



Study of Improving a Welfare Workplace by Surveying Good Standing Companies of Employment of People with Disabilities

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Abstract. Employment of people with disabilities in companies and welfare facilities have been steadily increasing. However, welfare workshops usually have low productivity because of variation in abilities of welfare facility users. The authors consider ways to effectively standardize work with an analysis of a workshop for creating an environment where people with disabilities are able to work comfortably and maintain the production of quality products.

Keywords: Welfare workplace · Employment of people with disabilities

1 Introduction

Today, the number of employees with disabilities in domestic companies has reached record highs for the past 13 consecutive years. Moreover, private enterprises employ about 470,000 people with disabilities [1].

Since employment support personnel and living support personnel collaborate to provide work assistance for people with disabilities, the number of registrants at the Employment and Living Support Center, and the number of introductions for job placement at public employment security offices have also been increasing [1]. The Ministry of Health, Labor and Welfare, Japan divides the employment of people with disabilities into three categories (Regular Employment/Support for Continuous Employment Type A Service/Support for Continuous Employment Type B Service), shown in Table 1, announced the total number of disabled workers to be about 840,000 in 2008 fiscal year (FY2008) [2].

In this way, it is assumed that the employment of people with disabilities in companies is continuing to increase due to the legal employment rate of people with disabilities being raised, as well as the reasons mentioned above [3]. Furthermore, the number of users of employment-related services for people with disabilities is increasing; therefore, it appears likely that this trend will continue [1]. As I mentioned, we consider that both enterprises and welfare workplaces need to make improvements in their work environment for employees with disabilities. For this reason, we examined two different workplaces that employ workers with disabilities and compared the work environments.

Table 1. Employment type of people with disabilities

Supporting type	Regular employment	Support for Continuous Employment Type A Service	Support for Continuous Employment Type B Service
Position of people with disabilities	Worker	Workers and service users	Service users
Number of workers and users	About 631,000 (Breakdown) Physical: 434,000 Intellectual: 150,000 Mental: 48,000	About 33,000 (Breakdown) Physical: 7,000 Intellectual: 133,000 Mental: 12,5000	About 175,000 (Breakdown) Physical: 226,000 Intellectual: 990,000 Mental: 535,000
Average monthly wage	Physical: About 223,000 JPY Intellectual: About 108,000 JPY	About 69,000 JPY	About 14,000 JPY
Valid term	For 2 years (*It is possible to renew for up to one year, only when there is need after individual examination.)	N/A	N/A

2 Method

2.1 Subjects

In this research, we examined the Regular Employment type company Sony Taiyo Co., Ltd. (hereinafter, referred to as S company) in Oita Prefecture. We compared it to the Y welfare workplace of Continuous Employment Type B Service in Kyoto Prefecture.

The reason why we decided on S company and Y workplace is that they have both similarities and differences. The common point is that they are both businesses that produce the final product, and have many people with disabilities employed.

The S company is held to the same manufacturing criteria as the other Sony manufacturing companies but employs people with disabilities at a much higher rate. They manufacture some of Sony's longest-standing high-quality products, such as professional microphones, high-end headphones etc.

On the other hand, Y workplace is a place where workers with disabilities produce rice crackers in a traditional, hand-baked process. We decided on Y workplace for our research because Y welfare workplace is in Kyoto which has the highest average wage increase rate in all Japanese prefectures for FY2004 and FY2005 [4].

A point of difference is the business type. S company is a Regular Employment type, and Y welfare workplace is a Continuous Employment Type B Service.

The average monthly wage should be taken into account to highlight this difference.

It is clear that S corporation, which is a private enterprises, pays workers a higher monthly wage on average as compared to Y workplace. This difference can be found in a report published by the Department of Health and Welfare for Persons with Disabilities [2].

2.2 Survey Overview

This study was made to clarify the differences in workplace environment between S company and Y welfare workplace.

We conducted a field survey in which we visited them and interviewed the people concerned. We used a semi-structured interview technique for both S company and Y welfare workplace in this survey. The details of the survey overview are below.

Interview Technique

We used a semi-structured interview technique.

Investigation Object

S Company

We interviewed a total of three people: one from the technical department, which advances improvement on manufacturing at the worksite; one from the manufacturing department; and one from the diversity and inclusion (D&I) supervision department, which advances diversity and inclusion at the company.

Y Welfare Workplace

We interviewed a total of three people: two management supporters who supervise the entire workplace, including spending for the disabled, and one on-site supporter who supervises the production of hand-baked rice crackers and teaches the method for manufacturing.

Visiting Day and Time

S Company

October 17, 2017 10:00–12:00

Y Welfare Workplace

October 31, 2017 10:00–12:00

Collecting Way of Study Contents

S Company and Y Welfare workplace personnel were interviewed using questions prepared beforehand based on information found in Sect. 3 Table 2. The interviewers in both workplaces told us about the way people with disabilities think and of their daily activities.

Table 2. Different levels of support for employing people with disabilities in S company and Y welfare workplace

Items	Subjects	
	S Company	Y Welfare Workshop
Support for people with disabilities working (workplace)		
1. Support for acquiring work skills	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2. Support for compliance with workplace rules	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3. Support for communication methods in the workplace	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. Support for workplace relationships	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Support for employing companies (initial employment)		
5. Promoting internal understanding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6. Job selection and job development	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Establishing an education and training system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Improving facilities and faculties	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Support for employing companies (throughout employment)		
9. Understanding characteristics of people with disabilities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10. Learning of guidance and employment management know-how	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11. Improvement of work process	<input checked="" type="checkbox"/>	<input type="checkbox"/>

We visited two workplaces for the study, spending a total of two hours at each place. Here is a breakdown of the time spent at each location: interview for the first hour, study the workshops with the interviewee for the next 45 min, then a question-and-answer session at the end for 15 min.

2.3 Survey Items

S company and Y welfare workplace were examined and compared in the following three categories based on the support system offered by the Ministry of Health, Labor and Welfare, Japan: Support for people working with disabilities (workplace); Support for employing companies (initial employment); Support for employing companies (throughout employment).

For each of these three categories, the employment and living support centers for people with disabilities offer support in collaboration with the employing enterprises.

3 Result

We compared the two surveyed enterprises described in Sect. 2.2. The results are shown in Table 2.

S Company had fulfilled all 11 items shown on the table, which means that the support system for regular employment has succeeded.

As for Y welfare workplace, 6. Job selection and job development, 7. Establishing an education and training system, 8. Improving facilities and faculties, and 11.

Improving the work process were not confirmed. Therefore, it has been concluded that Y workplace is not as comprehensive in their employment support as compared to S company. We consider each of the differences between enterprises in the four items listed above by using a specific example from the field study and interview results.

First, we will look at 6. Job selection and Job development. S Company respects the intention of the worker the most by actively supporting them in getting the kind of work they want to do. Moreover, they also implement changes to the workplace by varying the work and transferring workers to different sites to make use of the individual abilities of the workers.

Although Y welfare workplace respects the worker's preference in selecting a job, on-site support staff determine if the assignment is compatible with the worker's disabilities. Therefore, the workers often cannot do the work that they want.

Second, is 7. Establishing an education and training system. S company ranks workers according to skills and helps improve their skills through rank-based education and in-house skills tests.

On the other hand, in Y welfare workshop there are many jobs that the on-site supporters judge too difficult for workers due to their disabilities. For that reason, the supporters seldom offer the chance for the workers to be challenged by a new situation at work, which is usually a positive experience for employees. Thus a system for providing educational opportunities to workers with disabilities has not been designed in Y welfare workplace.

Third, is 8. S Improving facilities and faculties, S company provides devices to assist specific disabilities so all workers are able to work regardless of their disability. For example, when the job requires workers to inspect a product by handling it using their fingers, then they will provide a tool that has been redesigned so that those with impaired dexterity can perform the task, shown in Fig. 1 [5].



Fig. 1. Motion analysis software OTRS® used by S company

There is also a device for graphing sound, which displays the results in real-time on a monitor so that the process can be judged by sight in the case that a worker with a hearing impairment must do the sound inspection, etc., shown in Fig. 2 [5].

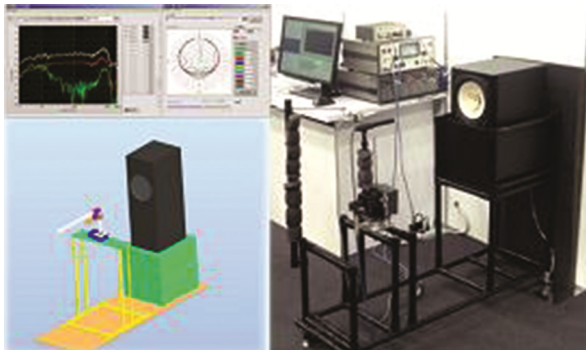


Fig. 2. Motion analysis software OTRS® used by S company

In addition, they make the environment so that workers in wheelchairs are able to work easily because the height of the work table can be tailored to meet each individual's needs.

Y welfare workplace improvement is not progressing because it is difficult for workers to change their work environment and tools are not made available for specific disabilities.

Last is 11. Improving the work process. S Company has systematically formulated standardized tasks performed by persons with disabilities as a work management method, a commonly used method from industrial engineering, shown in Fig. 3 [6].



Fig. 3. Motion analysis software OTRS® used by S company

The improvement advances by seeing the difference in the standard work and then formulating it for each task. Regardless of the presence or absence of a disability, the time to do the standardized tasks is divided into two categories, value adding and non-value adding. The standardization takes into account the difference in degree and kind of disabilities of workers. Animations of the task are projected in the workplace so that all workers are able to see the formulation of the standard time, ideally, this keeps all the workers producing at the same rate.

Y welfare workplace as shown in Fig. 4 thinks that it is difficult to formulate standardized tasks because the type of the disability varies greatly. Although, there the support staff feel that both the facilities and the work content needs improvement. In addition, how to improve specifically what to do, and how to communicate the improvement measures to each of the workers, poses problem. The formulation of standardized tasks and the improvement of the work process do not address this problem.



Fig. 4. Workshop view in the Y welfare workplace facility

4 Discussion and Future Tasks

4.1 Discussion

In Table 2, Y welfare workplace was recorded as having 4 unconfirmed items. We thought that this was due to differences in their mindset toward the disabled people at each work site. S company aims to create a workplace environment where all employees in a company can work equally regardless of their disability and without special prejudice towards people with disabilities. On the other hand, Y welfare workplace is trying to create a workplace environment that allows each worker to work within the scope of differences in the degree and the type of individual disability. At Y welfare workplace, support staff consider the individual worker's degree of disability and decide what they can and cannot do. We believe there is a possibility that support staff are narrowing the potential of workers. The biggest challenge in the Y welfare workplace is increasing daily production volume. There is only one worker who can bake rice crackers among all eight workers, this has become a bottleneck in the process and productivity has fallen. Currently, there is no established system for workers to share their knowledge and train one another, so bottlenecks like this occur. In this case, the task involves hygienic standards that must be strictly adhered to so the worker must be reliable in this way. As was the case at S company, the Y workplace treats workers with disabilities equally to workers without disabilities, as independent individuals, and do their best to provide them with broader opportunities. This environment encourages the disabled worker and helps them expand their capabilities. With this approach, production bottlenecks like the rice cracker baking task, as shown in Fig. 5, can hopefully be eliminated in the future.



Fig. 5. The process view of crackers being baked

In addition, S company thinks that it is necessary to formulate standardized tasks to accommodate their workers with disabilities, this addresses item 11. Improvement of work process from Table 2. It is difficult to formulate standardized tasks for Y welfare workplace because of the degree and type of the disability vary widely for each

individual. To address improving the work process, the standardized task formulation, using S company's idea of a video-guided process could be applied to Y welfare workplace. This concrete improvement plan could address a problem at the Y welfare workplace, making it possible to improve productivity.

4.2 Future Tasks

S company and Y welfare workplace were taken up as a study subjects because they are workplaces for Regular Employment and Support for Continuous Employment Type B Service users, respectively, and there are many cases where there is a severe difference of the worker's disabilities. It was understood through the interview that both companies are ready to employ individuals with a variety of disabilities while giving the theme that the individual ability can be utilized to their maximum potential, even if the worker of the Support for Continuous Employment Type B employment service increases in the future, although there are few workers with developmental disabilities in S company. Regarding work continuity support such as that provided by Y welfare workplace in the Support for Continuous Employment Type B facility, we would like to examine whether employing many people with widely varied disabilities can be applied to general enterprises in the future.

5 Conclusion

In conclusion, the present study has compared two workplaces: S company as a workplace of Regular Employment type of company for both people without and with disabilities and Y welfare workplace as a workplace of Support for Continuous Employment Type B Service for people with disabilities, and discussed the points in common and those that differed regarding their support for employment of people with disabilities.

S Company has a history of employing people with disabilities for 39 years and has been producing high quality products. In our opinion, by comparing S company and Y welfare workplace, it is clear that in order to improve the working environment for people with disabilities it is necessary that enterprises should not treat people with disabilities specially, and further, it is necessary to create a workplace environment where disabled people can demonstrate their intention as an individual. Further studies are needed in order to investigate that the same effect can be obtained at the Y welfare workplace when the productivity-increasing methods of S company are implemented.

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