item 6 indicates that 49 per cent of the total physically disabled population lived on campus while attending school and 51 per cent lived off campus. The sight disabled group and incoordinates had a majority, 67 per cent and 55 per cent respectively living on campus. The group with the highest per cent not living on campus was the semiambulatory with 66 per cent residing off campus.

10%

EDUCATION STATUS OF THE PHYSICALLY DISABLED

Edúcation	Nonambulatory	Semiambula	tory Sight		Incoordinates	Vordaa	Di Sali la J	Other	<u> </u>	<u> </u>
Status `	<u>N Z</u>	<u>N 7</u>	N N		N %	N	%	$\frac{\text{Other}}{N}$	Grand 7	<u>lotal</u> %
ollege Full Time	32 14	35 1	.9 78	8 45	1 5 1 2	·	21	33 21	193	22
bilege Part Time	. 12 5	6.,	4	5 . 4	11 9	. 5	9	3 2	43	5
rade or Business School	12 5	7	4	4. 2	5 4	6	11	8 5	42	۰. 5
rade or Business School art Time "	2 1	3	2	2 1	3 2	i	. 2	1 1	12	`1
bilege, Trade or Business school Graduate	42 19.1	.34 . 2	U 20 3	7 22	15 12	6	11, •	11 7	145	16
iever Attended	108 48		2 4	24	68 55 e	23	39	. 87 56	398	44
ropouts	17 .8	• 14	.9	3 2 7	7 6 %	4	7	13.8	,58	. 7
OTAL	225 100 .,	171 10	0 17	,100	124 100	× 57	100	156 100	· 891 ·	100

ABLE 6

. LIKE TO ATTEND COLLEGE, TRADE OR BUSINESS SCHOOL

19

E) Afull Tex

Yes	No	
<u>N N </u>	<u> </u>	<u>N</u> 7.
32 50	32 50	64 (23)
16 43	21 57	37 (13)
9 33	18 67	(10)
23 38	38 62	61 (22)
6 40 -	9 60	·15 (5)
33 45	40 55	73 (26)
119 43	158 57	277 100
	N Z 32 50° 16 43 9 33 23 38 6 40 33 45	N Z N Z 32 50 32 50 16 43 21 57 9 33 18 67 23 38 38 62 6 40 9 60 33 45 40 55

Physical	1 Ĉoli	leg e `	Tra	ide '	Busin	ness	То	țal
<u>Disability</u>	Ň	%	N ·	▓ .	N	%	N	%
· · · · · · · · · · · · · · · · · · ·	- <u>-</u>				•	•.	. –	1 17
Nonambulatory	10 -	50 ·	· 6	30	4	20	20	· *3 1
Semiambulatory-	. 4	40.	`• <u></u> 4	40	2	20 ·	10	1.
Sight,Disabled	. 3	38	•2	25.	∽_≃ 3`	38 ,	+8	12
Incoordinates	4 [~] .	44	3	33	2	22	9	14
Hearing Disabled	• •		`1 `	50	1.4	. 50	<u></u> 2	
Other • -	· 6	Ś 7	3	19	7	44.	. 16	25
		• •			1-	- •	۰.	• .
GRAND TOTAL	` 27	42.	· 19	29	.19	29	65	.100
			Ű,			N	•,	

REASONS FOR NOT ATTENDING COLLEGE, TRADE OR BUSINESS SCHOOL

	<u> </u>				<u></u>	^				~	۰		4
		Nonambulatory	Semianb	ulatory	Sight 1	Disabled	Incoord	linates	Hearing	Disabled	Óth	er Gran	d Tota
Reason	*	<u> </u>	N,	· 7	N	7	N.	%	<u> </u>			-% _ N	7
	• • •	1.	1	• •	-A2			— 、	`	V)	, E.		-
Could Not Meet Ad	mission	•	· .	•		•		ν. -			· •		
Requirements	.	[−] . 17 ² ^{−−} 22	6	20	4	15 ·	°∕20	36	6	40	· 27	36 8	0 29
ligh School Grade	s Too Low	8 • 10. [\]	.5	17,	· 2	· .8	. 4	~7 ·	. • 1	• 7 -	13	17 3	3 12
ack of Funds 🦈		• 11 14'	. 10	33΄	· • 2	• 8	. 4.	· 7		· ·	12	16 3	914
Architectural Ban	rriers .	. 12 16	• 3	10			· 4	7	· ,1	·7、	` · 6	8 · 2	69
ack of Guidance		8 10	. 3	10	6	23	. 6	11 .	• 1	7	6	, 8 3	0 11
lot Interested 🕷		12 16	· 1.	3	9	35	14	25	, 5	33	7	9 4	8 17
foo Busy		2 3)	. 2	8 1	·		° · · 1	7.	2	3	7 2
loo 01d	· • •	2 3		*	1	4		<u> </u>	***	⁷	· `a	<i>1</i> 、	3' 1
hysical Problem	5	3 4	2 -	6			· 2 .	,4 ⁸			2	3	9.3
Good Job	- '	2 3	·/			/	1	2			,1	1	4.1
	•		•)- • •	• `•		<u>م</u>	· · · · ·					•	•
TOTAL	••••	77 100	× 30	100	26	100	55	100	15	100# ×.	76	100 🤛 27	9 100
<u> </u>	<u> </u>	•	• ·		· · · · · · · · · · · · · · · · · · ·	<u>'^\'</u>	-	•	•			· ·	•
	·			,	· · ·	•	<i>o</i> ,		**				
JC. 21		T + + + +	•	•	1	· ,	•	ſ	ົ້າດ	• •	•	• •	
ovided by ERIC	- Ann	s .'	•	<i>i</i> .			*	`	× 44	•		-	

	• •	• 🗯 .	EMPLOY	MENT STA	TUS OF 1		ICALLY D	ISABLED I	n the i	ABOR FO	RCE	; . ; .	٣		
2	Employment Status	Non amb	ulatory X	Semiamb N	ulatory Z	Sight I N	Disåbled Z		inates %	Hearin	g Disabled		her %	Grand	Total Z
	Employed, Full Time Employed Part Time Unemployed	- 53 , 9 , 58	44 8 48	46 15 48	42 14 44	51 ,16 26	55 17 28	42 10 29	52 12 36		2 5	60 15 31	57 14 29	281 67 202	51 12 37
	TOTAL	120	100	109	100 ł	93	•100	81 💭	100 '	41	1 100	106	100	, 55 0	100
					<u> </u>						<u> </u>		•		

TABLE 10

Ξ

Ž3,

OCCUPATIONAL CLASSIFICATION OF THE PHYSICALLY DISABLED

 Dictionary of 	Nonambu	latory	Semian	oulatory	Sight	Disabled	Íncoor	dinates	Hearing	Disabled	Ot	her	Grand	Tota
Occupational Titles	<u>N</u>		N	-%	N	7	N	%	<u> </u>	7	N	7,	N	7
rofessional, Technical and	đ			•• • •	-`	•	•	• `						
Managerial	27.	54	19	-43	- 24	50	• 9	23	,13	59 [°]	· 7	٤4	99	39
lerical and Sales	6.	12	5	11	5	10	3	8	2	9	- 4	- 8	25	10
ervices	- 11	22	12	• 28	14	29	15	38	· 2	r ģ	18	,37	72	29
arming; Fishing, Forestry		~~					1	- 3	*				1	
rocessing				;-		-						´ 		´
achine Trades	' 1	2	_ 1	2	´ ` 1	2			· Ź	9`	2	`4	7	3
ench Work	. 2	, , 4 ,	~ 2	. 5				`	1	5			5	2
tructural Work	1	2 ·	•							,	_4		· 1	
iscellanéous	1 2		5	° 11	<u>ن</u> ۲ 4	9	11	28	2	9	18	- 37	42`	17
OTAL	/50	100	- 44	100 🖅	48	- 100	· 39	100	22	100 (49	100 '	252	100

24

	• •	•	, •	ARGHI	TECTURA	L CON	DITIONS		•	•	~ K	•		`* • *	، ، تعمیر	\ ^
- .		Non Is	ambulat Sho	ory ould Be			bulator Shoul		<u>·Si</u> Is	T)isable Shoul				dinates Should	······································
	Architectural Conditions	Availab N 7		<u>ilable</u>			- <u>Avail</u>		-	•	Avail		1-		Availa	
	Reserved Parking	26 5	-	2 46	22	48	24	52 ·	38	60	<u> </u>	40	•	52	11	48
	Elevators for Upper-Level Classrooms	¹ 28 5	7,2	43	29	- · 60	19	· 40	47	67	23	. 33	. 17	61	fi	- 39
	Modified Water Fountains	92	1 3	3 79	13	29	32	71 .	32	57	24	43 ·	12	40	. 18	60
	Modified Toilets, Showers, etc.	[.] 19 4	0 2	8 60	` 17	. 40	26	60	-, 41	68	19	32	14	38	23	62
•	Modified Public Telephones	13-3	Ó, , ;	31 70	ຸ 11	.25	33	75	28	46	33	54 [°]	· 9	29.	22	71
.	Modified Study Tables	29 6	3]	17 37	. 36	' 44	46.	56 ⁻	43	69	19	31	14	5 6 ^	11	44
	Nonglare Lighting	,19 5	6 [.] 1	15 44	· 17	46	, 20	54	37	64	21	36	16	62 _.	10	38
	Clearly Marked and Accessible Warning Devices	15 4	3 - 1	20 [·] 57	13	40	295	60	3`6	62	- 22	38	14	58	10	42
	Building Entrances Accessible for Disabled	19 4	0 2	29 60	. 17	38	28	62	38	61	- 24	39	15	•47	17	53
•	Special Cafeteria for Disabled	6 1	6 3	81 84	· 4	14	<u>.</u> 24	86	9	18	41	82	. 7,	29	17	_. 71
	Walks and Ramps for Disabled	,20 4	3]	26 57	• 14	32	29	68	30	48	· 32	·52 ¯	14	45	17	5 5 、
ic.	Braille Signs	2	7 2	26 93	ک 1	3	30	97	6	1 <u>1</u>	51	. 89	•		24	100
	Nonslip Floors	· 51	5 3	28 85	, 7	18	32	82	19	32	41	68	` ` 1	3	28	97
÷	(continued)				x	•	•	•	· ,	٠	۰.		- ,	,		

25

€.

EF Afrittere Pre

j,

٠,

TABLE		11	
• *	٠		

ily.

	Hea	ring	Disabl	.ed		Ot	ther			Grand	l Total	•
	. Is		Shoul		.Is	•	Shoul	d Be			Shoul	d Be
Architectural	Avail	<u>ablė</u>	Avail N				Avail N	able %	- <u>Avaii</u> N	able %	Ava i l N	able %
<u> </u>	<u> </u>		N	<u>%</u> .	<u>N_</u>	<u>/a</u> ·	<u>N</u>	<u> </u>	<u> </u>	<u> </u>	N	6
Reserved Parking	- 4	40	, 6 •	60	26	68	12	32 ື	128	54	100	46
Elevators for Upper-Level Classfooms	·``7	70	. 3	30	24	, 62	. 15	38	152	63	92.	37
Modífied Water Fountains	3	38	. 5	62	15	45	18	55	• 84	38	, 130,	62
Modified Toilets, Showers, etc.	3	43	4	57	15۔۔	52	14	48 [°] -	109	47	114,	53
Modified Public Telephones	ʻ 3	. 45	6	55	20_	. 50	20	50 ·	_ 8 6	.37	145	6 3
Modified Study Tables	· 6	60 . (- 4	40	21	64	• 12	3,6	149	59	- 109	41
Nonglare Lighting	4	5Ó	. 4	50	24	71	· 10	29	117	58	· 80	42
Clearly Marked and Accessible Warning Devices	3	33	• `6	67	. 26	68	•12	32	• 107	, 51,	90	49
Building Entrinces Accessible for Disabled	. 6	60	· . 4	40 .	17	42 .	23	58	112	48	125	5 2
Special Cafeteria for Disabled	`j	14	6	86	4	16	21	84	31	18	; 140	82
Walks and Ramps for Disabled	5	`50 `	5	50	10	. 30	23	7 <u>,</u> 0	93	41	132	59
Braille Signs	1	.11	8	89	. 2	8,	24	92	12	$\vec{\gamma}$	163	93
Nonslip Floers	· 1	10	9	90	7	23	24	.	40	17	162	83

7

Full Fixed Provided Byr ERIC

27

TABLE	12
SUPPORTIVE	SERVICES

			ulator		、 <u> </u>	emiamb	ulato	ry j	S:	lght I	isabl e	ed .	I	ncoor	dinàte	s
	Is		Shoul			5		ld Be	It	3 }	Shou1	ld Be	Is	3 、	Shou1	d Be
Supportive	<u>Avail</u>	able	<u>Avail</u>	able	Avat	<u>lable</u>	Avai	lable	Avail	<u>lab1e</u>	<u>Avail</u>	lable	<u>Avail</u>	able	<u>Avail</u>	.able
Services	Ŋ	%	<u>N</u>	%	Ŋ	7.	N	-%	- N	%	N	%	N	%	<u>, N</u>	%.
Basic Reading and Math	36	84	:7	16	<u>ب</u> 34	74	, 12	26	66	80	11	14	25	83	. 5 [,]	17
Tutor	33	8 3	7	17	33	69	15	3₽	, 61	84	12	16	25	78	°. – 7	22
Interpreter	16	57	` 12	43	، 1 0	.38	, 16	62 ·	26	46	3 0	5 <u>.</u> 4	8	38	' 13	62
Notetaker	14	42.	19	58	11	35	20	65	• 19	35	. 35	65	· 9	45	່ 11	55
Self-Care Aide	15	47	17	•53	15	45	18	55	17	33	, 34	67	. 7	33	, ' 14	67
Machine Reader (Opticon)	9 .	36	. 16	64	ر ٤	32	17	68	20,	34	• 39	, 66	`4	27	11	`73 ⁺
Human Reader	12	46	14	54.	14	48	15	52	_ 47	60 [*]	31	40	ľ0	• 48 ·	11	ł
Braille or Taped Texts	, 16	<u>5</u> 9.	11	41	14	• 44	18	56 ·	40	53	.36	47	י ד	37	12	63
Athletic and Social Programs	2 4	67	12 ,	33;	27	⁻ 64	15	ʻ 36	46	69 * (21	31	. 17	65 <i>,</i>	9	> 35 /
Mobility Guide	14	48	15	52	° g	30	21	70	• 19	31	42	69	ື 8ູ	4 4	10	56
Mobility Helper	.13	43	. 17	57	<u>َ</u> 14	48 \	\ 15	5 2 ·	22	35 - J	41	65	9	4,5	11	55
Special Transportation on Campus	ح	, 24	• • \ 29	76.		18	. 28	82	19	-28	49	72		19	17	81

(CONTINUED)

This table is based on responses from those persons in Table 5 who are attending or have graduated from college, trade or business school.

TABLE	12	

(CONTINUED)

· · · ·	He	aring	Disabled		ther	- Grand	Total
	. –	8 *	Should Be	Is	Should Be	Is	Should Be
Supportive	<u>Avai</u>	<u>lable</u>	<u>Available</u>		<u>Available</u>	<u>Available</u>	Available
Services	<u> </u>	<u> </u>	<u>N 7</u>	N 7	<u>N 7</u>	· . N % ·	<u>N %</u>
Basic Reading and Math	10	91 _	19	34 77	/ . 10 23 [']	205 82	46 18
lutor •	10	77	3 23		8 18	198 79	52 21 -
Interpreter	· 5	50	5 50 🕈	18 55	15 45	ۇ≇ .83 47	91 53
Notetaker	. 7	58	5 42	14 48	15 52	74 44	105 56
Self-Care Aide	· 2	29	, 57İ	13 45	، 55 ،16 ،	69 39	104 61
fachine Reader (Opticon)	´ `1	13	787	9 33	18 67 ·	51 29	108 71
luman Reader	و ع م	63	3 37	16 52	15 48	104 53	89 47
Braille or Taped Texts	> 5	, 45	6 55	10 33	20 67	92 45	103 55
thletic and Social Programs	• 8	80	2 20 ¬	28 72	11 28	150 69	70 31
bbility Guide	. 4	44	5 56	⁻ 8 29	· 20 71	62 38	113 62
Sobility Helper	2 3	33	6 67	7 26	20 74	68 38	110 62
pecial Transportation n Campus	2	22.	7 78	5 20	21 80	45 22	`15 1 78

ERIC.

.

32 :

Physical		Ye	S		NC			_To	tal
- Disability	•	, ^ N	<u>%</u>		N	×%		<u> </u>	<u>%</u>
· · ·				-	± • •	۰.	•	•	•
Nonambula to ry		- 50	45 •	•	. 60	55 -1)	110	100
Semiambulatory	•	32	34	•	61	66		93-	100
Sight Disabled	. •	80	67			33	•	´120	.100
Incoordinates	0	28 ,	55	•	ົ 23	45		、 51	100
Hearing Disabled		17	45		21	-55		^{\$} 38	100
Other .		31	42		42	58	•	73	19
• •					' ŧ	,		•	•
GRAND TOTAL	· .	238 -	49		247	51 "		485	100
	•' \	د		•	•		•		•

CAMPUS LIVING WHILE ATTENDING SCHOOL

Research Question 7. What guidance and counseling services were available to the physically disabled in the postsecondary institution?

A review of the findings for Survey Item 8 in Table 14 shows that a total of-81 per cent of the physically disabled group stated that career information was available at their schools; 69 per cent said that job placement services were available; and 86 per cent indicated that educational aid and aptitude testing were available.

CONCLUSIONS

The conclusions derived from this study are:

- A total of 33 per cent of the physically disabled population attended college, trade or business school full or part time.
- 'Of the 44 per cent of the physically disabled who never attended a postsecondary institution, about half said they would like to attend.
- A total of 37 per cent of the physically disabled group was unemployed.
- In general, architectural conditions in the postsecondary institutions attended by the physically disabled were given a low availability rating.
- Most supportive services for the physically disabled in the postsecondary institutions were given a low availability rating.
- Approximately half of the physically disabled group lived on campus while attending a postsecondary institution. A
- The majority said that career information, job placement services and educational aid and aptitude testing were available while they were attending postsecondary institutions.

8

CUITDANCE	ANTEN	COUNCETING	•	
COLDANCE	and	COUNSELING	•	

-		-					~					. •	1
'Nonambula			ry	Semiambulatory				Sight Disabled			- Incoordinates		
Is	1 .	Shou]	ld Be	Is				Is	•	Shou1	d Be	-Is	Should
<u>Avail</u> e	able	Avai	<u>lable</u>	Avai1	able	Avail	able	Avai1	able	'Avail	able	Available	Availab
N	X .	N	7	N	7	N	%	N	%	<u>N</u>	%	• <u>N</u>	• N %
· 38	76	~`1 2	24	7 38	78	11	22	78	88,	` 9	. 12	- 24 71	10 2
29	64	[•] 16	36	32	68	15	32	65	75	22	2 5	20 59	14 4
			· •	4				•、			1		
39	80	10	20	39	80	10	20	` 81	91	8	æ	/ 30 86	5 1
,		1	۷.,						•			<u> </u>	
	٦			٠ ٠	1	4	*				•		-
• •	/		•				▼ ./				-		Lea -
•			,	•		x /	· 45	5 .	•	-	>	•	
						-	•	`` .	-	•	•		r
Real		Diceh	lad		` <u>^</u>	- -				- Totrol		\sim	. ´
			T c							- 2			
									(
N	X	N	7	: N	X	. N	X -	N	7	N	7		۵.
9	82	2	18	• 46	90	5	10	. 233	81	49	, 19՝	•	, ,
7	64	4	36]	38	81	- 9	19	191	69	8 0	31	,	•
_13	93	\ 1	, 7	45	88	6	, 12	- 247	86 ^	40	14	•	- , ` `
,													
, 	9	`	• • •	•		كمر		~	· ·	с		•	*
	Ata114 N 38 29 39 39 <u>Hea</u> 18 Ava11 N 9 7	Afailable N Z 38 76 29 64 39 80 Hearing Is Available N 9 82 7 64	Afailable Avail N Z N 38 76 12 29 54 16 39 80 10 Hearing Disab Is Shou Available Avail N 9 82 2 7 64 4	Afailable Available N Z N Z' 38 76 12 24 29 54 16 36 39 80 10 20 Hearing Disabled Should Be Is Should Be Available N Z 9 82 2 18 7 64 4 36	Advailable NAvailable NAvailable NAvail N387612247383876122473829541636323980102039Hearing Disabled Is NIs NShould Be NIs N9822184676443638	Available NAvailable NAvailable NAvailable N38761224738783876122473878295416363268398010203980Hearing Disabled Is Should Be NOf Is Available NOf Is Available N98221846907644363881	Available NAvailable NAvailable NAvail N387612243878112954163632681539801020398010Hearing Disabled Is Should Be NOther Is N18Available NAvailable NAvailable NAvailable N9822184690576443638819	Available NAvailable NAvailable NAvailable NAvailable NAvailable NAvailable N387612243878112229541636326815323980102039801020Hearing Disabled Is Should Be Available NOther Is NShould Be N98221846905107644363881919	Available NAvailable NAvailable NAvailable NAvailable NAvailable NAvail N3876122473878112278295416363268153265398010203980102081Hearing Disabled Is Available NOther Is NTo NAvailable NAvailable NAvailable NAvailable N98221846905102337644363881919191	Available NAvailable	Available NAvailable Available Available Available Available Available Available Available Available Available Available Available A	Advailable NAvailable 	Advailable Available Available

• 7

RECOMMENDATIONS

Postsecondary institutions should review each recommendation in terms of changes that can take place immediately with little financing or major architectural redesign. Other changes that require long-range planning and financing could be initiated and continued for a longer period of time. Public Law 93-112, Section 504, Nondiscrimination Under Federal Grants Guidelines should be considered in the development of long-range plans. In addition, each postsecondary institution should conduct a local needs assessment of the nature described in this report in order to be more specific to the needs of the physically disabled student.

On the basis of the data and literature examined in conducting this study, the following recommendations are offered, as a guide for postsecondary institutions when they determine architectural conditions, supportive services and educational programs for disabled persons.

Architectural Conditions. Undesirable or negative architectural conditions must be recognized and effectively eliminated if educational opportunities for the physically disabled are going to be maximized. Conditions indicated as present by less than 50 per cent of the respondents should be given special attention. Recommended remedies include the following:

- Have an appropriate number of water fountains in each building accessible to the physically disabled (not higher than 36 inches).
- Provide an appropriate number of restrooms including modified toilets and showers (for each sex) accessible to, and usable by, the physically disabled in accordance with the nature and use of a specific building or facility.*.
- Provide an appropriate number of public telephones accessible to, and usable by, the physically disabled (mounted 48 inches from the floor). These public telephones should also be equipped for those with hearing disabilities and so identified with instructions for use.*
- Provide special cafeteria facilities such as lower tray racks, private eating areas, etc.
- Equip with handrails all exterior and interior walks and ramps having more than a five per cent gradient; ramps*should have at least six feet of straight clearance at the bottom.*
- Provide for independent approach and entry of all buildings. Doors should have a clear opening of no less than 32 inches and shall be operable by a single effort.*
- Provide raised letters and numbers on interior signs. Lientification should be placed preferably five feet from the floor.

• Provide nonslip floors in all buildings.

*These recommendations are in accordance to the American National Standard Specifications for Making Buildings and Facilities Accessible to and Useble by the Physically Handicapped, American National Standards Institute, Inc., 1971. Supportive Services. The lack of supportive services is seen as a problem by the respondents. The needs assessment shows there are limitations in almost every supportive service that the physically handicapped require to succeed in postsecondary education. The relevant recommendations are:

- Have interpreters available, both in and out of class, to translate the spoken language into sign language for the hearing impaired. (
- Provide notetakers for persons with manual disabilities.
- Provide self-care aides for disabled persons living on campus who need assistance in caring for themselves.
- Have available a machine reader (Opticon) to convert printed language into vibrating, tactile signals for the sight disabled.
- Have Braille or taped texts available for the sight disabled.
- Have mobility guides available to help the sight disabled "get around" on campus.
- Have mobility helpers available to push wheelchairs, help the disabled climb stairs, get in and out of cars, etc.
- Provide special transportation on campus for those having extreme difficulty traveling on campus.

Vocational Training. Forty-three per cent of the physically disabled who have not pursued postsecondary education stated that they are interested in pursuing additional education or training through a trade or business school (see Table 6). Based on the findings the following recommendations are offered:

- School guidance counselors should provide more information on trade and business school training to the physically disabled.
- Trade and technical programs in community colleges and branch campuses should be increased to accommodate more physically disabled students.

 Local area vocational-technical schools and comprehensive high schools should increase articulation efforts with all types of degree-granting
 institutions.

Chronic Unemployment. The unemployment rate of physically disabled adults in the labor force is 37, per cent according to the survey results found in Table 8. The number one goal of educational programs for the disabled adult should therefore be to reduce the high unemployment rate. The recommendations are:

• Training institutions/should look closer at present and future labor markét trends so that existing education and training programs will be congruent with existing and anticipated labor market demands.

Lifelong learning centers for the physically disabled should be established. Physically disabled adult have a need for vocational counseling, job placement assistance, interpreters, tutoring, training in communication skills and continued vocational training to provide them opportunities for advancement and upgrading of job skills. The centers' services should also be svailable to the parents of disabled children.

21 <u>37</u>

Special Services. A substantial number of the physically disabled population said they have not pursued postsecondary education because they could not meet admission requirements or because of a lack of funding. The recommendations are:

- State funded Higher Education Equal Opportunity Programs (Act 101) should , cooperate with organizations for the disabled, government and private agencies and school districts to seek but, assist, identify and enroll, interested disabled/adults in Act 101-funded programs.
- The Office of Higher Education should encourage two-year, associate degree-granting institutions to apply for Act 101 funds so that disabled adults seeking job skills can benefit from Act 101 services to disadvantaged students.

• An information publication should be developed which outlines educational opportunities and services available for physically disabled adults at Pennsylvania postsecondary institutions.

38

REFERENCES -

Frank, Keith. <u>Architectural Barriers to Physically Disabled Persons in Wisconsin's</u> <u>Vocational, Technical and Adult Education System</u>. Menomonie, Wisconsin: University of Wisconsin-Stout, June 1975.

- Graham, Gary L., <u>et al.</u> <u>Comparative Needs Analysis of Support Services for Non-handicapped and Handicapped Persons Seeking Postsecondary Education from a Community College System</u>. Ft. Lauderdale, Florida: Nova University, June 1974.
- McClanahan, Ruby F., and Hastings, Chester R. <u>The Development of Individualized</u> <u>Supportive Services and Sensorially Limited Adults at a Postsecondary Area</u> <u>Vocational School, Phase I.</u> Waco, Texas: McLennan County Community College, 1975.
- Rada, Ruth B. <u>Development of a Core Guidance Curriculum to Meet the Needs of Handi-</u> <u>capped Students at East Los Angeles College</u>. Los Angeles, California: East Los Angeles College, June 1975.

Williams, William N. <u>The Systems Approach in the Rehabilitation Process</u>. Rochester, New York: National Téchnical Institute for the Deaf, April 1971.

APPENDIX A.

.

ł.

٢

POSTSECONDARY SURVEY

.

ID

	0_	•												
	Plea	aséc.	lrcleE	ducatio	onal Le	vel:	9, 1	0, 11,	, 12 or	GĘD,	13, 1	4, 15	and	16
	Have	e yotù	ever re	ceived	vetera	ins'-e	educat	ion be	enefits	? Yes		No		,
	Doj	you ha	ive any o	of the	follow	ving (types (of phy	vsical	disabi	litie	s? (Ì	Pleas	e chec
	()	Nonar to wi	<u>bulator</u> neelchai	z: tho rs réga	ose ind ardless	ividu of 8	uals wi cause.	ho, fo	frall	practi	cal p	urpose	28, a	rę bou
	()	such	mbulator as a per ics, pul	cson. wł	no uses	brac	ces and	d/or c	ilk with rutche	h diff s, amp	iculty uteea	y or i , arth	ln see titi	urity cs,
	()	sight	Disable As impa azardoja	nired t	hose ind to the d	divid exter	luals w it that	who ar t move	e total ment in	lly bl: n publ:	ind an ic are	nd tho as i	se wi ins	hose ecure
		coord	rdinatès ination injury.	or pal	ose ind: sy from	ividu m cer	als wh ebral	nose d injur	isabil: y, spin	ities in a ling	leave Jury c	them or per	with ipher	fault
		to th	ng Disab	thet	those i	indiv iah+	he	s who	are dea	lor			-ng i	
	•	to th trial signa	e extent situati	that ons be	they mi cause t	ight they	be ins are up	secure able	to com	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
•	• • •	to th trial signa If yo	e extent situati ls. u are no	that ons be t in a	they mi cause t	ight they the a	be ins are un bove c	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Your	to th trial signa If yo pres	e extent situati ls. u are no ent stat	that ons be t in a us - E	they mi cause t my of t	ight they the a ent (be ins are un bove c Please	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Your	to th trial signa If yo pres Emplo	e extent situati ls. u are no ent stat yed full	that ons be t in a us - E time-	they mi cause t my of t	ight they the a ent (be ins are un bove c Please	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Four ()	to th trial signa If yo pres Emplo Emplo	e extent situati ls. u are no ent stat yed full yed part	that ons be t in a us - E time-	they mi ecause to my of to mployme -Type o	ight they the a ent (of jo	be ins are un bove c Please	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
· ·	() four () ()	to th trial signa If yo pres Emplo Emplo Unemp	e extent situati ls. u are no ent stat yed full yed part loyed, 1	t in a us - E time- time	they mi cause t my of t mployme -Type c for wo	ight they the a ent (of jo	be ins are un bove c Please	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() : () : () : () : () :	to th trial signa If yo pres Emplo Emplo Unemp Homem	e extent situati ls. u are no ent stat yed full yed part loyed, 1 aker, fu	tin a tin a us - E time- time ooking	they mi ecause t any of t mployme -Type o for wo e	ight they the a ent (of jo	be ins are un bove c Please	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() : () : () : () : () :	to th trial signa If yo pres Emplo Emplo Unemp Homem	e extent situati ls. u are no ent stat yed full yed part loyed, 1	tin a tin a us - E time- time ooking	they mi ecause t any of t mployme -Type o for wo e	ight they the a ent (of jo	be ins are un bove c Please	secure able catego	ries, p	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Four () () () () () () ()	to th trial signa If yo pres Emplo Emplo Unemp Homem Statu	e extent situati ls. u are no ent stat yed full yed part loyed, 1 aker, fu	t in a us - E time- time ooking 11 tim	they mi ecause to my of to mployme -Type of for wo e bove	ight they the a ent (of jo	be ins are un bove c Please	atego check	If imation commuter to commute the commuter term of ter	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	()) four ()) ()) ()) ())	to th trial signa If yo pres Emplo Emplo Unemp Homem Statu pres	e extent situati ls. u are no ent stat yed full yed part loyed, 1 aker, fu s other	time- time time time time	they mi ecause to any of to mployme -Type do for wo e bove ducatio Name of	the a ent (of jo ork	be ins are un bove c Please b lease	atego check	If imation commuter to commute the commuter term of ter	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Your () () () Your () (to th trial signa If yo pres Emplo Emplo Unemp Homem Statu pres Colle	e extent situati ls. u are no ent stat yed full yed part loyed, 1 aker, fu aker, fu s other ent stat	time- time time time time time time than a time time l	they mi ecause to my of to mployme -Type of for wo e bove ducatio Name of	ight they the a ent (of jo ork ork	be ins are un bove c Please b lease lease	atego check	If imation commuter to commute the commuter term of ter	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Your () () () Your () (to th trial signa If yo pres Emplo Emplo Unemp Homem Statu pres Colle	e extent situati ls. u are no ent stat yed full yed part loyed, 1 aker, fu s other ent stat	that ons be t in a us - E time- time ll time than a us - E time]	they mi ecause to my of to mployme -Type of for wo e bove ducatio Name of	ight they the a ent (of jo ork on (P: proj coll	be ins are un bove c Please b b lease lege gram	atego check	If imation commuter to commute the commuter term of ter	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning
	() Your () () () Your () (to th trial signa If yo pres Emplo Emplo Unemp Homem Statu pres Colle	e extent situati ls. u are no ent stat yed full yed part loyed, 1 aker, fu aker, fu s other ent stat	that ons be t in a us - E time- time ll time than a us - E time]	they mi cause to my of to mployme -Type co for wo e bove ducatio Name of Name of	ight they the a ent (of jo ork on (P: proj coll	be ins are un bove c Please b b lease lege gram	atego check	If imation commuter to commute the commuter term of ter	lor pul municar	olic a tè or	teas. te he	or in ar wa	n indu arning

5. (continued)
() Trade or business school full timeName of school Name of program
() Trade or business school part timeName of scho
(a) College, trade or business school graduateName of school
() Never attended colle, trade or business school
() Attended college, trade or business school but dropped out. Please give
6. Did you live on campus while attending school? Yes If no, why?
Would you like to attend college, trade or business school? Yes
() Could not meet admission requirements () Lack of guidance and counseling
 (•) High school grades are too low () Lack of funds () Lack of funds () Other (please name)
() Architeetural barriers
8. How does your college, trade or business school compare?
Available Available Guidance Counseling
() job placement services
()() educational aid and aptitude testing
() basic reading and math
() () tutor
(;)() interpreter
- ()
() () machine reader (Opticon) 25
ĨC ■■■ 41

ER Pruttest

(continued) 8. Should Be Is Available Available : () . . . human reader ()....Braille or taped texts () () . . . athletic and social programs (), [..., ()]**b** mobility guide . . **Mo**ility helper ()~. ······()... special transportation on campus () ... other (please name) Architectural Conditions . ()... reserved parking) . . elevators for upper-level classrooms . . () modified water fountains .(). ()... modified toilets, showers, etc. () ()... modified public telephones (): ... modified study tables . ()... nonglare lighting () ビ・・・ (), . . . () walks and ramps for disabled

():... () nonslip floors

. (). . Braille signs

COMMENTS: