

THE METHOD OF KEY WORD

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ABSTRACT

New technique to combine VE technique with behavioral science.

WHAT IS "METHOD OF KEY WORD"

When we understand something, we shake our heads vertically. Do you know how we start to shake our heads (downward or upward)?

Answer: Two cases exist, that is, starting downward and starting upward.

When you understand the purpose, you start to shake your head downward, saying "Yes, it is."

And when you understand the meaning or method, you start to shake your head upward, saying "Oh, I see."

This phenomenon shows that we have a subconscious ability to choose the relationship of purpose and measures instantaneously and we start to shake our heads downward or upward.

Now, upon recognizing this phenomenon, we have the next question, "There must be a borderline level of these. Then, "where and what is it?" "Method of Key Word" reveals it and that is the procedure of how to establish this level on paper.

OUR EXPERIENCES

Our experiences teach us that when we start to work or think, it becomes easier to do after we grasp what we are going to do by an expression of "in brief it is to do"

We also have the experience that we can achieve the work more effectively if we grasp it in the relation "To do what, How to do" (or for what, to do how).

The key word is the most exact expression that defines, [in brief, "To do"].

The method of key word is the label for the procedure and way of thinking. And it derives the greatest potentiality to create something, using a positive mental attitude and our subconscious abilities.

PROCEDURE TO DERIVE AND CHOOSE "KEY WORD" (OR THE MOST APPROPRIATE EXPRESSION OF BASIC FUNCTION IN VE)

When we start to work or think, we always have the subject (or theme). The procedure for deriving "key word" starts from this.

Procedure

1. Identify the subject (or theme).
2. List all possible expressions which come in your mind as the answer to the question, "In brief what are we going to do with the subject?"
 Note: In this step you can use the least number of adjective and adverb, phrases or clauses with verbs and noun expressions.
3. Using scissors, cut apart each expression to have separated and independent expression cards.
4. Compare and arrange the expression cards in the sequence of "In order to xx, to $\Delta\Delta$ ", and "in order to $\Delta\Delta$, to $\square\square$ " from top downward on appropriate sized paper. If, in repeating to compare and arrange the cards, you find the expression cards which appear not to be arranged from top - downward, by any means. Re-arrange the equal ones side by side.

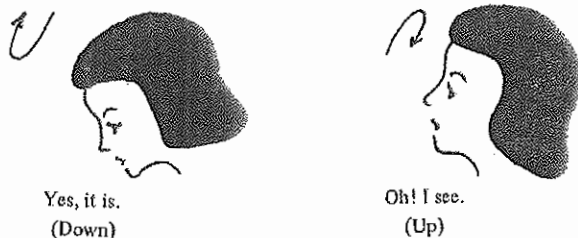


Fig. 1. Head movement when we understand something.

5. After arranging all cards, read them in repetition of "in order to xx, to $\Delta\Delta$, in order to $\Delta\Delta$, to $\square\square$ " checking to assure that they are in a logical and comfortable sequence. If you feel uncomfortable about the sequence of the cards, rearrange the cards or add new cards to them. When you are satisfied with the sequence, fix them on paper with transparent tape.
 6. Seek out the most concrete and appropriate expression level which satisfies both the higher and lower expression meanings. This expression is normally found near the center from top - downward. You can find this expression very magically.
- This is the expression of "Key Word."

- Note 1. In most cases, "key word" found in this stage is sufficient. However, when this Key word seems rather abstract, you must create, compare and select two or three ideas to realize the "Key word" and itemize the least element to realize the selected idea, then identify them as lower level subject to be achieved. After this repeat the procedure again.
- Note 2. In the sequence of expression, at lowest level you can find the quite ready entrance expression that shows how you can begin to realize the expression of "Key word". We call this lowest level expression as "Entrance key word."
- Note 3. We can use this procedure in a team of several members, because paper cards are used.

Figure 2 shows the example of subject "inexpensive and reliable, small handy light." "Key word" appears in level (c).

Ordinarily, a small handy light is basically composed of battery, electric bulb as common standard components. So you need only a highly reliable "on-off" circuit design.

Consequently, you have only to concentrate on creating the idea of a highly reliable "on-off" circuit under the subject of small handy light design.

WHY "KEY WORD" CAN BE FOUND BY THIS PROCEDURE?

Figs. 2 and 3 explain the reason:

- (1) The repetition of "in order to xx, to $\Delta\Delta$ " from top down is just the repetition of purpose and measures. (Note: We label this repetition diagram as "purpose - measures block diagram which shows "the direction of value."
- (2) When you look at the arranged line of the expressions closely, you are able to find that abstract purposes are explained by upper level than "key word" expressions and sequential procedures are explained by reading them from lowest level expression to key word level expression.
- (3) Consequently "key word" represents not only the objective results of the subject which is situated just below the abstracted purpose, but the expression which defines the plane of behavior shown in Fig. 3 and Fig. 5.
- (4) The phenomenon stated in procedure step (6) "you can very magically find the most exact expression around central level

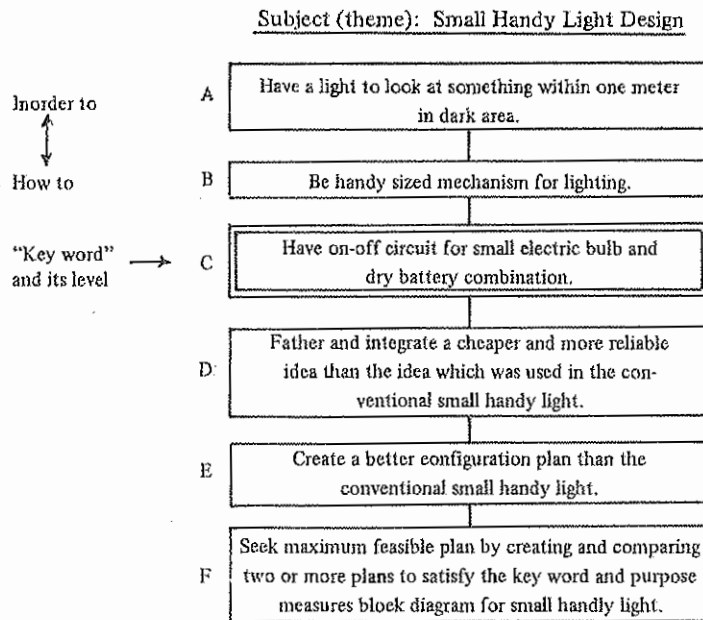


Fig. 2. Purpose measures block diagram and "Key word" level.

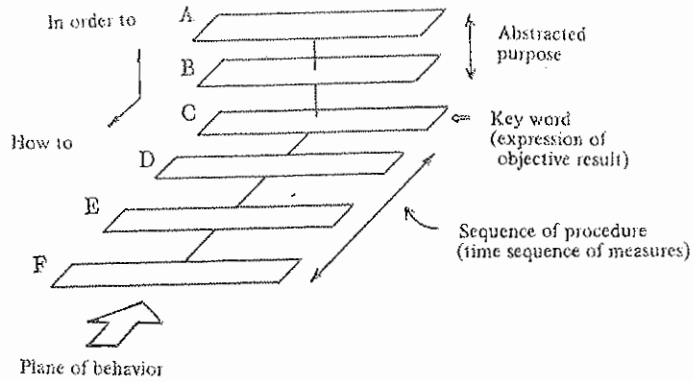


Fig. 3. Image sketch of purpose-measures block diagram bends at level of "Key word".

from top to down", and the phenomenon in which direction we shake our head, shows that we are able to use this mechanism subconsciously.

When we say "Damn it!" and "the key word" or "the Key point" comes in our mind, we do not shake our head. From this phenomenon you can also guess that there must be "Key word level" between shaking our head up and down.

PROCEDURE TO DERIVE A CONCRETE AND EFFECTIVE IDEA BY USING "KEY WORD" TO EFFECTIVELY ACHIEVE THE RESULT

Mr. Michiharu Nakayama is the honorable advisor of the Japan invention association. His explanation "knack of how to derive good idea" is in his book "Why ideas do not come out" which he wrote after his long inventive life. He says that, if once we grasp the most exact expression of "in brief, to do so" as stated above, many inspirational ideas come out continuously. He also says that to have more fully image key word, only repeat the question "to realize the meaning of key word, at least how do we have to do?" Then we can obtain the more concrete key word.

If we really follow what he says, we can unbelievably derive many ideas. "Key word" is the key to derive the idea image from the unconscious image stored in our brain.

When we make a proposal, or design something, we can use this method to formulate the best idea very quickly.

To make the idea more effective and concrete, the ideas can be derived by using the following procedure:

- (1) Formulate several ideas using "key word" as key for brain storm, then develop and choose two or three of the most extreme ideas from them. (Note*)
- (2) Think out the ultimate possible idea which is closest to each most extreme idea.
- (3) Consider that the most appropriate idea exists in between two ultimate possible ideas or in a plane triangle formed by three ultimate possible ideas. Then choose the most effective and appropriate one, from ideas including intermediate idea and composed idea, to realize the meanings of "key word."

(Note *) At this step, if you use the famous NM-method which was invented by Mr. Masakazu Nakayama, you can think out effective ideas from "Key word" more quickly. (NM-method is a method by image cards.)

EFFECT OF THIS PROCEDURE BY DERIVING AND CHOOSING "KEY WORD" ON A PAPER

- (1) To find out "key word" start by question of "In brief, what are we going to do with (or under) the subject?" By putting the word "we" in it, "our" mind enters into the subject of thinking. Once our mind enters, the subject automatically begins to move according to the direction of valve which is in a person's mind.
- (2) Purpose-measures block diagram is established when we search and choose "key word." If you make this block diagram by team work, you and your team members can have the same direction and same result of decision making and choose the idea very rationally by the mechanism as follows:

Suppose there were two jelly doughnuts exactly the same in appearance. You would hesitate for a moment before you choose either one. Then, in your imagination for an example you would make a comparison between the two as to which one contains more jelly or as to which one is nearer to your right hand; then you would decide to choose that one.

Thus, you will recognize that when you make any judgement or behavioral decision, you do so after you have acquired some appropriate "information of difference."

At the same time, whether you choose the one with more jelly or the one with less jelly, depends upon your direction of purpose and measures (this is known as direction of value). Judgement will be made after the decision of either to eat more sweets to keep healthy or less sweets (to keep healthy) has been collated with the information of difference.

This example tells us that even if we have the same purpose, when we have a different relation of purpose-measures, decision will be made in a very different direction, and even if we have the same means, when we have a different relation of purpose-

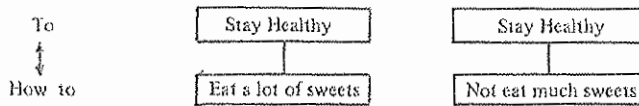


Fig. 4.

measures, decision will be made in a very different direction. (See Fig. 4)

Consequently, after we establish "a purpose measure block diagram" as well as "Key word" on paper in related people, we can have the same decision making on the same matter with them.

SUBTLE DIFFERENCE BETWEEN "WHY" AND "IN ORDER TO DO WHAT, TO DO HOW"

The word of "why" is known to have a tendency to go back to the past only, while the word of "in order to do what, to do how" has a tendency to derive the future image or new hypothesis.

Figure 5 shows the map of relation rule of these words to have effective and creative thinking. Followings are the rules:

Ground Rule

- (1) Question of "why" is easy to understand. But as it tends to go back to the past, you have to be careful not make it the first question, except when it will be useful (start from "B point" in Fig. 5.)
 - Use why question.
 - (i) To search the loss or the trouble of mechanism which has already been established.
 - (ii) To understand an impersonal matter or mechanism by using the already established theory or hypothesis.
 - (iii) To confirm or reconsider your situation by yourself.
 - (iv) To pursue someone's fault to embarrass him personally.
- (2) On the contrary, if you bring the question "in order to do what, to do how" at the start, it derives a wide future thinking plane. Also, you can put the question in front of it, "what are we going to do with it?" which was stated in former section.

(Note): "For what?" or "for what subject?" can be replaceable instead of "in order to do what?" to identify the subject or theme.

Example: The following story tells that "why" question will cause confused thinking compared with "in order to do what, and to do how."

When you look at yourself in mirror, you know that your right side reflects on the left and vice versa. However, why doesn't your upper side reflect as the lower and your lower side as the upper? In stead of this question, when your question is "in order to keep what mechanism (or law) how does your upper side reflect up and your lower side down in the mirror while your left side becomes right side and your right becomes left, your thinking will never become confused and you will realize the new hypothesis, or the ease of understanding this natural law. So, we can conclude that almost no new hypothesis comes out by the question of "why".

UNRESTRICTED PURPOSE FOR EACH CONSTITUTION

There are possibilities for the decision to take different direction even having the same measures. Consequently, it is very important to have an unrestricted purpose for each constitution.

The followings are examples of them from Peter F. Drucker and others.

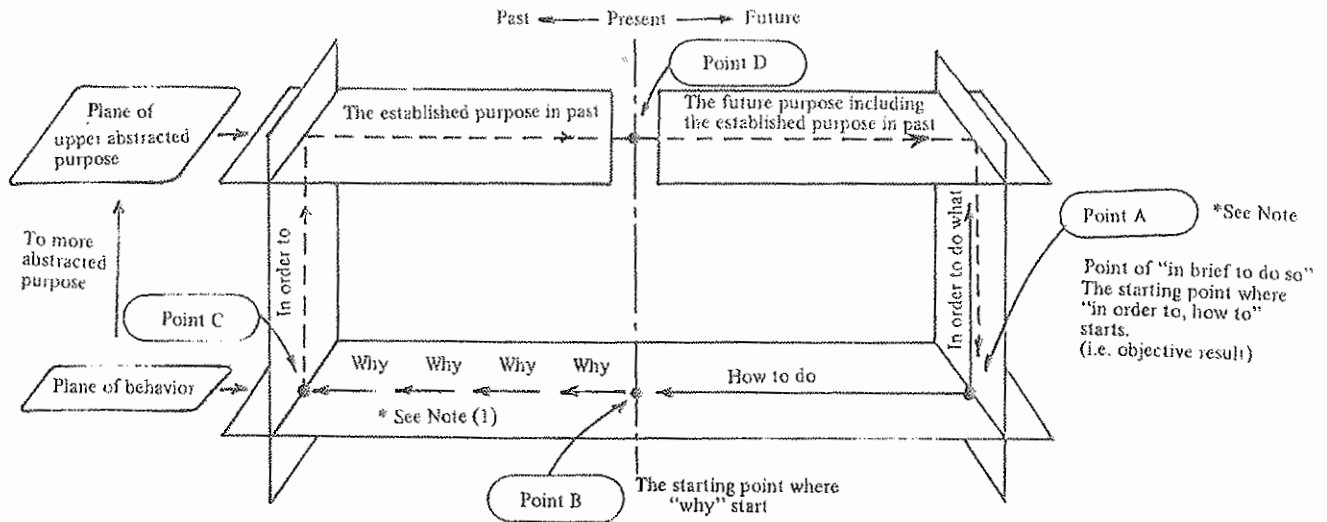
- (1) Military: To defend one's native country effectively.
- (2) Hospital: Exists for patients, and the only wish of patients is that they leave the hospital in a healthy condition and never return.
- (3) Enterprise: "To create customer" To create customer, enterprise must survive. To survive, the enterprise must obtain the profit. (Note: If we adopt the purpose to obtain a profit as uppermost in enterprise, limitless pursuit of profit will cause unsociality.)
- (4) The uppermost purpose of every constitute is to exist for society.

AN EXAMPLE OF THIS METHOD IN AIRCRAFT FLIGHT LINE MAINTENANCE SHOP

Prior to three years ago, before starting to use method of Key word a particular aircraft flight line had five times (or more) flight emergencies in a year. Now, there is no flight emergencies since they started using the rules of "Key word."

Using the rule of "Key word", their development has become as follows:

- (1) When they find an obvious trouble, they search thoroughly for the cause by repeating "why" questions. After gathering the cause data, they arrange them according to their frequency of occurrence.

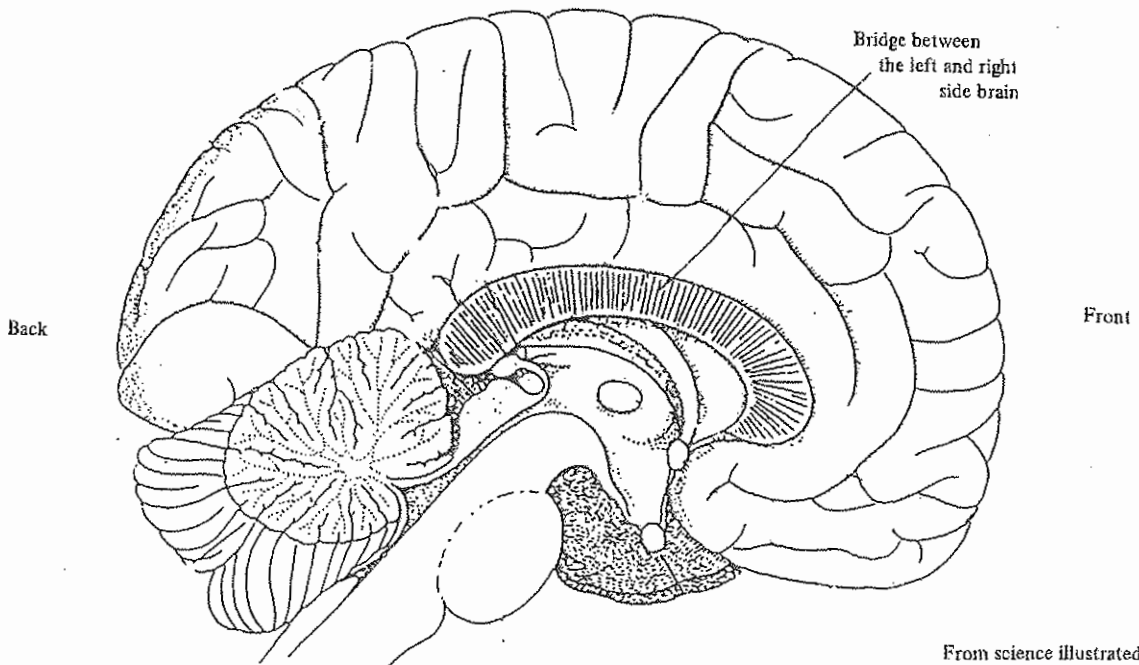


* Note (1) Several repetition of "why" will eliminate the fault. More repetition of "why" will take time, but it has a possibility to go through "point C" and "point D", then to take us to "point A".

* Note (2) For more complete detail about "point A", refer "Image sketch of purpose-measures block diagram mechanics."

* Note (3) In addition to above, there is a thinking "in order to do, why to do" which starts from "point C".

Fig. 5. The image map of thinking pattern of comparison between starting from "why" and "in order to, how to".



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Fig. 6. Hypothetically compared section of brain to image map of thinking pattern between "why" and "in order to, how to".

LEFT

This enables them to trace the trouble easily.

- (2) When they feel potential (or vague) trouble (for example, when they hear a somewhat strange noise in aircraft engine run) or when they feel something strange in spite of data showing nothing wrong, people in charge of the maintenance work ask the following questions by themselves (and at the same time, their boss asks them same questions):
- “For what subject are we doing this work?” “To do what, what are we going to do?”
- “How did this trouble happen, what is causing us this something strange feeling?” “How should we search for this trouble?”

The crew members in the flight line maintenance shop derived their subconscious ability by these question with high positive mental attitude. This attitude could reduce the irregularities in flight test since they started using this method.

SIGNIFICANCE OF “METHOD OF KEY WORD”

By this method we can reach these conclusions:

- (1) The expression and level of “Key word” indicate the most appropriate expression of “Basic function” in its subject level. This derives numerous ideas and images from our brain using the subconscious mechanism.
- (2) The minimum adjective and adverb mean the minimum requirement or restrictions to be accomplished with the basic function, e.g. comparing the function of pen, one is only to make a mark and one is to make a permanent mark. The latter requires more different ideas than the former ones. This is one of the reason that this method is more advanced in defining the expression of basic function than “FAST method” used in the U.S. So the method of key word clears the somewhat vague procedure in past VE techniques, and makes it faster to derive and establish it on paper.
- (3) The method of key word enables to understand the mind of value analysis for those who never studied VE.
- (4) The method of word derives the exact positive mental attitude in any area or field.
- (5) This way of thinking is somewhat the same way as praying.
- (6) The method of key word opens up the window which connects VE and behavioral science (including psychology, physiology of brain and so on).

Figure 6 shows the hypothetically compared section image of our brain to image map of thinking pattern between “why” and “in order to, how to”. From this Figure we derive the hypothesis that the bridge between the left and right side of the brain must correspond to the plane of behavior in Figs. 3 and 5. New hypothesis will be born in the front portion of the brain and an easy explanation will be born in the aft portion of the brain by “why” question. So, this paper establishes the procedure to do creative thinking, how to use the front side of the brain and the right side of the brain alternately :

- (7) The authors have already developed the procedure to do creative thinking, how to use the aft side of the brain and the right side of the brain alternately (Method of Steplist and FBS technique).

The authors believe that the method of key word with these techniques open up new horizons in management science.

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