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Methods and Conditions of Externalization: Use Tendency and Effect of Knowledge Expressions in Japanese Sake Breweries

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This thesis proposes a new analysis framework that develops an explanation about externalization of the theory of organizational knowledge creation. In this framework, a new concept “interim expression” that links tacit knowledge and explicit knowledge is introduced.

On the way to externalize tacit knowledge to explicit knowledge, there are some ways of converting which interim expression is used for in this framework. There are various methods to convert tacit knowledge, and for the efficiency improvement of externalization it is important which converting method to choose. There are some examples of the methods like dialog, observation, montage, motion capturing, and so on. Not only the way of conversion used before carrying out externalization but also the condition in that conversion had to be taken into consideration. Organizational characters such as incentive and a commitment are the conditions to take into consideration in externalization. The ability of the individual who carries out externalization and the form of the explicit knowledge after the conversion should be taken into consideration, too.

Interim expression includes various expressions that are used in processes to convert the vague tacit knowledge into the specific explicit knowledge. Metaphor and analogy are interim expression, and it may take a form such as a picture and music. Some contexts are often necessary to understand interim expression. Not only interim expression is used on the way of

externalization but also interim expression is sometimes used continuously without more externalization.

Investigation about the concept “interim expression” was done for Japanese sake breweries (Sakagura) in Hokuriku to verify the validity of the analysis framework of externalization and to find the nature of the interim expression as well.

There are two good reasons why sake breweries were chosen for this investigation. The first is that there are many conditions that tacit knowledge becomes important very much in the advanced skill of sake brewing, tasting sake, and so on. The other is that a successor problem takes place. That correspondence is an important problem for sake breweries. In other words, most sake breweries are pressed for the choice of bringing up some skilled persons or proceeding with the mechanization early. Because the ways of coping with them were different in each sake brewery, the characteristics of these organizations and environments got variety. In this research the targets are three breweries of Ishikawa Prefecture, and all number investigation of the person concerned with the sake brewing was done.

There are two purposes of the investigation. The first one is to find what kind of language expression the brewery persons are using, and the second one is to find what kind of environment of the sake brewery organizations influences the use tendency of expressions.

The new technique that it didn't have was adopted so far for this investigation. First, the various expressions that would be used in the sake brewing processes were collected, then collected by the literature investigation and interviews to the sake breweries also.

The collected expressions were divided in every process of the sake brewing that relates, and then divided into vague interim expressions and definite explicit expressions. Each 10 explicit expressions and interim expression that related about each process were chosen, so the list consisted of 100 explicit expressions and 100 interim expressions in the 5 processes was made from collected expressions.

Each respondent answers three questions about each expression of that list. The questions are following. 1. Have you ever heard the expression? 2. Do you know its meaning? 3. Do you use it often? The complete questionnaire was made by adding a face sheet which consisted of the questions related to a respondents' age, the years of experience of brewing, the employment form such as season employment, the charge process, and so on.

Some interviews with the manufacture persons in charge of each sake breweries were carried out at the same time with the investigation for detailed information about the characteristics of each sake brewery.

By putting the results of the interviews and the survey together, some interesting conclusions were found. One is that the use tendency of interim expressions and explicit expressions of the brewery person varies in the figure of research and development of the organization. The other is that interim expression is used more often in the process when it isn't being mechanized and sake is being brewed by the manual operation.

It got two conclusions.

1. The validity of the introduction of the interim expression is high.
2. The nature of an organization can be studied by researching the use tendency of the interim expression and the explicit expression in the organization.

Therefore, the analysis framework of externalization proposed in this thesis could increase its validity. Furthermore, it found that the measurement of the tacit knowledge or the explicit knowledge that existed in the organization by making use of interim expression might become possible. It develops the theory of externalization in the organizational knowledge creation by continuing the research with this framework.