



# **A Study on the Countermeasures to Expand the Employment Opportunities for Blind and Visually Impaired Persons**

**[Survey Report No. 91] Summary**

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## **1. Coauthors (in order of writing)**

Chuji Sashida (Researcher, Employer Supporting Department, National Institute of Vocational Rehabilitation)

Masatoshi Hirakawa (Chief Researcher, Employer Supporting Department, National Institute of Vocational Rehabilitation)

Keiko Kawamura (Researcher, Employer Supporting Department, National Institute of Vocational Rehabilitation)

Wakako Okiyama (Chief Researcher, Employer Supporting Department, National Institute of Vocational Rehabilitation)

## **2. Researcher period**

Fiscal 2007 to 2008

## **3. Composition of the research report**

Chapter 1 Purpose and method of the research

Chapter 2 A survey on the expansion of employment opportunities for blind and visually impaired persons

Chapter 3 Employment realities of blind and visually impaired persons at work - from a case study

Chapter 4 Objectives in finding new jobs for blind and visually impaired persons

Chapter 5 Concluding remarks - objectives with workplace exploration

Documents

## **4. Background and purpose of the research**

The status of jobs introduced to blind and visually impaired persons by public employment security offices (hereafter "Hello Work") in the first half of fiscal 2006 shows that about 60% of blind and visually impaired persons obtained jobs, a percentage much higher than that of persons with physical disabilities at about 40%. However, a majority of the employed (two-thirds of the blind and severely visually impaired persons) obtained jobs in "the three therapeutic businesses" (i.e., generic term for Massage, Acupuncture and Moxibustion therapies, hereafter referred to as "MAM businesses"), reflecting their dependence on that field.

In contrast, a close look at the status of employment in clerical jobs using personal computers with speech output—a promising area of jobs for the blind and visually impaired persons in recent years—shows a percentage of about 12% (or 7% for blind and severely visually impaired persons), which is far lower than that of all persons with physical disabilities, who account for a little less than 30%. In addition to this, while the number of sighted therapists rapidly increased in the MAM businesses, but other job areas have not been developed for blind and visually impaired persons. It is therefore obvious that the employment situation of blind and visually impaired persons remains much harder.

A close look at this situation reveals that an extremely important objective in increasing the numbers of blind and visually impaired persons employed requires a multi-faceted monitoring of the realities facing the blind and visually impaired jobseekers and incumbent workers with blindness and visual impairments, as well as measures being taken according to those realities.

This study therefore aims to clarify the details of blind and visually impaired persons who are in employment or looking for jobs through various surveys, by considering effective supportive actions to expand employment opportunities, in addition to MAM jobs, such as ensuring employment opportunities in clerical jobs.

## **5. Method of the survey**

### **(1) Collecting and analyzing preceding studies and information**

The coauthors collected and analyzed documents owned by the NIVR, periodicals and research/survey reports issued by associations and establishments engaged in blindness and visual impairment and the employment and job-related issues of blind and visually impaired persons, and electronic information provided on their web sites.

### **(2) Lectures by Experts**

The coauthors conducted lectures by experts hearings to collect comments on conducting questionnaire surveys and interview surveys of incumbent workers with blindness and visual impairments, and obtained knowledge about spotlighted job areas for increasing the numbers of jobs for the blind and visually impaired persons.

### **(3) Survey on the intentions and opinions of blind and visually impaired jobseekers and the situations of supports at work support institutions**

In order to clarify the intentions and opinions of blind and visually impaired jobseekers, the coauthors conducted a postal survey of those enrolled at educational and training facilities, and a telephone survey of Hello Work visitors. The coauthors also conducted interviews with people engaged in career guidance and employment support at schools for the blind and vocational development facilities to clarify the actual situations of supports at work support institutions.

### **(4) Survey on situations of incumbent workers with blindness and visual impairments**

A visiting survey was conducted of ten incumbent workers with blindness and visual impairments (at eight business places) to clarify the actual situations of incumbent workers with blindness and visual impairments at work and how employers' attitudes to these workers are, mainly in private corporations.

## **6. Outline of the survey result**

### **(1) Survey on the intentions and opinions of blind and visually impaired jobseekers and the situations of supports at work support institutions**

The following summarizes the awareness of blind and visually impaired jobseekers regarding employment based on the questionnaire survey of those enrolled at educational and training facilities, and blind and visually impaired persons using Hello Work. (Hereafter, "those enrolled at educational and training facilities" are referred to as A, and those using "Hello Work" as B.)

#### **(a) Trends regarding blind and visually impaired persons**

Blind and visually impaired persons vary widely in age from teenagers to people in their 60s. The central age group differs depending on the facility used. Specifically, the age groups tend to rise in order of (1) schools for the blind, (2) rehabilitation centers for the visually impaired and vocational development facilities, and (3) sheltered workshops and Hello Work.

Table 1 Facilities belonged/used and by respondents and their age groups

(unit: persons)

Facilities belonged/used		Age group							Total
		10s	20s	30s	40s	50s	60s and up	No responses	
Educational and training facilities	Ordinary course, high school division, school for the blind	72 94.7%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	1 1.3%	2 2.6%	76 100.0%
	Other than ordinary course, high school division, school for the blind	2 0.9%	80 34.2%	60 25.6%	44 18.8%	41 17.5%	5 2.1%	2 0.9%	234 100.0%
	Rehabilitation centers for visually impaired	0 0.0%	12 20.7%	17 29.3%	13 22.4%	11 19.0%	5 8.6%	0 0.0%	58 100.0%
	Vocational development facilities	2 4.3%	9 19.1%	13 27.7%	11 23.4%	7 17.0%	3 6.4%	1 2.1%	47 100.0%
	Sheltered workshops	0 0.0%	4 8.2%	11 22.4%	10 20.4%	12 24.5%	12 24.5%	0 0.0%	49 100.0%
Hello Work		2 1.2%	22 12.7%	29 16.8%	37 21.4%	33 19.1%	33 19.1%	0 0.0%	173 100.0%

Note: There are six persons whose facilities are unspecified. This table therefore does not include them.

Both A and B include many persons with severe impairments, but A was found to include more severely impaired and many totally blind persons (Fig. 1). One recent notable trend is that those who became visually impaired after becoming adults accounted for as many as 40% in both A and B (Fig. 2). The background explaining this fact seems to be that, with a decline in the numbers of visually impaired persons since birth due to advances made in medical treatment technology, more people have become visually impaired and severely impaired due to diseases and accidents. This trend is more conspicuous in B. Of those who became visually impaired after becoming adults, some have no licenses for working in the MAM businesses and those who hold some kind of license obtained their licenses before becoming disabled. Thus, there are many who have the handicap of visual impairment but lack marketable skills.

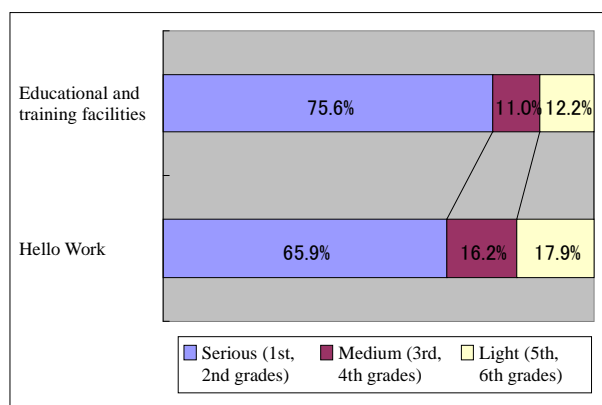


Fig. 1 Disability grades

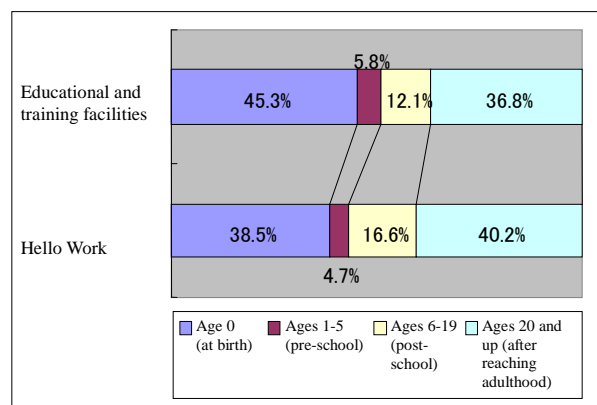


Fig. 2 Ages upon becoming disabled

#### (b) Desired jobs

The trends in desired MAM jobs where many blind and visually impaired persons have long been engaged account for more than half (57.7%). A specific breakdown of MAM jobs indicates that, in addition to "working in clinics and hospitals as a MAM technician (35.8%)" and "self-employed as a MAM technician (9.8%)" as traditional jobs, many persons do engage in "jobs that take advantage of their MAM licenses (12.1%)" as new job areas. A breakdown here by category surveyed shows that A reveals those seeking MAM jobs account for more than

60% as opposed to 40% for B, thereby showing differences according to the facility used. This apparently reflects the many responses to this survey from those enrolled at MAM training facilities (schools for the blind and rehabilitation centers for the visually impaired) who seek jobs suited to the contents of the education and training provided.

Next, a close look at non-MAM jobs indicates that those engaged in such jobs account for 30%. Of those, the most responses indicated "clerical jobs (7.3%)." This reflects the fact that they have landed clerical jobs due to the recent development of PCs and peripherals, which has made clerical management possible for the first time by using equipment, software and other facilities that compensate for visual impairment. Conversely, "telephone operators and recording stenographers (1.6%)" and "information-processing engineers (1.9%)," which used to attract many blind and visually impaired persons, have dropped considerably lower in percentage than clerical jobs. The background for this decline is attributed to the shift in telephony toward dial-in systems at corporations as pertaining to telephone exchanges. The reason for the decline in the area of information-processing technology is due to graphics program development that has now become part of the mainstream.

A breakdown as classified by category surveyed reveals that A shows many responses indicating "clerical jobs (6.4%)," but few responses were generally made indicating other jobs. In contrast, B shows significant variations in previous training history, vocational history, licenses acquired and other aspects of background, with many respondents wishing for "clerical jobs (9.8%)." This category is also characterized by the fact that respondents vary in many fields including "production process and labor management (6.4%)" and "service-related jobs (6.4%)."

Last but not least, a close look at sheltered employment indicates that A includes only a few respondents wishing for such employment. Among those enrolled at vocational aid centers and the comprehensive division of schools for the blind, some cannot work in general jobs. It is therefore necessary to consider how to respond to those persons.

Table 2 Desired jobs by respondents

(unit: persons)

Persons surveyed	Desired jobs (primary wish)																		Total	
	MAM jobs			Other than MAM jobs												Sheltered employment	Have not yet considered the matter	Don't know		No response
	Working at clinics or hospitals as MAM therapists	Self-employed as MAM therapists	Jobs that take advance of their MAM licenses	Non-MAM jobs in medical treatment	Welfare-related jobs	Data-processing engineers	Clerical jobs	Sales and marketing jobs	Service-related jobs	Production process and labor management	Teaching	Clerical jobs at governmental offices	Librarians	Telephone operators, audiotypists	Other jobs					
Those enrolled at educational and training facilities	184 39.1%	60 12.8%	54 11.5%	6 1.3%	8 1.7%	10 2.1%	30 6.4%	6 1.3%	5 1.1%	7 1.5%	16 3.4%	7 1.5%	2 0.4%	7 1.5%	9 1.9%	30 6.4%	11 2.3%	10 2.1%	8 1.7%	470 100.0%
Hello Work users	46 26.6%	3 1.7%	24 13.9%	4 2.3%	6 3.5%	2 1.2%	17 9.8%	4 2.3%	11 6.4%	11 6.4%	0 0.0%	0 0.0%	1 0.6%	3 1.7%	24 13.9%	0 0.0%	4 2.3%	13 7.5%	0 0.0%	173 100.0%
Total	230 35.8%	63 9.8%	78 12.1%	10 1.6%	14 2.2%	12 1.9%	47 7.3%	10 1.6%	16 2.5%	18 2.8%	16 2.5%	7 1.1%	3 0.5%	10 1.6%	33 5.1%	30 4.7%	15 2.3%	23 3.6%	8 1.2%	6433 100.0%
	371 57.7%			196 30.5%																

(c) Work support measures

In response to the survey results, work supporters must not only work to explore workplaces pertaining to MAM jobs and create even more jobs in the clerical fields being spotlighted as new areas, but also create jobs from a flexible viewpoint according to the disability characteristics of the respective persons without being constrained by the fixed idea of "jobs for blind and visually impaired persons." In order to obtain a job in a clerical field, individuals must improve their skills in the face of few opportunities at the moment for receiving such training. It is therefore necessary to increase opportunities for the commissioned training of persons with disabilities and working in other areas as well, thereby increasing training opportunities for blind and the visually impaired, while applying such ingenious ideas as increasing opportunities for learning such skills at various educational and training facilities.

At the same time, the survey suggested the importance of arranging a proper workplace environment when such persons were recruited. When a blind and visually impaired person is employed, people tend to focus on the need to procure supportive equipment. This survey, however, also indicated a similarly high demand for human support. Moreover, these needs clarify the differences in disability status (i.e., how to see things from the perspective of the disabled). Based on these circumstances, work supporters must adequately convey the status of such individuals to their employers while further improving their expertise to provide effective information and advice.

**(2) A survey on the realities of supports at work support establishments**

Based on findings from the questionnaire survey, a hearing was conducted of career guidance providers and vocational guidance representatives at schools for the blind and vocational development facilities regarding the realities of their respective educational and training, trends in employment, and other aspects.

(a) Trends in the employment of blind and visually impaired persons

The coauthors organized the information about MAM jobs, centering on the hearings conducted of persons from schools for the blind. The information about non-MAM jobs is organized, centering on hearings of persons from vocational development facilities.

First, the information about MAM jobs is organized here. For employment at traditional clinics, more job offers are being made by large clinics that run diverse areas of business, which now require very practical abilities. For employment at hospitals, simply holding the license of a finger-pressure massager is not enough to receive sufficient clinical remuneration. There are consequently concerns over a possible decline in job offers in that field. The health-keeper now being spotlighted as a new MAM job—is often employed to work in the massage room of a large company or a similar facility. However, due to the difficulties posed by the recent social situation, corporations are reducing the numbers of job offers, as reflected in the downward trend in employing regular employees. The physical therapeutic trainer, also a new type of job, represents a growing number of persons recently being recruited in line with the advances made in nursing care insurance, though employment conditions and job descriptions vary significantly among employers.

Next, a close look at non-MAM jobs, particularly clerical jobs with high expectations, shows that clerical management not possible in the past can now be done by using equipment and software that compensate for visual impairments. This has resulted in rising employment in clerical jobs. In contrast, telephone operators and information-processing engineers have experienced declining employment demand in recent years. The main reasons are the shifts in telephony to dial-in systems at corporations and from program development on a text basis to program development in graphics. In view of these circumstances, vocational training facilities for blind and visually impaired persons have done away with training departments for telephone operators and newly established training departments for clerical fields, as a new set of jobs.

(b) Consideration and ingenious ideas for guidance

Efforts show various realities according to the characteristics of different institutions. But it has become clear that, when blind and visually impaired persons are in school or enrolled, they are given careful supports according to their individual disability characteristics, thereby allowing them to acquire respective skills.

Schools for the blind are working to expand their programs for clinical practical training and workplace experience (internship) in preparation for the national examinations for MAM licenses. Moreover, they also adopt ingenious ideas on career guidance to increase professional awareness among students and provide guidance for sheltered employment for persons who cannot work in general jobs.

Vocational development facilities teach their students the basic steps in PC operation at the entry stage of training in an environment arranged to suit their respective status of disability (by such means as using screen reader and screen enlargement software) and, on top of that, provide specialized training. Moreover, as an ingenious idea for promoting the training results to corporate people in order to increase job opportunities, blind and visually impaired persons conduct demonstrations and briefings by using PCs complete with an access environment.

**(3) The work realities of incumbent workers with blindness and visual impairments**

Based on the hearings conducted of employers of blind and visually impaired persons, the following summarizes the realities and objective of work facing the blind and visually impaired persons.

Employers for whom the blind and visually impaired persons surveyed in the hearings work vary greatly in terms of form, scale and type of business. As classified by form, the employers are in the private sector (general business places and exceptional subsidiaries) and local governments. In terms of scale (workforce), the employers range from a staff of 2 to a workforce of 16,000. By type of business, the employers are involved in public duties, the service industry, and the MAM business. Aside from one exception, all the blind and visually impaired persons concerned have been disabled since birth. The status of their visual disabilities varied widely from total blindness to low vision. Most of them gradually developed severe degrees of disability.

As for the jobs engaged in, three persons work in jobs that require them to use their vision, while the others are not required to use eyesight. Except for one, all the others use a variety of software to work when they use PCs. These individuals use a PC to work most of the time during the day. Hello Work is the main route to employment, and most of these persons are regular employees.

The three persons with low vision are able to move walk independently without using white canes when commuting. The other persons use a white cane when walking alone. In the workplace, however, most of these individuals walk without white canes. Flextime is allowed so that the blind and visually impaired persons can avoid rush hours and commuting after sunset.

Hearings of recruitment cases of blind and visually impaired persons involve many difficulties in two aspects: the acquisition of informants who take the hearings and the acquisition of their consent regarding the publishing of the contents of the hearings. The coauthors were therefore limited to only a few reportable cases, and summarized the findings while noting the following five points:

(a) Anxiety about accidents while commuting and at work

Many employers exercise much care to protect blind and visually impaired employees against accidents (occupational disasters) while commuting and at work. This is also evident from the findings of a survey conducted in the fall of 2008 by Turtle, a designated nonprofit action corporation (NPO). Moreover, some representatives from certain employers have said that in case of any anxiety, a person with normal vision can reassure a blind and visually impaired employee by walking the commuting route together with that person at least once. The coauthors hope that such positive efforts are reported even further.

(b) The severity of the way to employment

The severity of employing blind and visually impaired persons is reflected in the survey findings obtained in the research conducted by the NIVR. In "A Reality Survey of Employers Regarding the Employment of Middle-aged and Senior Persons with Disabilities" (2008), about 80% of the 2,072 employers answered "blindness and visual impairment" in response to the question: "What type of disability makes employment most difficult?"

(c) Decisions of the employers

It is estimated that among all employment issues regarding persons with disabilities, many employers are most hesitant to reassign personnel in order to employ or reinstate blind and visually impaired persons. Whatever the motive or momentum, it could be said that employment was made possible by the employers deciding to overcome their hesitation.

(d) Support provided by nearby people and the self-help efforts of the blind and visually impaired persons

There are some things that a totally blind and visually impaired person cannot do, even if exerting one's best efforts. For example, since handwritten text cannot be read by using OCR software, someone must sit next to that person and read the text aloud. In cases where blind and visually impaired persons remain employed, it is obviously imperative for those persons to work hard, but also necessary for the people around them to lend support.

(e) PC operation ability

Cases of blind and visually impaired persons at work largely depend on their ability to operate a PC. Information and documents concerning various software applications that are effective when a blind and visually impaired person uses a PC are exchanged among vocational development facilities and the blind and visually impaired persons themselves, but one cannot overlook the demand for specialized job coaches.



**Table 3 Summary of the information obtained through interviews with incumbent workers who are blind and visual impairments**

Case No.	Sex and age	Degree and grade of disability	Employer scale	Job held, years of service	PC use status	How to move, commuting time
1	Female, age 42	Light perception (both eyes) 1st grade	490 employees	Responding to customers on the phone 1 year	Email software (My Mail) Screen reader software (JAWS, PC-Talker) Braille display LAN environment arranged	Independent walk with a white cane, and takes 50 minutes to commute by train and subway.
2	Female, age 43	Left 0.1, right 0.2 Disorder in field of vision 5th grade	490 employees	Transferring telephone calls Clerical assistance 9 months	Screen reader software (PC-Talker) Website reader software (Homepage Reader) Screen enlargement software (Zoom Text)	Independent walk without a white cane, and takes one hour to commute by bus, train and subway.
3	Male, age 33	Left 0.02 (0.6) Right 0.02 (0.2) Disorder in field of vision 2nd grade	Designated subsidiary: 27 employees Head office: 460 employees	Mail sorting, checking 2 years	No work with a PC	Independent walk without a white cane, and takes 40 minutes to commute by train and shuttle bus. There is a 30-minute shift in working hours due to the sunset time.
4	Male, age 45	Left 0.02 (0.03) Right 0.02 (0.03) Disorder in field of vision 2nd grade	Designated subsidiary: 27 employees Head office: 460 employees	Clerical work 13 months	Screen reader software Screen enlargement software Closed Circuit TV	Independent walk without a white cane.
5	Male, age 41	Totally blind No field of vision 1st grade Eyesight gradually deteriorated.	Two employees (the employer and the interviewee)	Website preparation and management 5 years	Screen reader software (VDMW300-PC-Talker-XP, XPReader, JAWS) Website reader software (Homepage Reader, Net Reader) Braille display (Braille Note BN46D, Braille Memo BM16)	Independent walk with a white cane (works at home, so seldom commutes).
6	Female, age 29	Totally blind No field of vision 1st grade Eyesight gradually deteriorated.	Desk workers: 370 Field workers: 2,400	Clerical work for sales, miscellaneous work 5 years	Screen reader software (JAWS, XPReader) Website reader software (Homepage Reader) Email software (MM Mail) Screen enlargement software (Zoom Text)	Independent walks with a white cane, and takes 45 minutes to commute by train (with one change of train), and uses flextime to avoid rush hours.
7	Female, age 44	Light perception (both eyes)  1st grade Eyesight gradually deteriorated.	Designated subsidiary: 7 employees Head office: 860 employees	Massage, acupuncture, moxibustion Chief therapist 8 years	Screen reader software (XPReader)	Independent walk with a white cane, and takes one hour to commute by bus, JR, and subway.
8	Female, age 45	Disorder in field of vision (only central vision available) 2nd grade Eyesight gradually deteriorated.	Local government	Clerical work 17 years and half	Screen reader software (JAWS) OCR software (YO-Mail) Transportation fare search software	Independent walk with a white cane, and takes 70 minutes to commute by riding three train lines and a bus
9	Male, age 43	Left, light perception; right 0.03-0.05. 1st grade Lost eyesight due to an accident (occupational disaster) 5 years ago.	Consolidated: 22,113 employees	Clerical work (customer support) Executive 19 years, 9 months after reinstatement	Screen reader software (PC-Talker, XPReader, JAWS) Email software (My Mail) Word-processing software (My Word V) OCR software (My Read) Other (Schedule Notes Made Easy, Business Cards filing software)	Independent walk with a white cane, and works in shifts with the core time between 10:00 and 15:00.
10	Male, age 30	Right 0.03 (corrected), left 0.04 (corrected) 1st grade Eyesight gradually deteriorated.	Consolidated: 16,682 employees Institute: 68 employees	Clerical work (research assistant) 5 years	Screen reader software (JAWS, XPReader) OCR software	Independent walk with a white cane, and takes 40 minutes to commute by train and bus

#### **(4) Objectives to be addressed for finding more jobs for the blind and visually impaired persons**

Based on the status of blind and visually impaired jobseekers and incumbent workers with blindness and visual impairments clarified in the survey and their support needs, the coauthors present the main objectives concerning support measures for finding more jobs for the blind and visually impaired persons as described below.

(a) Support measures in educational and vocational training stage

- Important objectives with supports in schools for the blind and other special-needs schools include: (1) appropriate career guidance suited for the abilities and wishes of students, (2) more opportunities for workplace experience, and (3) accumulation, organization and analysis of information about the career courses of graduates.
- Among objectives in work supports at MAM training facilities is to pay attention to the trend toward the utilization of "homes for the blind" long positioned as work support facilities for MAM license holders and based on the status of training facilities, taking recent welfare system reforms into account.
- Objectives for supports at vocational development facilities include: (1) various ingenious ideas for demonstrating vocational abilities of blind and visually impaired persons, (2) efforts to provide meticulous consultation supports for obtaining jobs, and (3) recognizing the importance of support services to improve their skills of incumbent workers with blindness and visual impairments and develop effective measures to provide such support. All such measures should be taken.

(b) Support measures at work support institutions

The objectives concerning support measures based on a summary of the work support institutions identified in the survey are as follows:

- The staffs of work support institutions should understand the employment status of blind and visually impaired persons and the crucial points in work supports while tackling their tasks. To fulfill that requirement, they must provide detailed information, renew their skills on a daily basis, and collaborate with each other in their work.
- It is necessary to devise ingenious ideas for the system of providing information and consultation supports that allow blind and visually impaired persons to be referred on the spot to relevant institutions when such persons simply contact to said system. (Refer to the concept of a one-stop career center in the USA.)
- In order to allow many blind and visually impaired persons to take the necessary training at familiar places, it is necessary to increase the number of vocational development facilities that accept the blind and visually impaired persons (since there are now only a few such facilities in the country), and on the other hand to train vocational trainers to accept blind and visually impaired trainees at existing vocational development schools located in each prefecture.
- As measures to remove physical barriers to the work support institutions, ensuring accessibility to the information terminals at Hello Work and introducing a writing service which is available when necessary should be introduced for example.

(c) Support measures for incumbent workers with blindness and visual impairments

Based on the objectives determined from the hearing of incumbent workers with blindness and visual impairments, it has been revealed that, regarding the need for safety measures in commuting and providing the necessary support, it is important to (1) provide supports until a commuting route is fixed, (2) consider introducing and otherwise handling the system for going to work with time differences and the system for working in shifts, and (3) consider the users of guide dogs.

In arranging equipment to be used at the workplace, it is necessary to arrange equipment related to rehabilitation training for blind and visually impaired persons. To that end, it is necessary to obtain the advice and assistance of experts from work support institutions including vocational trainers. Moreover, in order to allow the blind and visually impaired persons to work efficiently, it is important to ensure network accessibility and, depending on the case, to use human support.

- (d) Supporting the reinstatement of adult blinded persons (those who become visually impaired after having finished education or worked)

In recent years, the people concerned note the status of the growing numbers of adult blinded persons. Regarding the objectives concerning their reinstatement supports, the course from loss of vision to reinstatement is considered divided into (1) the medical rehabilitation stage and (2) the training for daily living and vocational rehabilitation stage. In particular, as objectives in the rehabilitation training stage, the National Personnel Authority's new interpretation of the leave and training programs for national governmental employees is being spotlighted as affecting such reinstatement. Moreover, regarding consultations and supports for reinstatement supports, it is important to provide consultations and supports for the blind and visually impaired together with a rehabilitation expert.

**(5) Concluding remarks (objectives posed by finding new jobs)**

In summarizing this research, the coauthors have set "exploring new workplaces" as the central objective through a set of support measures designed to find new jobs for blind and visually impaired persons, and considered what kind of efforts are necessary.

- (a) Exploring new workplaces that take advantage of MAM licenses

This field involves many issues including (1) reduction of the score regarding the massage treatment in the health insurance program, (2) proliferation of unlicensed and illegal masseurs, and (3) inaccessibility to the electronic medical record systems that have been recently introduced. Since all three issues cannot be resolved at one time, the coauthors wish to make the following suggestions as measures to explore new workplaces.

- Conduct a nationwide survey regarding the realities of health-keepers and physical therapeutic trainers at health-keepers and nursing care facilities.
- To address the issues of non-licensed masseurs, massage treatment under the health insurance program and related issues, consider measures to create more job opportunities for blind and visually impaired persons on the precondition of conducting surveys medical treatment under the health insurance programs in order to identify the issues.
- Regarding changes in the working environment for visually impaired masseurs with the introduction of electronic medical record systems at hospitals, put into perspective the emergence of visually impaired physicians and other new trends, and survey the actual conditions of accessibility to the electronic network by medical treatment providers.

- (b) Exploring new workplaces for clerical jobs

Regarding this field, it is desirable to (1) provide cases by taking full advantage of video, audio, Internet content and various other media in addition to printed matter, in order to collect and provide cases of employing blind and visually impaired persons, and (2) encourage computer manufacturers, software houses, half-public/half-private R&D-only institutions or related institutions to support the enhancement of screen reader software for the blind and visually impaired persons and the development of screen enlargement software (or hardware).

- (c) Barrier-free and the provision of the reasonable accommodation for licensing examinations and related programs

In this area, it is desirable to (1) remove the limitations and other constraints due to disabilities when entering school, and expand the scope of admitting students to universities and other educational institutions, and (2) expand opportunities for blind and visually impaired persons to take examinations in Braille, recorded media and other electronic media at university entrance exams, various company entrance exams, and licensing tests as well.

- (d) Accumulation of good practices of adult blinded persons and their reinstatement

Accumulating cases of adult blinded and their reinstatement and analyzing their respective job descriptions and the realities of their support systems will hopefully further increase the possibility of exploring new workplaces.

## **7. How to use the research findings**

This survey has monitored and organized many aspects regarding the employment awareness of blind and visually impaired jobseekers and incumbent workers with blindness and visual impairments. The survey findings will therefore be used as reference material for career guidance and employment supports provided at educational and training institutions for blind and visually impaired persons, and as reference material for consultations and supports provided at work support institutions.