

# Future Design and Success Engineering in Global Society by Creative Self-innovation

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## Abstract

- a) *We are of the same opinion to unify and standardize the lecture's name, which is worthy of the essential name. I proposed "Future Design and Success Engineering in Global Society by Self-Innovation" (an abbreviated name: FDSE). All persons approved to my proposal.*
- b) *We each other made up our minds to build FDSE up for the educational subject of the global standard. So, at first, we must compile the common text in both Universities, for inspecting the fruits and results.*
- c) *We start to make a small experiment in both Universities, at the current year. After inspecting the results, especially, successful and unsuccessful points in this lecture, we have to develop the strong points and amend the weak points, through making the analysis of success-failure, which is his favorite management method. We have to level up the contents of this text, at the next year. We must reinforce the two theories after unifying theoretical and practical phases by the mutual cooperation.*
- d) *Candidates students for this lecture would learn from experiences of "the common knowledge ( common field of discussion : 共有智)", held common languages, common thought, common system. They fill up the blanks of "The Matrix Frame" which is mentioned in the latter parts, and they express own way of life (work, study). As a matter of course, their personal private affairs must not be made public.*
- e) *He is making the experiments of this lecture in various organizations, for example, high schools, university, government offices and companies, for eight long years. Consequently, we can find out that people mastered the common knowledge can enter immediately into conversation, and can apply closely to their studies.*
- f) *It is quite happy that the cultural, economical exchanges between Korea and Japan are now in full flourish and people do a lot of traveling each other.*
- However, if this project will start on the educational global standard, we have a world-wide significance. Moreover, we can promote goodwill between Korea and Japan, and also we can contribute to a better international understanding and the peace of the world by students in both Universities.*
- g) *We hope that candidates for this lecture will have a rounded personality and be a life worthy of human being for realizing Self-Actualization in "Motivation and Personality" by Abraham Maslow.*

## Introduction

Students are likely to lose their ultimate goals after getting through the entrance examination for universities, in Korea as well as in Japan.

We educate students that it is very important for them to take "the lifelong goal". On the other hand, we have to do the conscious survey of students. After description of student's impressions about schoolwork, and university lives, we realized that they had an aim in order to pass the examination for the university according to learn by heart. As they cannot make new plans of school life after entrance, they are atrophied what they have come here this university. They are easy to get, so-called "syndrome for lack of objects". All students must be requested to acquire communication skills, and full creative skills, as well as to learn special subjects of study. However, they don't know what to do, how to do. Although it makes also demands that they understand, decide, behave and manage themselves, they do not know what to do, how to do. They don't know how to design their future, ultimate goals. So, their hopes have vanished, and their motivations have dropped down. Finally, there is a marked lowering in students' scholarship. University has not got supporting system ready for them, improving their abilities, cultivating their personalities, and leading them how to live, how to work, how to study.

So, we developed an educational tool for the students, named "The thinking method based on matrix diagram". As mentioned above, we built up our theory after integration of related studies, for example, Ethics and Metaphysics by Aristotle, System Engineering, Business Administration by Harvard Business School, and Brain Science by Ryuta

Kawashima who is a professor of Tohoku University and a very famous brain scientist as “Brain Training Game” of Nintendo.

The theory is figured below, in the part of relating studies.

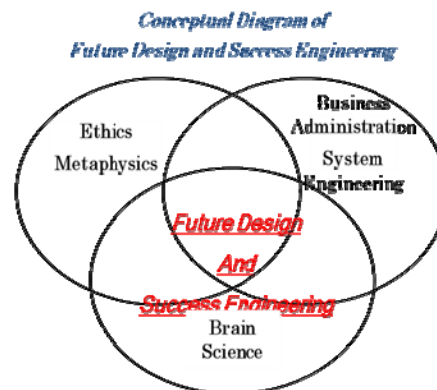


FIGURE 1.  
FDSE

When Sato was the president, he made the business management plan, which is composed with factors - personal affairs, constitution, finance, products, sales, advertisement, transportation, trade, and so on.

These factors stand one behind another on the vertical axis, and five elements which are analysis for circumstances changing, recognize current state, vision(purpose), venture(plan to do), victory(target), form a line side by side on the horizontal axis.

He managed his company whether he was taking the best course, making the analysis of strong and weak points, checking the progress reports in his toy enterprise every day, in conformity with this frame.

He applies this management method to lead the supreme life. He takes into consideration that it is quite necessary to cultivate “*Seven Knowledge Powers*”, which is mentioned below, for having the best life.

- a) **Morality:** Literacy of morality in the way of life, for improving social service, ethical doing, manner, obedient to the laws, etiquette, and so on.
- b) **Physical Health:** Literacy of physical health, for improving good health, good appetite, mentally and physically training, etc.
- c) **Intelligence:** Literacy of intelligence in the way of life, for improving technical knowledge, expert knowledge, good judgment, and so on.
- d) **Finance:** Literacy of finance in the way of life, for improving economic stabilization, self-support, gaining income, etc.
- e) **Playful:** Literacy of playful in the way of life, for enjoying life, amusing time, and entertaining (oneself and friends), and so on.
- f) **Family/Home:** Literacy of family/home in the way of life, for loving your family each other, and helping and supporting your family each other, etc.
- g) **Aesthetic:** Literacy of aesthetic in the way of life, for improving aesthetic sense, aesthetic life, and so on.

Kim also established the world of success life for engineering by using the four dimensional world, for example, dream, thinking, belief and word.

Based on these concepts, we proposed “*Future Design and Success Engineering in Global Society by Self-Innovation*” (an abbreviated name: FDSE). We each other made up our minds to build FDSE up for the educational subject of the global standard. So, at first, we must compile the common text in both universities, for inspecting the fruits and results. We tried to make a small experiment in both university at the current year. After inspecting the results, we have to develop the strong points and amend the week points, through making the analysis of success-failure, which is his favorite management method. We have to level up the contents of this text at the next year. We must reinforce the two theories after unifying theoretical and practical phases by the mutual cooperation. Candidates students for this lecture would learn from experiences of “*the common knowledge ( common field of discussion)*”, held common languages, common thought, common system. They fill up the blanks of “The matrix frame” which is mentioned in the latter parts, and they express own way of life (work, study). As a matter of course, their personal private affairs must not be made public. We are making the experiments of this lecture in various organizations, for example, high schools, university, government offices and companies, for eight long years. Consequently, we can find out that people mastered the common knowledge can enter immediately into conversation, and can apply closely to their studies. It is quite happy that the cultural, economical exchanges between Korea and Japan are now in full flourish and people do a lot of traveling each other. However, if this project will start on the educational global standard, we have a world-wide significance. Moreover, we can promote goodwill between Korea and Japan, and also we can contribute to a better international understanding and the peace of the world by students in both Universities. We hope that candidates for this lecture will

have a rounded personality and be a life worthy of human being for realizing Self-Actualization in “Motivation and Personality” by Abraham Maslow.

### Regarding future design and success engineering

We emphasize that human beings win the way to final survival game, of adapting themselves to the new environment. We also emphasize that the sense of educational and strategic values would be greatly changed in competitive and global society. So-called, paradigm will be changed, especially in your personal histories and/or the curriculum vitae. In compliance with the companies’ demand recently, you must master four abilities, as follows: problems solution skill, creativity, teamwork skill, communication skill. As all persons will not always be a number one, at the top head in the competitive and global society, we recommend that you will be a so-called, “only one person” with proving their great, real and potential talent. We emphasize clearly that as the contents in the competitive and global society will be changing, the rounded character will be asked nowadays. Although our theories are excellent in theoretical and intellectual respects, we think that the definite life management plan into practice in the daily life – how to live, how to work, how to study, will be incomplete on putting into practice. Students will understand the world of knowledge, emotion and will, and/or mind-seed by using the head, but they do not put our theories into practice every day.

So, we point out that students will be likely to submit the description of their impressions about my lecture, and it is not easy for them to develop their potential ability. As our theories are build up logically using Hellenic philosophy, business administration of Harvard University, resent brain science, traditional system engineering and so on, they would be got along well by way of the global standard theory. As the matrix thinking frame is building up using the great fundamental principle of resolution and integration in western philosophy, their theories would be done well for the educational global standard. Their theories are also not organized using our excellent, intellectual respects, especially, the companies’ demand, competitive strategy, educational global standard and so on.

From a lot of survey, it is obvious that most students in universities lose their desire for learning just after entering their universities. In order to solve this problem, we developed a novel educational tool for the students, named “*The thinking method based on matrix diagram*”.

If they try hard with the help of this tool, they will be able to learn how to design and manage their splendid university lives in addition to get the basic knowledge and to improve their basic abilities. It is also found that they can earn the common knowledge mutually after learning a common method, which supports to make them to improve their communication abilities drastically. Based on the matrix thinking method and the understanding of the world of mind, we propose the FDSE.

If someone has too much money as not possible to be able to be used, can we call this person a happy man or woman? However, if this person causes family troubles at home, or this person’s health is not good, and this person’s natural virtue is lacked, can you call this person a happy man or woman?

So, we modeled that any life consist of seven knowledge combination, and we think it is a first prerequisite in order well of the balance on “Seven Knowledge Powers”, as figured below.

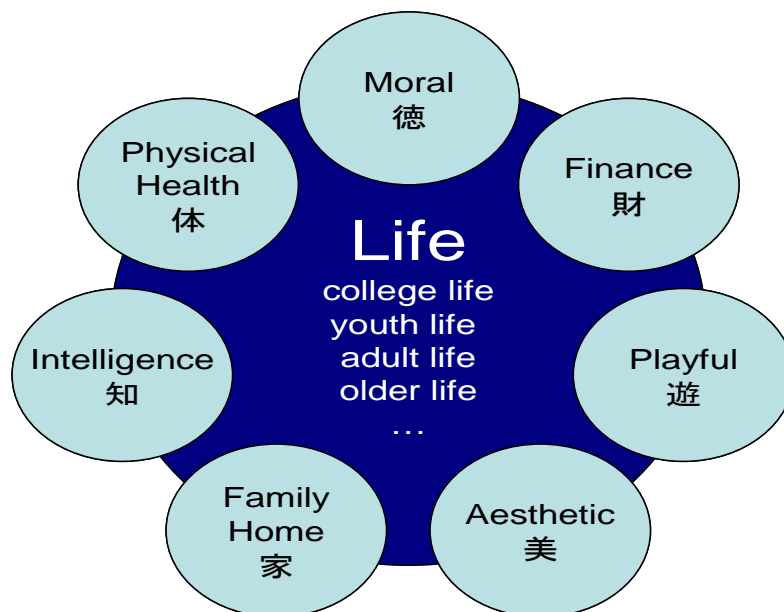


FIGURE 2.  
CHART OF SEVEN KNOWLEDGE POWERS

We understand well when checking it by using this technique every day, the circle grows up, and turns out in various social experiments, for example, on lectures to civil servants training, managers training, and students at high schools, universities and so on.

There are three progresses in this theory;

- Process of filling out the blank
- Process of expressing your opinions in public
- Process of doing PDCA cycle.

**a)** Process of filling out the blank.

When you fill up the blank of “*Matrix Thinking Method*”, you will know yourself, and you are able to take the self-cognition. That is to say, you will find out who you are, and you can get know satisfaction what it is you want.

However, as I mentioned above, he teaches you must not put down on your personal secrecy, so-called privacy.

**b)** Process of expressing your opinions in public.

If you don’t declare to show your signs of improvement on method of life, and method of study, putting out on your words in front of others, it is difficult for you to get rid of your bad habitual ways.

So, this process is installed for setting for mutual studying that there are a lot of points to serve as a reference to your way of life, after hearing other’s announcements.

**c)** Process of doing PDCA cycle.

As illustrated with a figure, this process is the daily management system from morning to night. Putting it concretely, when getting up in the morning, you look at the filling in items, at first. Then, senses of hearing them by your ear are made to work aloud, checking your method of action during today, and confirming your schedule.

Students made the concrete plans for becoming their own in the abstract articles of The Fundamentals of Education Law in Japan, using this 3M theory. For example, to full development of personality, to cultivate a rich sensibility and sense of morality, to foster an attitude to acquire wide-ranging knowledge and culture, to develop a healthy body and so on.

The applicants of sophomore belonging to Industrial chemistry and Chemical engineering course at Yamagata University, took this lecture, from April 2008 to March 2009 and April to March 2010. The students at the Korea Maritime University took this kind of very similar lecture from March 2005 to June 2010. They were organized 4~5 students per a group, in order to design better university life by using the Matrix Thinking Method at Yamagata University and in order to find out more valuable life by changing their mind at Korea Maritime University. Student’s comments are before taking this lecture, as bellows.

“I have no purpose of university life, because my only purpose was to pass the entrance examination of university.” “I have no interest in academic learning, and my interest is how to get passing score of each subject easily.” My purpose of university life is how to get good employment, and the point is good recruiting activity, no specialties / academic learning in university.”

On the contrary, student’s comments are changed after taking this lecture, as bellows. **a)** We learn any everyday happening can easily be solved by acquiring the Matrix Thinking Method once. We also understand as it judges very for the problem to occur because of what, and to solve it, and how it is necessary to act immediately. We come to be able to do the action that we foresee from a random action ahead. **b)** Although we have nothing to take what kind of will and what kind of target, we lose sight what kind of humankind we are, and we exist in the condition similar to “a stray sheep”. After thinking each factor using this method, we have been self-analyzed in detail, and we are able to be established. **c)** We can take the success knowhow by this lecture. (Is there no such lecture up to now?) The vague one becomes clear, and we can direct our course toward the target. We can take the correct direction if diligently reviewing, and advancing while correcting the goal, as we can. **d)** Generally speaking, the difference is quite often caused in the content that the sender intended and the content that the receiver recognized. Also, it has a tendency to interpret it in one’s own way without permission. It has been realized for mutual understanding to be able to advance instantaneously when this method is used, and to attempt communications.

Consequently, students made the pie chart of the weight of each element on “Seven Knowledge Powers”, under the influence of the successful life. They made the action plan which including the element, such as to have gratitude, to think positively, to accept other personality, to say thanks to everyone anytime, and so on.

## **Competitive strategy**

### **Keep Strong Relationships in Engineering Work**

*It will state clearly at first that the role and charge of universities must train and bring up global leaders, moving clockwise as figured below.*

## Keep Strong Relationships in Engineering Work

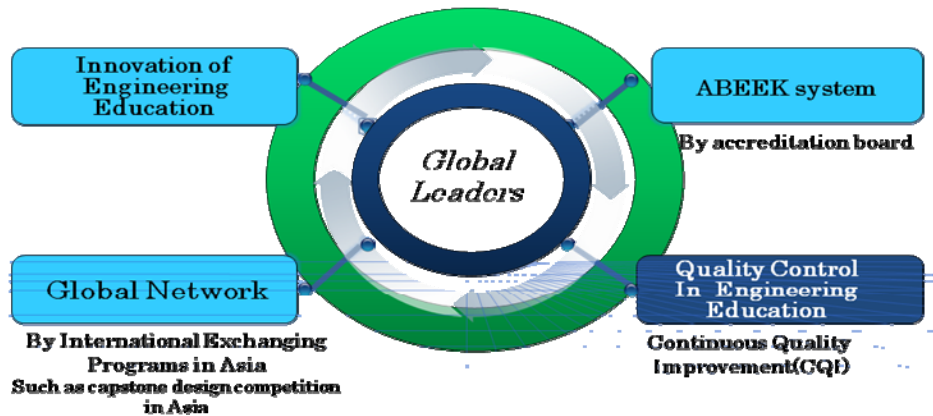


FIGURE 3.  
CHART OF RELATIONSHIPS IN ENGINEERING WORK

- a) Global Network:** It is very important for Engineering Education to build up the Global Network, by International Exchanging Programs in Asia, doing as capstone design competition in Asia.
- b) Innovation of Engineering Education:** It is also important for Innovation Engineering Education to grow up Teamwork, Communication Skills.
- c) ABEEK system:** ABEEK (Accreditation Board for Engineering Education of Korea) is the same as ABET (Accreditation Board for Engineering and Technology) and JABEE (Japan Accreditation Board for Engineering Education). It was founded at November 6<sup>th</sup>, 2007, in Seoul, Korea.
- d) Quality Control in Engineering Education:** It is asked to be of Continuous Quality Improvement (CQI), in Engineering Education.

By the way, do you know the meaning of “Leadership”?

Literally, it means a person to lead a ship, which is equivalent to a master of a ship, or a president.

### The world of Saturation in mind

It is called that Knowledge, Emotion and Will are important for taking the best life since old times. First of all, we have to know about the world of Knowledge. After we understand the world of knowledge, the world of emotion becomes important next, and that of will comes.

The order is important from Knowledge first, Emotion next, and Will. The order is useless in Emotion first, Will next, then Knowledge.

### **The World of Saturation**

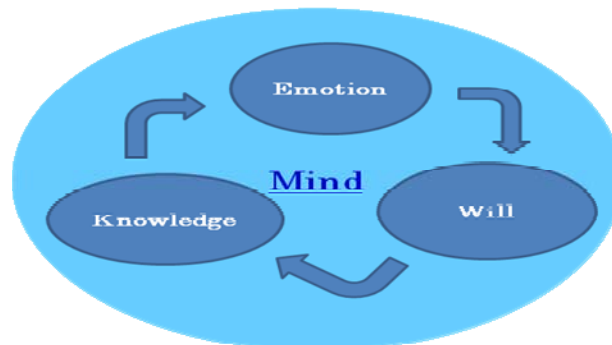


FIGURE 4.  
CHART OF THE WORLD OF SATURATION

When three round circulations put out in order, the person can enter the world of Saturation. And, the seed and idea are planted in the soil of the mind. Then, it is possible to lead the successful life.

### Where is Mind in your body?

Do you know where is “Mind or Heart” in your body?

Humankind thinks about things in the words, tells intentions in the words.

When you speak always about simple, good words, for example “Thank you very much”, your brain that rules the ideas begins to work as spoken in the words. Consequently, the change on your personality would take place in your brain in the power of words because of the experiment on the brain science.

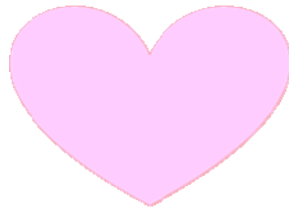


FIGURE 5.

ILLUSTRATION BY HEART TYPE

It is produced with the illustration by heart type because it has been thought that the mind is in the heart before. Chinese character of mind shows the heart.

If we say from the view point of the brain science, the mind, the spirit, and the inside world are in the prefrontal region when saying in the word of brain science.

### **Principle of the survival of the fittest**

Charles R. Darwin published “On the Origin of Species”, November 24<sup>th</sup> 1859. His theory of evolution is based on key facts and the inferences. He mentioned them, as follows.

“Individuals less suited to the environment are less likely to survive and less likely to reproduce; individuals more suited to be environment are more likely to survive and more likely to reproduce and leave their inheritable traits to future generations, which produces the process of natural selection.” And also, he mentioned. “This slowly effected process results in populations changing to adapt to their environments, and ultimately, these variations accumulate over time to form new species.”

We explain students that it begins to think by yourself, and you will be a victor, putting into practice. Also, I recommend you will be a person rather Only.1 than Global No.1

### **Contents of the competition have changed**

The environment that surrounds us has changed greatly, as compared in half century years ago. It becomes a competition for process afterwards, and the competition for the talent power now, though it was a competition for the commodity in old times. I show you the change of circumstances, as figured below. It becomes “Who-to-do” nowadays and “How-to-do” afterwards, though it was “What-to-do” at one time. Our living environment of surrounding us has changed suddenly before half a century and today. At one time, students were to have solved problems of causing in the quality basic. Naturally, the ability that the enterprises request students has changed keeping abreast of the times. The demands of the enterprises have changed, because it became the global age, digital age and an age of making to compound now. Especially, students are requested to understand the following four abilities and to acquire these abilities from experience. You have to change your study attitude as the results though enterprises will change by the change in our living arrangements. As a result, the contents of your personal history submitted to enterprises for finding employment will be naturally changed. Especially, an important thing is what not to have learnt, and to describe it from the aspect what being able to be done. In other words, it is necessary for you to describe it from the aspect “What do you understand?” into “What can you do?” Especially, the point to be recommended is the description of your portfolio, and the description that uses the ABEK attestation standard terms. The study attitude is to value the application of not knowledge memory, but the knowledge application, the analysis, integration and evaluation. The details are as shown in the following figure.

### **Aiming “Only 1 person”**

A certain person had owned this red diamond for 25years. However, he did not know the value. Evening Standard of Great Britain reported recently that this was the most valuable one being in existence in the world. It is the rare diamond worth £ 270 (49 billion Won) per carat (0.2gram). You might know whether you have much wonderful ability just like this story. All people cannot be able at the top of the first place.

I teach students to aim rather “Only 1 person” than “Number 1”, improving and exhibiting your infinite potentiality. And then, you have a match with your forte and/or your specialty. The most expensive one in the world is creativity that you have. Please develop and improve your imagination and creativity, and win the success!

### **Have a clear target for being a successful person!**

The trails of professor were made figures to have to work on students to improve the creativity.

By the way, there is an interesting survey data, by Mr. Paul Meyer.  
 (From Leadership Management International)

He investigates the differences between the successful persons and other people, and has put out one conclusion.  
 It has been understood that the successful persons are executing the clear target and/or goal written on papers, having them though only 3% of the population is the successful persons.

Also, he mentions the middle production layer is 27%, the people layer is 60%, and the poor people layer is 27%.

We can understand it is important with the well-defined purpose very like understanding from this result of the survey.  
 So, do you live in every day that the target and/or goal are without existing either somehow? Or, do you make an effort to achieve the well-defined purpose every day? The difference and result will come out in years how many.

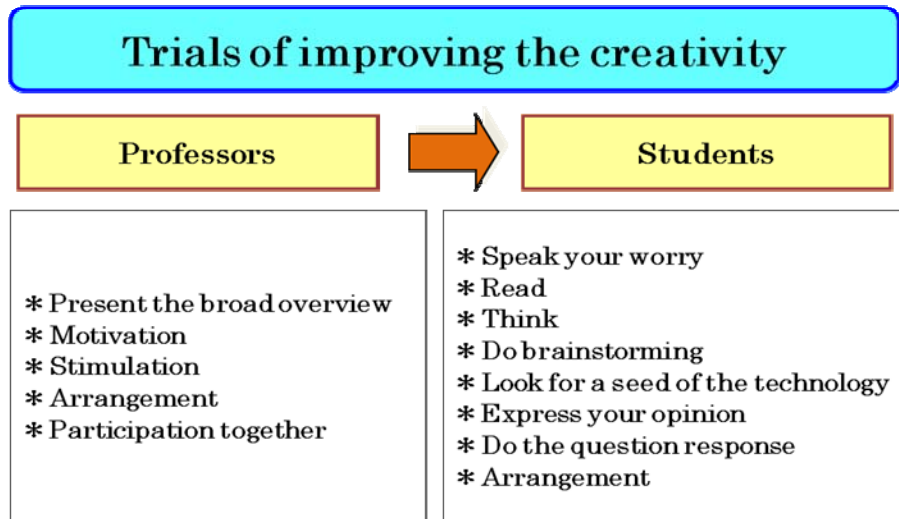


FIGURE 6.  
 CHART OF TRIALS OF IMPROVING THE CREATIVITY

**Conclusion**

It becomes possible for your potentiality to be improved and to walk in the first step for a successful life if you fill in on this “Matrix Thinking Frame”, express and check them based on this every day.  
 Everyone, let’s challenge this!