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# Way of Working and Environment for Persons with Intellectual Disabilities to Create Labor Values: From Analyses on Success Cases of Special Subsidiary Companies and Vocational Training Workshops

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It is extremely difficult for persons with intellectual disabilities to create labor values. However, there are success cases of special subsidiary companies which have tried to do this and have shown successful results. Special subsidiary companies analyze vocational capabilities of persons with intellectual disabilities working there, find out jobs which can be done by them from parent or associated companies and let them form groups to mutually complement each other in order to secure the minimum employment rate for persons with disabilities of their major parent companies. On the other hand, there is a vocational training workshop in Kagoshima which manages the business focusing on manufacturing of Buddhist altars, the local industry. It narrows the working area down to a high value-added traditional craft which is competitive and can be manufactured by even persons with intellectual disabilities who have acquired competitive skills. In both cases, the works of persons with intellectual disabilities have been incorporated into the social division of labor as an economic system, and mutually complementary and mutual aid relationship with surroundings has been generated.

## I. Introduction

Working makes a strong contribution to human dignity. As a matter of course, persons with disabilities shall be no exception to the participants. When persons with disabilities are divided into those with physical, mental and intellectual disabilities, persons with intellectual disabilities would be the farthest from working site. Because, persons with intellectual disabilities have some disabilities in vocational capabilities, e.g., thinking, recognition, judgment, perception, language, memory, creation and voluntary movement, and their work rate changes depending on physical conditions so it is hard to maintain vocational life alone. In fact, many working persons with intellectual disabilities receive some assistance for both life and work from those around.

It is very difficult for companies and organizations to maintain business activities competing against other companies with persons with intellectual disabilities. However, although it is only a part of companies, there are some workplaces in which business proceeds smoothly and there is not much difference between wages of persons with intellectual disabilities and people without disabilities even though many of those with intellectual disabilities are in charge of operations in the organizations. We can find an “exceptional business model” there.

In this paper, I will discuss what environment and what conditions are needed for continued work of persons with intellectual disabilities by analyzing success cases of a part of special

subsidiary companies<sup>1</sup> and a vocational training workshop.<sup>2</sup>

## **II. Special Subsidiary Companies and Vocational Training Workshop C Which Are Successful at Utilizing Persons with Intellectual Disabilities**

I have watched some workplaces utilizing persons with intellectual disabilities. In this paper, I will find out future direction of work and employment of persons with intellectual disabilities focusing on the following three special subsidiary companies doing general businesses (surveyed in 1999) and Vocational Training Workshop C which is a welfare-oriented facility in Kagoshima working on coating of high value-added Buddhist altars<sup>3</sup> (surveyed 2005).

### **1. Working Conditions of Persons with Intellectual Disabilities in Special Subsidiary Companies**

#### **(1) Factors behind the Employment Promotion for Persons with Intellectual Disabilities in Special Subsidiary Companies**

Special subsidiary companies accept secure jobs from the parent companies, contribute to the achievement of the employment rate<sup>4</sup> (1.8%) for persons with disabilities of the parent companies by involving those with disabilities in the own companies and secure a certain profit.

In the early days of the special subsidiary company system, advantages for establishing special subsidiary companies for parent companies were focused on the hardware side, e.g., when placing wheelchair ramps for employees with disabilities, it is better to bring employees

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<sup>1</sup> General companies (subsidiary companies) which employ many people with disabilities and manage independent business. When the parent company establish a subsidiary company with special care for employment of persons with disabilities and it meets certain requirements, the persons with disabilities employed by the subsidiary company are regarded as employment of the parent company and counted for the calculation of the minimum employment rate of the parent company for persons with disabilities (discussed later). In general, special subsidiary companies possess a deep understanding of disabilities of employees and the compensation is more than minimum wage of people without disabilities. Many of them receive 10 times the number of applications for the positions.

<sup>2</sup> Welfare-oriented employment facility which provides workplace for people who can hardly work normally due to physical or intellectual disabilities. Users (persons with disabilities) work and receive vocational training there toward normal employment. Since it is different from normal employment facilities, the compensation is often lower than 10% of general wage for people without disabilities.

<sup>3</sup> Buddhist altars are holly storage furniture to enshrine Buddha statues and family's ancestors' posthumous names. Since the arrival of Buddhism in Japan, it absorbed Japanese cultures such as Shintoism, the religion of Japan from time untold, and developed uniquely. Although cheap exports from China have increased recently, Japanese consumers prefer to buy domestic lacquer-coated quality products as religious holly furniture. Many of them are traditional crafts.

<sup>4</sup> This is one of employment obligation system. It obligates employers of companies with given number of employees to employ persons with physical/intellectual disabilities more than the legally-prescribed minimum employment rate (private companies: 1.8%, government/local authorities and government-affiliated corporations: 2.1%). (Persons with mental disabilities are exempt from the system but counted for the calculation of the employment rate.) Companies which do not meet the legally-prescribed minimum employment rate face penalty and company name may be disclosed in public in the worst case.

Table 1. Outline of Surveyed Special Subsidiary Companies

(As of 1999)

	Company R	Company F	Company R
Foundation	April 1994	March 1994	October 1997
Parent company	Major office automation equipment vendor	Major electronics manufacturer	Japan-US- partnership diversified chemicals company
Main business	Packaging/packing parts of copy/fax machines for service after the sales	Printing, binding, mailing, manufacturing support and in-plant cleaning	Inspection/manufacturing support for parent company's products and labeling and boxing of imported medical devices
Number of persons with intellectual disabilities	16 out of 23 employees	18 out of 26 employees	16 out of 26 employees

in wheelchairs together in a specific office to focus on improving the facility there rather than dispersing them to many offices. It is easy for persons with disabilities themselves to work in such a specific office and companies are also able to hold down spending for improving facilities.

Therefore, persons with intellectual disabilities who do not need any special facility for work must be beyond the scope of the initial assumption. Recently, however, the employment of persons with intellectual disabilities has been promoted in special subsidiary companies. The main reason would be people deeply understand that “effective utilization of persons with intellectual disabilities becomes possible” by making efforts at the software side as analyzed in this paper.

Some sensitive issues, e.g., human rights, are inherent in unique efforts such as intensively hiring persons with disabilities and leaving subsidiary companies to take care of that. However, as far as I know, persons with intellectual disabilities are working with vigor and enthusiasm there and stable economic performances are obtained there. Judging from these things, it is rather preferable direction as a corporate social responsibility (CSR).

## (2) Outline of Surveyed Special Subsidiary Companies

How do special subsidiary companies succeed in business employing persons with intellectual disabilities? How to use them is particularly explained in Table 1.

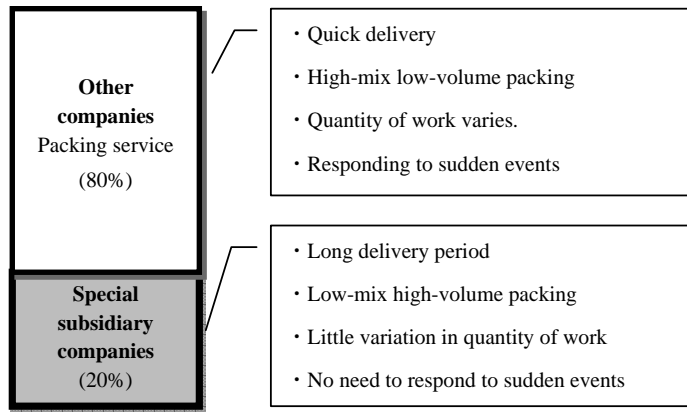


Figure 1. Orders from the Parent Company to Company R

### (3) Implementation of Each Company's Main Business

#### *Approach of Company R*

When establishing Company R, the parent company secured a part of packing work of after-sales parts of copy/fax machines which are core products of the parent company for company R. Nevertheless, the parent company does not give any special treatment to Company R regarding the contract price of the packing work. For instance, the parent company solicited competitive bids for unit-price contract.

As a result, Company R accepted works with few fluctuation factors from the parent company which is about 20% of parts packing work in the group (Figure 1). Procurement of parts often requires an urgent response on the site of maintenance. However, some parts can be shipped in large quantity at once (stable profit can be secured) having plenty of time for delivery. The parent company's department in charge of parts procurement placed orders with Company R adjusting to a certain amount of work not to be too much or too small for persons with intellectual disabilities. Such consideration (providing work) is little burden to the parent company.

Then, how about the other 80%, relatively formidable work? The parent company gives other companies working with Company R the rest of contracts. Those companies played a role of cushion for Company R when adjusting quality and quantity of work.

Since persons with intellectual disabilities are difficult to respond to changing situations, when quick-delivery work continues or individual employees are overburdened due to rapid increase in quantity of work, their quality of work may decrease or they may get panics and it could lead to industrial accidents. Therefore, the company must always keep the quality of work constant to keep up employees' (with intellectual disabilities) mental stability.

#### *Cleaning Service of Company F*

Company F mainly accepts cleaning service from the parent company. Before Company

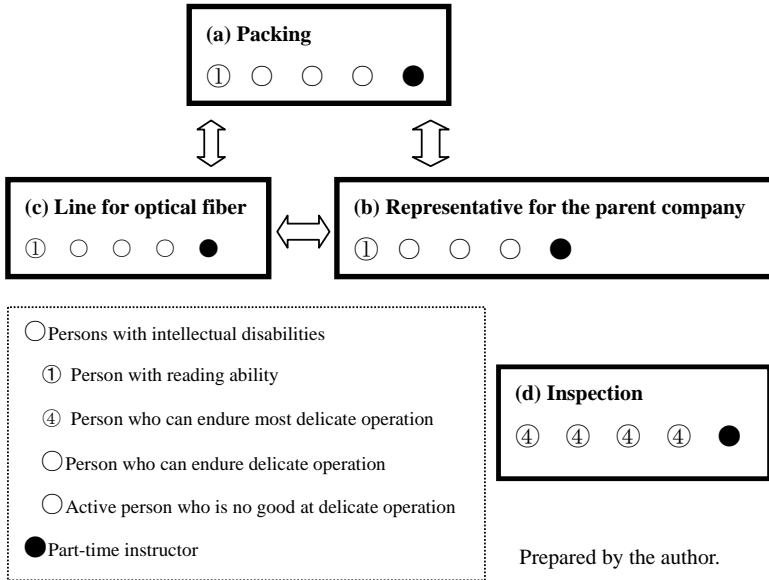


Figure 2. Working Composition Image of Company S (Work Rotation)

F accepts the cleaning service, the parent company delegated it to two contractors outside the company. The parent company initially asked those two companies to add persons with intellectual disabilities to the cleaning service in order to expand job opportunities for them, but they refused. Therefore, the parent company terminated the contract with the two, made Company F as a prime contractor of the cleaning service and additionally contracted with external cleaning service companies which showed understanding of employing persons with intellectual disabilities as partners of Company F. Advantages of making Company F as a prime contractor and grouping with other cleaning service companies are as follows:

Generally, there are two kinds of company cleaning, daily cleaning and special cleaning which is needed a couple of times a year. As for daily cleaning, since the ground of the parent company is large and the garbage quantity varies daily, it seems difficult for Company F with persons with intellectual disabilities alone to respond to such changes. Regarding special cleaning conducted a few times a year, organic solvents and special cleaning machines which are not normally used are needed.

As a prime contractor, Company F has become able to put external cleaning service companies to work with its persons with disabilities at a reasonable pace, which enables Company F to conduct cleaning service for the headquarters smoothly.

*Combination Example of Persons with Intellectual Disabilities in Company S*

Company S mainly provides inspection and packing services for products of the parent company, a diversified chemicals company, and manufacturing support service for it. The working system is shown in Figure 2.

Table 2. Facilities of Social Welfare Corporation K and Main Vocational Training Items

Facility	Foundation	Capacity	Main vocational training item
First vocational training workshop (Stay)	April 1993	50 people	• Manufacturing of Buddhist altars (patching with putty, coat and polishing)
Second vocational training workshop (Ambulatory)	April 1997	30 people	• Work on light duty (bagging operation for packets of dried sardine and making carton cases) • Practical training outside the workshop, etc.
Welfare Factory M (Welfare factory)	April 2002	20 people	• Manufacturing of Buddhist altars (patching with putty, coat and polishing) • Making wooden crafts, processing raw materials for seasoning, etc.

Prepared by the author based on interview survey.

In principle, Company S does not set a person with intellectual disability to work alone. 16 people with intellectual disabilities are divided into four groups by disability property, working ability, character and sex and the work is completed by each group. Such combinations eventually lift performance of the entire company.

Three out of the four groups basically conduct the following work by rotation: (a) packing service which requires little perseverance, (b) representative service for various works on light duty of the parent company and (c) production line duty for optical fiber.

In addition, ① a person with reading ability, ② a person who can endure delicate operation and ③ an active person who is no good at delicate operation are allocated to each group. The person with reading ability reads a duty slip when starting work and makes a work arrangement to some extent.

Group (d) consists of ④ people who can endure most delicate operation. This group (women only) only inspects quantity and defects of small buffer materials which is a basic work for Company S. The administrative manager explained that, “since it is a simple work requiring delicate operation, it takes full advantage of them and probably it is hard for people without disabilities to do the same operation.”

Their operations are checked by part-time instructors who are allocated to each group to work with them, but the instructors are not much involved in their daily work arrangements.

## 2. Success Case of Employing Persons with Intellectual Disabilities in the Local Area: Vocational Training Workshop C

### (1) Outline of Vocational Training Workshop C

Vocational Training Workshop C was established in April 1993 with 30 people for stay and 30 people for ambulatory (Table 2). The annual gross profit of the entire vocational training workshop was 40 million yen as of 2005 and about 15 million yen of them was from Buddhist altars, i.e., it contributed most to the management stably securing a certain profits. Regarding other services, about 10 million yen was from contracts outside the workshop and the rest was

from work on light duties. The workshop energetically continued operating activities in order to constantly obtain new jobs from outside the company even at that time when the business relatively became stable.

Although activities of Vocational Training Workshop C contain factors of cooperation with Welfare Factory M which is attached to it, I analyze them as solo activities in this paper as the activity contents seem to be almost stand-alone.

## (2) Manufacturing of Buddhist Altars

Since it is an important service for Vocational Training Workshop C to manufacture (especially coat) Buddhist altars from the perspective of facility management and it contains an important factor for seeking a direction of employment for persons with intellectual disabilities described below, I would like to explain how to manufacture Buddhist altars here.

There are six manufacturing processes for Buddhist altars in Vocational Training Workshop C: (i) puttying, (ii) base coat, (iii) primer coat with sealer, (iv) coat with surface, (v) manual coat/polishing and (vi) coat/polishing by machine. Especially, it maintains its monopoly in the undercoating technique for doors in this area. The reason comes from that there was only one company which had this coating technique in Kitakyushu City and the president passed on his technique to this facility living under the same roof with persons with intellectual disabilities because he reached an advanced age and had no successors. This allowed it to make transactions with 20 to 30 Buddhist altar dealers, about half in the local area, and obtain about 60 to 70% of related Buddhist altar manufacturing processes except assembly and gilding.

Vocational Training Workshop C is also active in capital investment such as introduction of a large polishing machine and a far-infrared drying chamber. This led it to get away from domestic handcraft industry in which many vocational training workshops still remain and develop into a modern production site in which efficiency can be sought.

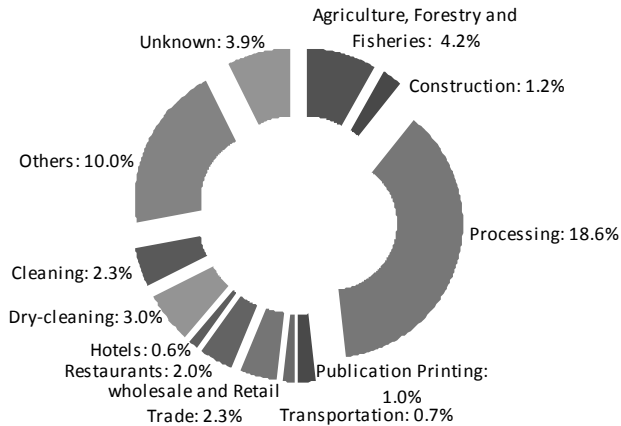
## III. What Can Be Done and What Cannot? What Is Needed?

Persons with intellectual disabilities who are difficult to complete their work independently need some assistance in order to produce working results. In fact, many people with intellectual disabilities engage in relatively simple work receiving assistance from surroundings at labor-intensive workplaces (Figure 3).

### 1. A Theory of Intellectual Skills and Working of Persons with Intellectual Disabilities

#### (1) Intellectual Skills at General Workplace

Continued employment of persons with intellectual disabilities is based on the premise that they have a certain level of basic abilities, e.g., physical strength, ability to understand instructions, willingness to work, enduring strength, accuracy, ability to concentrate, emotional security,



- Notes: 1. Chart was compiled by the author from *Survey on Persons with Intellectual Disabilities 2000* by Ministry of Health, Labour and Welfare.  
2. Workshops (50.1%) are not included.

Figure 3. General Workplace for Persons with Disabilities

sense of responsibility, initiative, daily greetings, cooperative behavior and mobility capability. It is also important how to deal with various troubles which occur daily at workplace.

People without disabilities can successfully deal with “skill” factors such as experience and ability to guess based on that and flexible judgment. However, persons with intellectual disabilities are not good at doing such things.

Before considering how to deal with persons with intellectual disabilities, I would like to look at the skills which are important factors for ordinary people (without disabilities) to continue their works.

As for job skills, I have to mention the theory of intellectual skills by Professor Kazuo Koike. I quote his “intellectual skills” below:

Intellectual skills are know-how for handling problems and changes. Even mass productive assembly line, if you observe it for at least half a day, you can find out ‘usual operation’ and ‘unusual operation.’ Usual operation seems to be monotonous and repetitive and able to be done with little skill. However, even on mass productive assembly line with repetitive work, changes and unexpected problems including small ones frequently occur surprisingly. In order to keep producing smoothly, it is always required to deal with such changes and problems. Such operation is called ‘unusual operation.’ There are two types of unusual operation, response to problems and response to changes.

Regarding response to problems, the following three know-hows are required: (i) investigation into the cause of problems, (ii) resolving the cause and (iii) check. Concerning response to changes, know-hows are required for: (i) changes in production method, (ii) changes in production volume, (iii) changes in product type and (iv) changes in personnel organization” (Koike 1997, 1-3).



Next, what response is needed for smooth operation in a general workplace? Take a look at the following description regarding “problem handling” in Koike theory:

“There is an opinion that you should not expect production workers to acquire annoying intellectual skills but leave it to qualified workers. There may be two specialization systems, ‘separation’ and ‘integration.’ The former is that production workers are committed to usual operation and ask qualified workers to do unusual one. On the other hand, the latter is that production workers are in charge of a part of unusual operation as well as usual one. The question is which specialization system is more efficient” (Koike 2005, 21).

As seen from the above, it turns out that an operator and a person who deals with problems are not necessarily the same person and it may be unnecessary to solve problems right there.

## (2) Response at Workplace of Persons with Intellectual Disabilities

Then, how do they actually deal with “changes and problems” at workplace where persons with intellectual disabilities are working smoothly? As same as Koike theory, these responses are divided into (i) response to changes and (ii) response to problems (troubles) as follows:

### *Response to Changes*

First, as for response to changes at organization level, this reduces the occurrence of changes at individual operation level by removing factors of changes as much as possible at the stage of organization.

Looking at the case of parts packing service in Company R, (i) service is limited to the work with relatively long time for delivery of parts, (ii) orders are relatively constant and (iii) other formidable work is undertaken by other cooperative companies. That is, the scope of Company R’s service is specified among the group to avoid the occurrence of temporal, quantitative or qualitative changes as much as possible.

Company F’s cleaning service is also in the same situation. Company F became a prime contractor of the cleaning service for the parent company and provides cleaning service with other cleaning companies which consist of non-disabled people. This allows Company F to undertake relatively simple and stable work, i.e., other cleaning companies play a role of buffer for the quantitative (fluctuation of garbage quantity) and qualitative (special cleaning) changes. Overall, this enables smooth cleaning service for the parent company.

As for jobs with quantitative or qualitative fluctuation factor, except temporal factor, the mechanism does not rely on individual abilities of working persons with intellectual disabilities as much as possible.

### *Response to Problems (Troubles)*

Next, I would like to discuss problem handling. The first one is response to machine troubles. Basically, there is no complicated or dangerous operation when persons with intellectual disabilities use machines. Even if original machines are complicated or dangerous, they

have been altered to avoid such things by utilizing subsidies. Nevertheless, since the use of machinery may lead to a big accident, people using machines are limited at most of workplaces. When doing “unusual operation” such as model change and maintenance/repair, the company does not allow persons with intellectual disabilities to do but people without disabilities substitute for them. This is “separated system” according to Koike theory.

It is a lifeline for business activities to prevent defective products from occurring (frequency and level) when accepting work. To take work on light duty in Vocational Training Workshop C as an example, at each workplace, (i) there is a sample of finished product, (ii) “operating instruction” describing detailed procedures such as who does what, weight and how to pack and “confirmation note” are displayed for instructors, and (iii) various checks, e.g., examination of foreign body and reweighing after packing in the cardboard boxes, are conducted (iv) to conduct double checkups.

## 2. Composition of Response to Changes and Troubles

As above, at organization level, troubles can be eliminated by identifying scope of work and people involved in the work at each workplace and expecting changes in the following five aspects: production method, production volume, type of product, composition of operators and operation for new product.

Concerning troubles, in addition to the organizational structure where troubles are hard to occur, even at the individual operation level, there is a thorough job design so that persons with intellectual disabilities are not involved in the area in which troubles are expected as much as possible. For this reason, all processes from occurrence of troubles to analysis, response and check are non-disabled people’s (organization’s) side. It can be said that discovery of defective products/mistakes does not rely on individual abilities but operations to check defective products/mistakes are incorporated in the work process.

In other words, because surveyed companies expect when, where and how changes and troubles happen, they thoroughly eliminate the factors in advance and persons who respond to changes and/or troubles are limited.

They narrow down the working area (width of work) in which persons with intellectual disabilities can work with relatively few changes and troubles and let them improve their skills (depth of work). If they are difficult work by themselves, instructors (without disabilities) support that part. What is clear is that they never let persons with intellectual disabilities find, analyze or respond to troubles but non-disabled people do instead. Probably at workplace, it is a key for employment of persons with intellectual disabilities to narrow down the width of work and support it according to the plan, and seeking of the depth of work would lead to ensuring of profits utilizing persons with intellectual disabilities (Figure 4).

## 3. Craft-Type Skills and Problem Resolution-Type Skills

I considered skills at mass production site based on Koike theory. Then, how should the case of traditional craft (manufacturing of Buddhist altars) in Vocational Training Workshop C

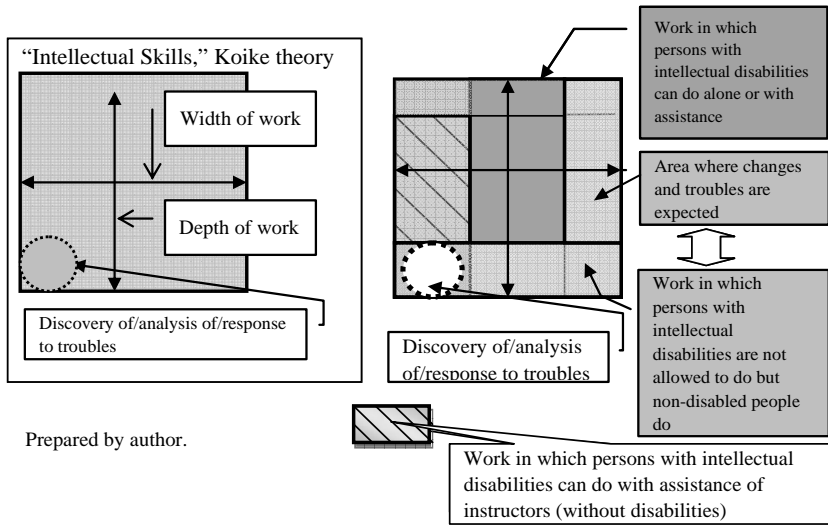


Figure 4. Image of Workable Area for Persons with Intellectual Disabilities

be considered? I would like to consider it on the basis of the concept of skills by Innovation Center, Hitotsubashi University.

According to Hitotsubashi University Research Center (2004, 248-49), “in order to understand skills which characterize manufacturing, it is crucial to understand by dividing them into two, craft-type (professional) skills and problem resolution-type (intellectual) skills and craft-type skills are handling/assembly skills exploring the upper limits of tools, machinery and equipment. Problem resolution-type skills are ones to promptly and accurately determine the causes of defective products and the production processes.”

Applied this to the process of Buddhist altars in Vocational Training Workshop C, persons with intellectual disabilities have obviously craft-type skills and people without disabilities have problem resolution-type skills, i.e., their roles are clearly divided. As for craft-type part in which persons with intellectual disabilities are in charge of, although they accept the assistance from non-disabled people for some difficult work such as operations of machinery and equipment, they have improved their quality of proficient skills which is not so different from that of non-disabled people and increased added values for the craft-type work which is determined as workable.

#### 4. Intellectual Skills at Workplace of Persons with Intellectual Disabilities

Like the examples of special subsidiary companies, parts packing service of Company R, cleaning service of company F and work in Vocational Training Workshop C, the existence of businesses achieving a certain result by utilizing persons with intellectual disabilities shows the effectiveness of Koike theory. However, there is a crucially different part regarding skills.

That is, the subject of skills of non-disabled people is working individuals according to

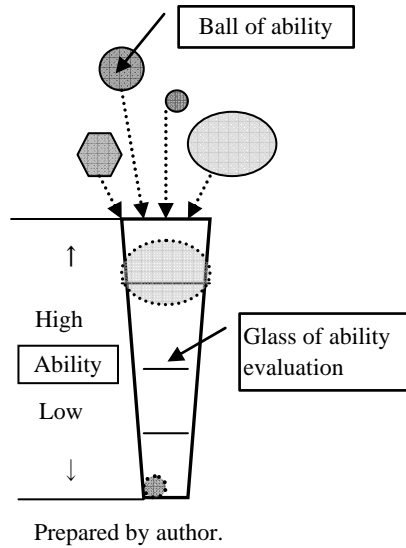


Figure 5. Relationship between Abilities and Evaluation

Koike theory, but skills at workplace of persons with intellectual disabilities are in the organization. At workplace of persons with intellectual disabilities, factors of skills are not left to individual abilities of those working there but are established in the mechanism of support by instructors so that the management side can always manage the factors.

The reason is that it is difficult for persons with intellectual disabilities to respond to changes and troubles and they can hardly maintain their skills. Therefore, organizations need a system to acquire, accumulate and manage their skills as precious resource, in the daily business.

#### IV. How to Find out Labor Values of Persons with Intellectual Disabilities

##### 1. Relationship between General Abilities and the Evaluation

I would like to abstract the relationship between general working abilities and the evaluation using ability balls and an ability evaluation glass (Figure 5). Assume balls showing individual working abilities and a glass which indicates the evaluation tool (I call it “ability evaluation glass”).

Shapes of balls may be balanced sphere or distorted depending on strong and weak abilities. Sizes of balls (abilities) shall be also varied.

The shape of glass which indicates the evaluation shall be upside-down triangle. There is a vertical scale of evaluation on the side of the glass. The upper the scale is, the higher the evaluation value becomes. Various balls are dropped from the top and the point where the ball stops shall be the evaluation value of the ability.

There are various sizes of balls: some larger balls stop at near the top, some smaller ones stop at near the bottom and some reach the bottom. Such evaluations may be carried out in an open general labor market by occupation or on companies' own accord (as an internal labor market). It is very likely that balls stop at the upper position when evaluations are carried out on companies' own accord.

The timing to throw a ball in the glass (evaluation opportunity) would vary depending on individual working life, e.g., company entrance exam, valuation of bonus, judgment for promotion and evaluation of previous work experience when changing jobs. Therefore, even if the evaluation is low at one time, it may become higher along with improved abilities or carrier in a few years.

## 2. Creation of Labor Values of Persons with Intellectual Disabilities

According to above cases, balls of abilities of persons with intellectual disabilities are small and many of them may reach the bottom of the glass. That is why many people with intellectual disabilities working for vocational training workshops receive a few to ten thousand yen as a monthly income (less than one tenth the general Japanese monthly income).

Then, why balls of above mentioned three special subsidiary companies and Vocational Training Workshop C stop at the middle of the glass, i.e., why they can create a certain labor value? The shapes of their balls may differ from that of people without disabilities.

### (1) Case of Special Subsidiary Companies

According to the case of Special Subsidiary Company S, in order to create the labor value utilizing persons with intellectual disabilities, this company (i) analyzes workable abilities of individual persons with intellectual disabilities, (ii) combines individual abilities to make groups and (iii) they complement each other in each group.

If they would not have disabilities, their self-contained abilities would be one ball. The company combines works of persons with intellectual disabilities so that the operation can be done by more than one person (Figure 6).

However, a mutually complementary group would not be established by simply combining them from the perspective of abilities. In order to establish such a group, a role of adhesive which binds people would be required.

Since it is harder for persons with intellectual disabilities who lack in communication skills to collaborate with peers than non-disabled people, this role is especially important. Each special subsidy company has prepared unique know-how and system to maintain a good relationship between them in order to cooperate with each other in the company.

The reason why such grouping is possible is because one person with intellectual disability whose working ability is relatively high has been hired from among 10 to 20 times more applicants. There is a favorable situation for special subsidiary companies. Even if there is

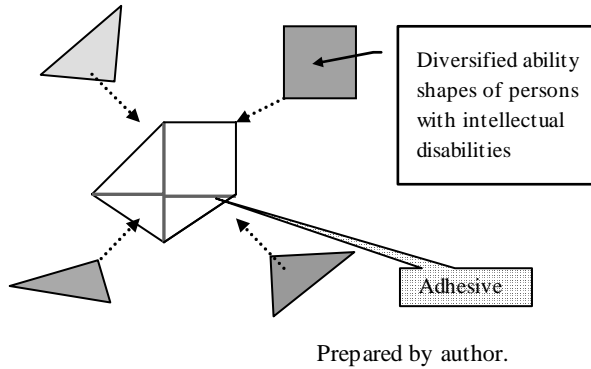


Figure 6. Ability Combinations in Special Subsidiary Company

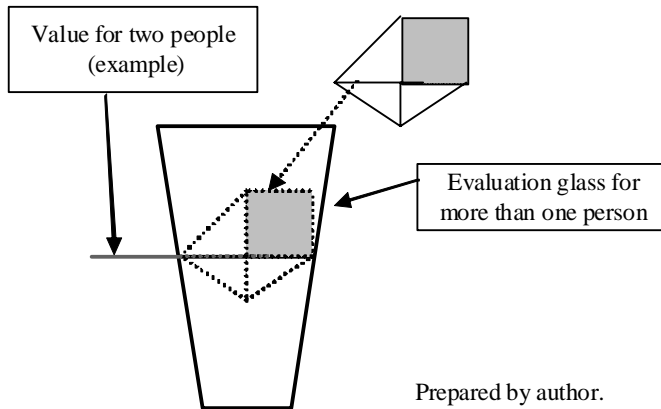


Figure 7. Creation of Labor Values of Persons with Intellectual Disabilities

a great difference between their abilities or properties, provided that each of them has a certain level of working ability for specified work, the companies are able to screen/hire them expecting mutually complementary (or optimal) grouping by efficient combinations of their abilities.

In particular, when accepting them from senior high schools for disabled persons, since they have practical work experience for a couple of weeks while in schools, the companies hire them based on their individual abilities, characters and problems.

Then, how do special subsidiary companies like Company S reflect their abilities summarized as above in the value evaluation? The size of the ball (abilities) is larger than that of one healthy person since the ball consists of more than one person. However, the values are not based on the number of them. The value of four people with intellectual disabilities may be equal to that of two non-disabled people and the value of five may be equal to that of three non-disabled people. Nevertheless, people whose balls reach the bottom of the glass alone and who can create little working results are able to create a certain level of labor values here (Figure 7).

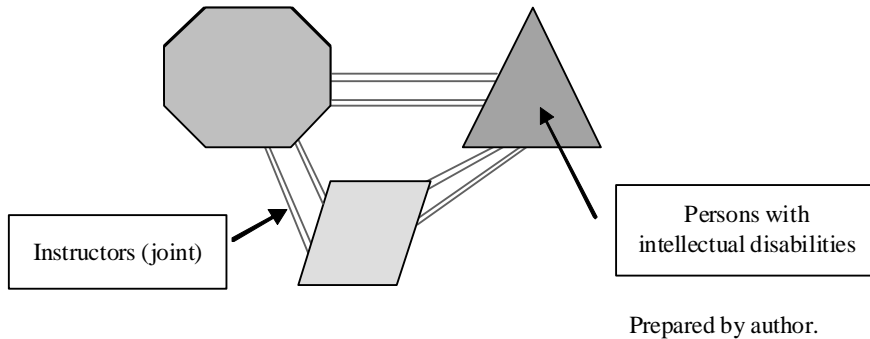


Figure 8. Collaboration of Abilities in a Vocational Training Workshop

### (2) Ability Combination and Work Assistance in Vocational Training Workshop

How about vocational training workshops which basically do not screen when hiring them? Since differences of individual properties and abilities are greater than that of special subsidiary companies, it is relatively difficult to directly let persons with intellectual disabilities collaborate together and therefore instructors at working sites should play a role of joint which connects them (Figure 8).

It would be appear that the efficiency of work on light duty of special subsidiary companies is higher than that of general vocational training workshops due to the difference between direct and indirect collaborations with persons with intellectual disabilities and the different levels of instructors' intervention.

### (3) Screen of Personnel and Selection of Work

When hiring persons with intellectual disabilities, work choices are different between special subsidiary companies which can screen them and general vocational training workshops which basically do not. In other words, special subsidiary companies choose people to suit the work but vocational training workshops choose work to suit the people.

This difference has a great influence on the security of company's profitability and the stability of business regardless of difference in abilities of members (persons with intellectual disabilities) working there. Because, special subsidiary companies can choose the work (from the work area of the parent company) to secure the profit while general vocational training workshops have to choose the work to suit the abilities of facility users (persons with intellectual disabilities) and the work could be unprofitable "avocational operation" which is far from the market demand in some cases (regarding Vocational Training Workshop C, see "Acquirement of work" [selection and concentration]).

## **V. Setting of Local Environment for Maintaining/Improving Labor Value of Persons with Intellectual Disabilities**

### **1. Product Value and Expectation from Market/Local Area**

In order to increase the value of manpower which is a derived demand, products and services must be highly valued. However, there is little high value-added work of persons with intellectual abilities in the market. From this standpoint, the manufacturing of Buddhist altars in Vocational Training Workshop C has some favorable terms to maintain high added-values.

In particular, although Japan's Buddhist altar industry is on the decline as a domestic industry due to increased cheaper imports from China, (i) Japanese consumers are eager to buy domestic products (traditional craftwork) due to religious reasons so there is a certain demand and (ii) since the price range of Buddhist altars is wide, from around 3 million yen to about 10 million yen, high profits can be produced depending on the quality of products.

Also, (iii) since Buddhist altar industry is a comprehensive traditional industry which requires accumulation of high-level skills, new entry into the market is extremely difficult while (iv) once high-level traditional skills are obtained, the role to maintain the industry is expected by domestic industries. Specifically, (v) the role to maintain the local industry is expected from the aspect of human resources since local young people have gone to urban areas.

For these reasons noted above, Vocational Training Workshop C secures a certain level of profits as well as creating an environment where persons with intellectual disabilities are accepted and can maintain their working life.

### **2. Sophistication of Craft-Type Skills in Vocational Training Workshop C**

How does Vocational Training Workshop C maintain and improve high-level skills utilizing persons with intellectual disabilities?

#### **(1) Evaluation of Instructors' Contributions**

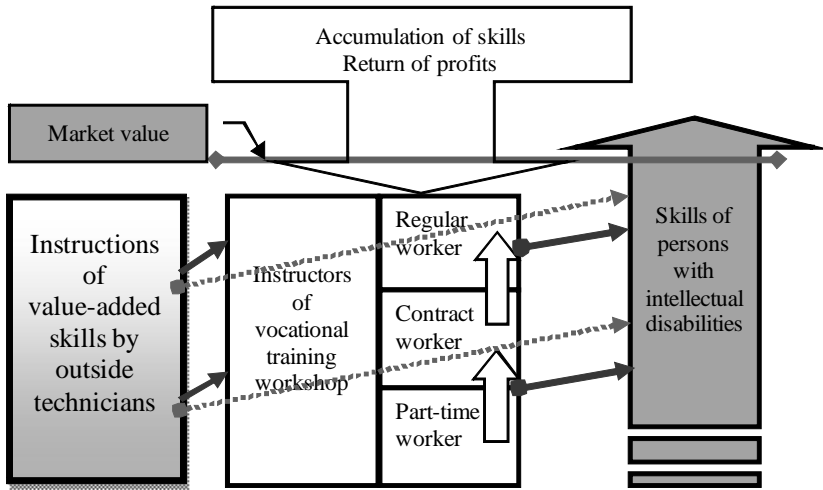
In order to improve working abilities of persons with intellectual disabilities, what cannot be overlooked is to improve abilities (skills) and generate motivation of part-time employees and facility staff who instruct the work in the vocational training workshops. It is essential for persons with intellectual disabilities who can hardly improve abilities themselves to improve abilities of instructors who constantly and strongly develop abilities (skills) of persons with intellectual disabilities.

Therefore, as a mechanism of improving techniques and skills of the entire facility, Vocational Training Workshop C provides incentives for improving abilities of persons with intellectual disabilities to regular employees and part-time employees in the shape of adjustment of their status or return of profits to them.

#### **(2) Improvement of Instructors' Leadership Abilities**

There are two abilities of instructors in Vocational Training Workshop C. One is operating





Prepared by author based on interview survey.

Figure 9. Circular Composition of Skills and Compensation of Persons with Intellectual Disabilities in Vocational Training Workshop C

ability and another one is teaching ability to facility users (persons with intellectual disabilities).

In order to manufacture products with market value, the manufacturer must have a certain level of skills. It is almost impossible to acquire high-level skills which exceed the market value by a vocational training workshop alone especially for high value-added products like craft work. Therefore, Vocational Training Workshop C has directly received skill transfer from outside instructors in order to acquire skills.

Concerning teaching ability, instructors must teach not only operating procedures but also independent operations to some extent depending on disability characteristics.

In the case of Vocational Training Workshop C, outside technicians with manufacturing skills collaborate with facility staff with knowledge of persons with intellectual disabilities such as their characteristics to instruct them producing a better effect.

In short, constant instructions are needed to improve abilities of persons with intellectual disabilities who can hardly obtain intellectual skills. In order to manufacture high value-added products in the market, a two-stage instruction system, skill transfer from outside technicians to instructors and daily instructions from instructors to facility users (persons with intellectual disabilities), is effective in tandem with direct instructions from the technicians to the facility users (Figure 9).

The important point is to establish a mechanism and incentives which lead to own interests when instructors at working sites improve skills of persons with intellectual disabilities.

## **VI. Working Framework of Persons with Intellectual Disabilities**

### **1. Working Framework of Special Subsidiary Companies**

#### **(1) Organizational Structures against Market Competition**

I verified the way of using persons with intellectual disabilities based their disability characteristics, organizational operation, acquirement of skills and evaluation methods of their working abilities using success cases. As expected of companies/groups with disadvantages of human resources for daily business management, there are well-defined efforts in which organizations of people without disabilities have never done.

However, there is no way to explain how to produce work outcome utilizing persons with intellectual disabilities with above managerial efforts only. I believe the big factor is, taking special subsidiary company as an example, three organizational protecting functions against market competition. The functions can be summarized as follows:

- (i) Exclusion of sector peer companies' entry and reduction of burden on business activities
- (ii) Security of a certain level of profitability (security of work area where profits can be maintained not getting involved in competition for lower prices)
- (iii) Security of work pace for disability characteristics

I realize that above functions are very "defensive." Needless to say, business management always needs both "offense" and "defense." In order to counter the rigors of general product market competition with persons with intellectual disabilities, "defensive" factor is especially important more than general companies. Consequently, special subsidiary companies whose mission is to have many people with disabilities have a framework in the organization so that they can counter the market.

Then, what is the source which allows such small companies to have an organizational power that can counter the market?

#### **(2) "Working Framework" of Major Companies and Failure of Labor Market of Persons with Disabilities**

Major companies generally have a (social) mission to achieve "minimum employment for person with disabilities" apart from "economic transactions in goods and services." However, there are some issues when employing persons with disabilities (especially those with intellectual disabilities) in major companies' main bodies.

The issues are, in Japan today, (i) major companies themselves are internal labor markets on the basis of high wages and long-term employment and (ii) social changes, i.e., labor-intensive workplaces for mass production have been rapidly reduced due to automation and overseas transfer. Especially in Japan facing more than 5% of unemployment rate (as of October 2009), (iii) internal labor markets require those who are without disabilities as well as with outstanding specialist capabilities and the people who do not meet companies' requirements have to go out into external labor markets.

Under the circumstances, it is a significant risk for major companies with high average

wage to employ persons with disabilities with high asymmetry of information. It is even more difficult to directly employ persons with intellectual disabilities.

As collateral evidence, as of June 2009, the actual employment rate of private companies is 1.63% while the legally-prescribed minimum employment rate is 1.8%, i.e., the percentage of companies which achieved the minimum employment rate is only 45.5%.

### (3) External Consolidation Solution in Special Subsidiary Companies

As above, it is extremely difficult for major companies to directly employ persons with intellectual disabilities. However, the larger the company size becomes, the greater the social responsibility is and they cannot afford to ignore. Then special subsidiary companies come to the front.

As for employment of persons with disabilities in major companies, it is better to let their special subsidiary companies employ on behalf of them since there is a system that the number of persons with disabilities employed by the special subsidiary company can be counted for the calculation of the employment rate of the parent company. In addition, as mentioned above, special subsidiary companies are not heavily dependent on assistance from parent companies.

Parent companies can ask special subsidiary companies to manage business independently with little financial burden. What parent companies take responsibility for is just to seek work for persons with intellectual disabilities from own companies or related companies, adjust quality and quantity of work and provide job opportunities like always filling a glass with water.

In addition, when placing orders with special subsidiary companies for such work, economic transaction costs can be kept lower than that through the market due to lower wages of special subsidiary companies compared with that of parent companies and general sector peer companies. As above, parent companies take few risks and enjoy a considerable amount of benefits, e.g., social transaction as employment of persons with disabilities and cost reduction.

That is, it is highly likely that major companies, in the two markets, goods and service market and labor market, enjoy an advantage by using special subsidiary companies as “semi-internal organization” rather than general markets. This is the case that “although market failure occurs, if two parties are consolidated, the market failure associated with externality will be processed within the organization and disappear” (Imai, Itami, and Koike 1982, 4-5).

Special subsidiary companies are “external consolidation solution” against market failure.

## 2. Slow Assistance Environment in Vocational Training Workshop C

### (1) Role of Local Industry as “Working Framework”

How about welfare-oriented employment site which is represented by vocational training workshops? I would like to see the situation of securing work in general vocational training workshops.

Vocational training workshops which do not receive any jobs from parent companies like

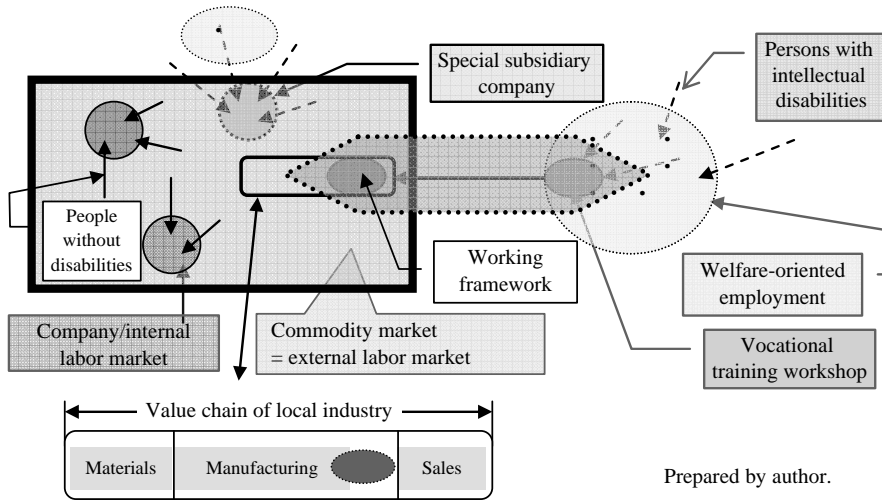


Figure 10. Entry of Welfare-Oriented Employment into External Labor Market

special subsidiary companies must obtain a certain amount of work to fill the vacant time for work of persons with intellectual disabilities. However, many of jobs' unit prices are low so a large profit cannot be expected as a result. Many of them are highly likely involved in competition for lower prices. Moreover, unlike special subsidiary companies, persons with intellectual disabilities are not carefully screened by vocational training workshops when accepting them so there is a lot of individual variation in working abilities between members. After all, many welfare-oriented employment sites like vocational training workshops undertake mindless jobs which do not contribute to the improvement of working abilities in order to fill the vacant time for work and the security of profits comes second as a result.

On the other hand, how about Vocational Training Workshop C covered in this paper? As same as other general vocational training workshops, there is no support organization like a parent company for special subsidiary companies. The members would be seated in the welfare-oriented employment area which is far from internal labor market or even external labor market under normal circumstances. They have no labor value alone.

However, if there is an excellent leader who focuses on the competition area and makes groups of their abilities as "working framework" (internal organization) toward goals, e.g., obtaining a part of value chain, their dispersed and eccentrically-located abilities have an organic link and produce labor values as an organization. This allows the organization to break the wall of external labor market, enter into general labor markets and fill a place in the internal labor market as a full part of the local industry. That is why Vocational Training Workshop C places itself in the environment in which it can be easily expected and supported by the local area (Figure 10).

In other words, Vocational Training Workshop C obtains "defense" from both organization and market by functioning as "working framework" (internal organization) in the local

industry. If there is no factor of such “slow assistance environment”, Vocational Training Workshop C would also be pressed by unprofitable work with low unit prices and the organization would be unstable as same as other vocational training workshops.

Then, what obtained the position as “working framework”? It is that the leader of the organization is not oriented toward maintaining the status quo but has a character of innovator who always developmentally lead and the innovator properly select and concentrate on the work.

## (2) Acquirement of Work (Selection and Concentration)

Regarding acquirement of work, Vocational Training Workshop C also fundamentally have to acquire work from outside to avoid any vacant time for work as same as other general vocational training workshops. And the work must be within the range of abilities of members (persons with intellectual disabilities).

Then what is the advantage of Vocational Training Workshop C over other general ones? It is that it builds up the “defense” by making its business as Buddhist altar manufacturing to be a part of “value chain of products” in the local industry and obtain support from the local area while managing “aggressive” business, i.e., repeatedly making a choice of work which can be operated by facility members and are profitable for the facility taking advantage of limited opportunities of selecting work.

Its flexible business management, building up the defense and conducting business aggressively, can be seen.

### *“Selection” of Work*

Focusing on “selection” of work, work obtained from outside is divided into (a) “work which only some persons with intellectual disabilities can do” and (b) “easy work in which most of them can participate in.” The “work which only some persons with intellectual disabilities can do” is also divided into (a)-1 “work making profits in a short time” and (a)-2 “work contributing to facility management from the middle- to long-term viewpoint.”

If such relationship is compared to field athletes, selected athletes are (a), other normal athletes are (b), selected sprinters are (a)-1 (spot short transaction) and long-distance athletes are (a)-2 (long-term continued transaction).

Depending on the competition (team ball sport or individual sport like athletics), members are selected by physical conditions at one stage and some members are fixed for a specific competition at another stage. In some cases, they change competitions to participate in by looking at characteristics of members. This would be the clever method of using players (human resources) to secure profits utilizing handicapped human resources.

### *“Concentration” of Work*

Next is “concentration” of work. The characteristic of Vocational Training Workshop C is to focus on a traditional craft, Buddhist altar, as a new opportunity. Initially, it had tried various

jobs and finally it focused on the coating of Buddhist altars. The reasons are mainly the following three points:

- (i) In the Buddhist altar industry, due to social changes and competition with China, it is difficult to settle the compensation for manufacturers and they are leaving. However, the needs never disappear.
- (ii) Under above circumstances, the number of competitors decreases in a declining industry while Vocational Training Workshop C's contributions to the local industry is acknowledged and it can easily receive support by taking responsibility for a part of operating processes as a vocational training workshop.
- (iii) Although local young people do not want to inherit skills since it takes long time to obtain, as a community-based vocational training workshop, profits can be expected for a long time once skills are acquired.

As above, the reason why Vocational Training Workshop C focused on the coating of Buddhist altars as a main business is because "if it were a company with people without disabilities, even if it can obtain this job, there would be little advantage or business would not work out. As a vocational training workshop for persons with intellectual disabilities, there are many advantages to acquiring and continuing this job."

Many vocational training workshops are bound by the security of work at hand (short-term work on light duty) and involved in endless competition for lower prices while Vocational Training Workshop C living in the local area puts its attention on high value-added work from relatively long-term perspective to secure the steady profits and stabilize the organization.

This has become possible as it secures the range of work where the advantage of organization/group with many people with intellectual disabilities can be exerted and due to the method of using human resources making effective use of limited members.

## **VII. Conclusions**

Finally, I would like to look back on above mentioned analyses of successful cases of special subsidiary companies and Vocational Training Workshop C.

First, special subsidiary companies complete the work by specializing the range of work in which they can do, understanding strong and weak points of individual members, bringing out their individual limited abilities and organizing mutually complementary groups.

Concerning the relationship with the parent company, the parent company gives job opportunities so that the subsidiary company can secure stable profits regarding burdens generated by having persons with intellectual disabilities as compensation for securing the minimum employment rate for persons with disabilities. For this reason, the economic rationality is established in both parent and subsidiary companies.

On the other hand, while many other vocational training workshops have a tough time at the management and vocational guidance sides, Vocational Training Workshop C works on

Buddhist altar manufacturing which is a local industry to secure performances on par with special subsidiary companies. As a result of analyzing the reason for the success, I see that there are some efforts to overcome the handicap, i.e., strategy of putting its attention on the local traditional crafts to improve the skills for a long time without support from outside unlike special subsidiary companies with the parent company, as well as management in common with special subsidiary companies such as specification of range of work and mutual complement between persons with intellectual disabilities.

These are organizational structure, mechanism, efforts and organizational environment in order to realize work and employment of persons with intellectual disabilities. These are all important factors when they work, and especially important factors are conversion of “labor value criteria” for persons with intellectual disabilities (placing value on results after the mutual complement with teamwork, not regarding individual abilities as same as people without disabilities, etc.) and “working framework.”

Because, it is an extremely hard act for persons with intellectual disabilities who can hardly complete work alone to discover individual labor value applying standards of non-disabled people and persons with intellectual disabilities are vulnerable workers and need “defensive factors” more than non-disabled people.

Some people may have doubt about the fact that persons with intellectual disabilities can work and continue a certain economic activity. However, in the organizations which I picked up as cases for the verification, there are very natural relationships, just like parent birds bring food into the nest to feed the chick there.

Both special subsidiary companies which contribute to the maintenance of the employment rate for persons with disabilities of the parent company and Vocational Training Workshop C which contribute to the maintenance of the local industry place themselves in a good environment regarding the organizations (nests) as “working framework.” Because there are external circumstances protecting from such competitions and/or outside enemies, unique and various employment efforts and approaches prove effective and individual working abilities of persons with intellectual disabilities are acknowledged as worthwhile.

A give-and-take (two-way) relationship is seen from persons with intellectual disabilities working and living there who are warmly accepted by the local community through maintaining their vocational life unlike many other persons with intellectual disabilities who receive (one-way) support from the local community.

It is significantly important for persons with intellectual disabilities that their work outcome (value) is acknowledged beyond comparison with people without disabilities’ labor value. It is not the problem of wages or outcome size. What is important is the fact that results are produced and persons with intellectual disabilities are involved in it (the ball stops at the middle of the evaluation glass).

In these organizations, individual persons with intellectual disabilities are, indeed, constituent members of the community or society, their work is incorporated into the social division of labor as an economic system, and mutually complementary and mutual aid relationship with

surroundings has been generated accordingly.

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