

## A Study on the Learning Process of Sustainable Community Design : From the Process of Etude Based on the Case Method Approach

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**Abstract:** Previous research points to organize the social capital that is effective in solving community problems. In this paper, firstly taking the case of a work created by the volunteer community fire brigade, then a workshop where students observe the pattern of the discussion surrounding this case, is followed by a sequel to the story in this case, making plays in the drama itself. Finally the essence is summarized focusing on the problem-solving process to consider appropriate measures. Through this work, it is trying to suggest an effective learning procedure to arouse the desire and intention to participate in building sustainable communities.

In conclusion, as to the essential issues contributing to design sustainable community, experience learning is important and useful by acting to accumulate social capital within the community and to know how important it is to have a positive motive in contributing to solve social problems. A case in point, the fire brigade in the community after the Tohoku Earthquake that occurred on the 11<sup>th</sup> March 2011, supporting the evacuation of the people and searching for missing residents of the local community, are praised for their committed action in the disaster area so dedicatedly, many scenes are still vivid in our memories after four months since the incident happened. Bearing this in our mind, we should archive this valuable knowledge and experiences, it might be our responsibility to find the way to strengthen social networks and to take any future action. In quoting fire brigade case, in this paper, the author tries to evaluate the case methodology and etude procedure from the scope of learning process contributing towards building sustainable community.

Key words: Community, Social Capital, Sustainability, Fire Brigade, Case Method

### 1. Background and Purpose

These days, there are various economic problems in the community. In order to solve these problems, social capital gives us very good guidelines enabling us to keep the disputed points in order. The preceding study on social capital suggests that respect, trust and feelings for each other are important in discovering solutions by discussing different opinions or issues and exchanging information amongst interested parties.

In community management, researchers emphasize how important it is that good quality social capital should be accumulated in order to settle problems to mutual benefit. It is also important to offer such simulated experiences and opportunities to universities which are the most practical places of study.

In this textbook, I would like to try to offer some effective study subject matter to get sufficient attention or raise motivation to participate in creating possible sustainable communities as follows:

1. Arrange the preceding study issues in which social capital is effective in solving various problems in the community.
2. Pick a case (Fire Brigade) related to community activity
3. Observe the students discussing this issue
4. The students role play this case and put together ideas of their own
5. Pay attention to the process in which the students examine measures to solve the case

## **2. Social capital in resuscitation of the community**

For breaking through centralized community policies and searching for measures to solve various community problems, it is very useful to pay attention to individual corporations, services offering places or potential businesses.

These have never been paid attention to as resources in past community policies. Recently there have been countless issues that developed countries have about local societies. Rising crime rates, lack of consideration for the weak such as children and the old, lack of a sense of belonging to the local community, moral decline, decrease of local industrial activity, impoverishment and disappearance of the local community clearly exist not only in big cities but also small towns. The measures for these problems are very critical. Recent social science fields have searched for the solution to these problems.

To solve these problems, the measure should offer a high standard of social capital knowledge in local areas so that it can create mutual trust and cooperative activities. For instance, Japan's ministries encourage Nonprofit Organizations' activities and also try to slough the conventional public sector oriented governance.

This trend focuses on each network actor who is already fixed in a local community and gives rise to an expected measure responding to a high awareness of mutual trust and reward.

### **2.1 Importance of reciprocity for regeneration of the community**

Stacy (1969) said that when it comes to resuscitation of the community, we should concentrate on raising the quality of the social network rather than stick to the concept of community. Putnam (2000) proved the merits related to social connections among health conditions and other benefits. The merits and their impact give you the idea that the base element of social capital is social network and communion. In other words, the measure we should take is to establish relationships between person to

person, search for catalysts to make communication smooth. Putnam's words are very persuasive.

Indeed the concept of Social capital offers an effective aspect from thinking about community. Beem (1999) pointed out that many debaters including himself put social capital in the middle when they debate using "reclaiming public life". On the other hand, Putnam (2000:19) summarizes that material capital has material purpose and human capital is for quality of the individual while social capital is for connections between person and person - social networks, the norm of reciprocity, trust among them so these two are different.

Beem (1999:20) emphasizes only mutual relation (bilateral relation) can establish community, make commitment and weave social fabric. Putnam also illustrates four factors such as Child Development, Public Spaces, Economic Prosperity, Health, using them as a criterion for measurement of social capital. He actually used macro data in the U.S. and proved his theory (chart 1).

However Putnam, the authority on social capital, has not shown anything about concrete measures for promoting social capital, especially the solution against required people and methods.

## 2.2 Problems and measures

When you face the problems of today's community, what kind of measures should we take? In reality, Community problems exert various influences on our lives. Look at the following occurrences.

a) Stagnant local economy . . . decline of downtowns in small or middle-sized cities

Concentration on economy activity and job opportunities in the cities . . . decline of public enterprise, change of industry structure (decrease of construction companies/ manufacturing companies, expansion of information communication) Cities tend to get these advantages.

b) Decrease of self-employed business owners . . . change of employment forms, lack of community sense because of a decrease in the number of self-employed business owners who have commitment to the local community.

c) Expansion of economic areas . . . expansion of economic areas caused by development of means of transportation such as bullet trains and highways. The straw effect occurred and it leads to the tendency in which big cities suck up the power of local economies.

d) Progress of network economy . . . Instead of reducing the needs of previous area-unit and closed economic areas, nationwide and worldwide division of labor's structure is being established. Therefore if there are no priority resources or eminent skills, not only companies but areas themselves may disappear.

We also have to look at the problem about the structure of the city (town). Present houses in the city and the structure of the city make it generally hard to set up a community. Residential areas are becoming

bigger and houses are getting taller so they make the work place, the home and leisure places separate from each other. Therefore, people have fewer opportunities to communicate.

For example, *Machiya* in Kyoto or Parish in Europe make people communicate and offer the basis to nurse the spirit of reciprocity. But in the space of today's cities, there are no gathering places for people who live there traditionally or work there, or play spaces for kids, or no place where adults and kids can talk to each other. It means a loss of a mental pillar of the community. In fact, Mumford and Power (2003) and New Economics Foundation (2003: 20-25) indicate that plazas, squares, parks and common places play a very important role as communication opportunities in Europe.

### **2.3 Focus on Local Connection “Chi-en”**

Let us look at the trend of an existing community as a typical example of transfiguration of the community. The existing community means a community run by residents like a neighborhood community or residents' association. According to the report of “Study Committee of Working Together and Support” in Yokohama, despite the increasing number of community members, the number of people who take part in community activities stayed the same. Particularly this trend is very remarkable in the cities.

Avoiding getting to know neighbors, fewer activities of local community (no one wants to be a organizer, people don't follow the community's rule, inactive community) are outstanding.

In the meantime some trends show that people want to join activities for certain clear purposes rather than local activities conducted in their area. It is pointed out that the number of people who join specific activity groups has been increasing. For instance, it is said that the activities for protecting nature and birdwatching are flourishing.

Sakaiya (1996) affirmed more than 10 years ago that, “the time will come when people connect with each other with hobbies and the like, not kindred, local relationships or work connections” in his book entitled “Self respect and good connection - solving the equation of a satisfied society”. The situation we are facing today is little bit different from Sakaiya's insistence. Having little sense of ties to local community could be a real problem from aspects of risk management such as natural disasters and crime prevention.

### **2.4 Focus on catalyst function**

Oe (2006/2007c) claims that existing resources and know-how should be organized as useful assets in order to get communities to revive and activate. Each person in the social network of the community also has a social mission to contribute to strengthen and activate the network, as an entity embedded in the network, on the basis of his or her own duty or service.

Although public supports and concrete measures by the administrative agencies are required to solve the problems of community, strengthen and activate, there must be a volunteer-based resuscitation plan

and the clear will of the residents in the local area. Also, the existence of “embedded assets”: the labor force and resources from other areas and mobilization are also indispensable factors.

If a community which has problems closes inwards and isolates itself from the outside network, it won't be possible to get new ideas or take in resources. In order to solve network problems, the network should access some resources outside it and utilize them aggressively. The network is required to be open. Also flexibility to accept diversity and foreignness of resources are needed. Otherwise there will be no way to use such factors.

To allow this network to open, use many types of resources efficiently and assess ways to try to solve problems, the network should be responsive to different kinds of information. And useful information should be understood, transmitted and utilized efficiently in his or her own area.

But it is not easy for us to imagine what we've never experienced or listen to different opinions from others. How can we listen to the various opinions, put them together, change them to new wisdom and lead to a solution?

I would like to close this chapter with the word, “catalysis”, “Catalysis” is an indispensable function. It draws different opinions and new information, and puts them together making up a brand new value. Who or what is going to exercise such a function in the community?

Up to here, we have thoroughly put in order the issues to understand the community from the viewpoint of a network. Some of the various participants in the network not only work on their duty and service, but also work as catalysts extensionally and indirectly, not being showy but quiet. Those participants are, for example, organizers of local connection groups (neighborhood committees, etc.) shop owners who have run businesses for a long time, heads of post offices and head teachers of elementary schools. There must be many such people who contribute to the areas as organizers. There are individual participants who can connect to other participants, instigate communication and be a catalysis of information. If you look at those key participants, you may see today's community in a different light.

In this paper, some crucial issues are considered we cannot overlook, in order to solve community problems from the macro view point. And in the network, individual network participants such as shop owners in shopping arcades and local residents are facing many problems; think them over and take action. Let's have a look at a case and through the discussion of it, we shall observe the experimental problem solving workshop based on role-playing as “etude” in the next section.

### **3. Structure of the Study- Case Method Approach**

The case method which this study follows is a teaching approach that consists in presenting the students with a case, putting them in the role of a decision maker facing a problem (Hammond 1976). The case method is a teaching method that is largely used in business schools. For instance it was used at the

Harvard Business School since the founding of the school in 1908 (Corey 1998).

The “case method approach” is the practical method for learners to encapsulate many social problems through discussion and inspire themselves to take action to settle problems in a confident manner (Oe, Okura, Nakano (2010). Before the students find problems in the cases, think about the measures, take unique steps and have discussions, they take time to firmly consider their opinions through discussion with the discussion leader and other people who have different opinions or backgrounds.

Each person should present his or her own opinion logically, make an objection to other opinions, with due respect, and work together to have discussions smoothly and positively. They focus on the processes in which they can see the problems from many sides. It doesn't aim at finding a certain solution or presenting self assertion in order to beat others. So the case method itself is a suitable opportunity for study.

While a case study leads you to one conclusion with analysis, a case method shows that you find problems and questions that don't have correct answers and it gives the case different perspectives. To study a case which is likely to happen in daily life is a very effective way to learn mutual effects among related actors in a social network, and the possibility of solutions from the perspective of macro. And this is what Rave said “access to practice as learning resources” to have simulated experiences.

### **3.1 Case Lading and its Output**

The case which was chosen in the workshop was an episode of local volunteer fire brigade as the protector of the community. To make the points and atmosphere clear, I would like to present the whole episode here. The case which was actually used in the class is as follows. This case is a fictitious story based on the reality which the author experienced in July 2010.

*It was an unusually hot Saturday, a summer festival was being held at a local elementary school conducted by the PTA. The school, called Aokawa Elementary School, located in the middle of the city, has only one class in each grade: a total of 158 pupils. Though it is a small-sized urban public school, it is 135 years old and many of the children's parents also graduated from the school.*

*The old style school building and its schoolyard are located in a quiet residential area one block behind the main street that traverses the city. New green turf was laid for the 135th anniversary of the foundation of the school and many events are held there after school and on the weekends in cooperation with local shops and businesses. The school adopted a business policy in cooperation with the local community and child raising in the local area. The present headmaster and vice headmaster established the new system. The school kids have started running around the playing field in the mornings in order to promote sports and increase their physical strength.*

*Chiharu's daughters get to school at 7:30 and run around the track many times to train themselves.*

*Chiharu is very happy to raise her daughters who are growing up in her hometown.*

*Chiharu graduated from Aokawa Elementary School. She has straight black hair and a slender figure. Though she looks like a smart office worker, she is the draw at her parents' mounter shop which has been operating for three generations; also it is one of the oldest shops in the shopping arcade. She lives behind the shop, her husband works for a company and her two daughters are in the 3rd grade and 5th grade of Aokawa Elementary School. She is a homemaker who does housework, works for her elderly parents in the shop and also participates enthusiastically in local activities, one of which is the local fire brigade which has problems concerning its continuing existence.*

*When the shopping arcade consisted of local private shops, the fire brigade had a lot of opportunities to raise awareness of fire. Many people joined the brigade and were proud of themselves. They were once children's heroes.*

*Since then, the town has dramatically changed. A variety shop across from Chiharu's is now a car park, a famous coffee chain shop is on the right and a convenience store is on the left. It has become hard to find third-generation shops in this area because the elderly owners gave up their land or became owners of real estate.*

*Most of the workers at the coffee shop and the convenience store are part timers who come from different areas. They greet properly and have a good sense of customer service but Chiharu thinks that the shopping arcade has become just the same as other ordinary arcades elsewhere.*

*The more shops turn into nation-wide chain stores, the more she feels the shopping arcades will become clones. The same sign boards, the same colors, the same layouts, everything done by manual, will be seen everywhere, and towns will become faceless.*

*There used to be elderly men and women everywhere whom children knew. They scolded bad boys and girls. Needless to say, local people took care of the children, but these days it is even hard to let children play outside.*

*There is one more thing that Chiharu cannot stand. Though she asks people to join the local fire brigade, people like part timers in the chain stores will not participate in it. So the number of the fire brigade members has been decreasing and the members also have been aging. The shops owned by these people refused to pay donations or membership fees for the residents' association due to the severe economy. Isn't it their responsibility to contribute to the activities and ties of the local community that has such a long history?*

*Let's go back to the story about the summer festival. Chiharu, who is the one of the board members of the PTA, worked very hard as the youngest local fire brigade member. She planned various games for*

*elementary school children having first discussed them with the PTA members. Earthquake experience in an earthquake simulation vehicle by the fire station, knocking down traffic cones by using fire extinguishers, making computer games in which you have to guess the time it takes to extinguish a fire, using ten old computers from her husband who works for a software company. In the competition using soccer balls, people got excited at getting a strap with a fire-department mascot.*

*More than 90 percent of the children participated in the event despite the heat. Chiharu was soaked with sweat but very happy. She saw her daughters during the event. She wondered what they thought about their mother when they saw her dressed in a fire brigade uniform, working very hard with her hair tied up. When they grow up, will they live in this place, love this place and join the fire brigade?*

*The problem is that there is a shortage of members of the local fire brigade. Most of them are over 60 years old. The members who join the festival under the hot sun and support it, are the ones who can leave their shops safely in the hands of other people. She pondered whether she can join the festival as a fire brigade member next year and how long she can keep going.*



**Picture 1 Discussion Scene on the case lead discussion  
(14 Dec. 2010)**

This case has a lot of elements including ties of community, a sense of belonging and affection. From the discussion, in order to solve problems by the accumulation of social capital, raising awareness of helping the aging community and sense of belonging to the community by the residents, strengthening affections to the community and a sense of solidarity and motivation are highlighted. The students had an active discussion on how important a catalyst is to make people motivated.

I would like to review the effects of the case method in order to study practically a solution to the community problems from the approach of the students towards the case.

### **3.2 Student awareness and essence of tackling look - notice from story board and role playing**

Story boards are made to support the consideration of the case. The students acquired deeper knowledge about the problems as if they were the people concerned, and examined the solution after they performed a role play based on the story.



Below is the story board. Characters' lines are from their emotions. Visiting Professor Reiko Tanaka contributed towards making these story boards( Picture 2).

消防団



(千春) 朝、家族を送り出す



(千春) 「8時か・・・そろそろ、お店に行かなきゃ、たしか明日から商店街セールだし、奥の倉庫から看板出さなきゃ。」

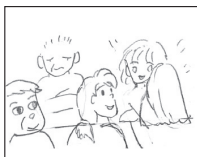


(父) 「お、千春、早いな。」  
(千春) 「明日から商店街のセールでしょ？お父さんたち張り切り過ぎて、また後から腰が痛いだの言っ  
て大騒ぎになると困るでしょ？だから早く来たのよ〜。」  
(父) 「そうか、気が利くな、腰が痛いお世話だけど・・・。」  
(千春) 「そんなこと言って・・・、薬局のおじさんが、お父さん、この前湿布を5箱も買ったって教えてくれたわよ。(笑)」

母登場



(母) 「おや、千春早いわね。」  
(千春) 「おはよー。」  
(母) 「明日からセールってよく覚えてたわね、私なんでもう、最近は一昨日食べたものもすぐに思い出せなくて、困ったものだわ、そうそう、角の果物屋さん、今年いっぱい閉店した後に喫茶店・・・え〜と、最近カフェって言うのかしら、そういうお店にするらしいわよ。」  
(千春) 「へえ、あの果物屋の息子のアイデアかしら。」  
(千春) 「あつ、そうそう、今日は消防団の会合があるから、夕方からさやか(千春の子の名前)たちを  
お願いしま〜す。」



夕方6時、町内の会議室  
(団長) 「今日は女性の方が多いな、と言っても、全部で5人しかいないけどな〜、他の連中は何してるんだか。」



- (千春) 「えーと、では、夏祭りの企画担当の青川です。PTAのメンバーと練りに練ったアイデアを披露しま〜す！サッカーボールを使った、まど当てゲーム。これはトーナメント式で賞品を出します。賞品は・・・」
- (団長) 「話の腰を折るようで悪いけど、実際に出てくる団員は5-6人だよ。そんなに色々できるかな？資金だって年々寄付が減って、淋しくなってきたし。消防団は今年、不参加という選択もあるんじゃないか？」
- (千春) 「けれど、子供達は、去年とっても楽しそうにしていたから、今年も期待していると思います。それに今年から止めちゃうと、来年再来年はどうなるんですか？」

**Picture 2 Case Story Boards of Fire Brigade**

This “technique of notice” is used by a technique called Etude in a stage performance. Etude is often used in American and European academies as a way to properly understand the characters’ positions or circumstances through the role play in which the students identify with only using basic information without giving any details. Through this technique the students are able to understand the characters’ positions with reference to the social capital they had learnt before, and search for important elements to settle the issues.



**Picture 3 Scene of the “etude” (18 Jan. 2011)**

In fact, student S said that basis of fire brigade activity is an awareness of the social contribution of local residents, and student R said that events for children are effective in letting people know they are part of the local community. Another student, Y, said giving flourishing opportunities to the old is a better way to solve the problems. Student Y also mentioned that if he had spent a normal life, he wouldn’t have noticed the existence of community crises. This implied that Etude played a very important role in making people identify with and think like the characters in the process of notice. In 3.3 I would like to show the story about the fire brigade in the community taking steps to contribute to a development of local society comparing to the students’ comments and also show a hypothetical situation.

**3.3 Evaluation of the element of social capital in the summary of the team’s output**

Table 1 shows four outcomes resulted from accumulation of social capital according to the preceding research.

Outcomes(Benchmark)	Discussion Points
Child Development	Child development is powerfully shaped by social capital. Trust, networks, and norms of reciprocity within a child’s family, school, peer group, and larger community have far reaching effects on their opportunities and choices, and hence on their behavior and development (Beem 1999:296-306).
Public Spaces	Public spaces in high social-capital areas are cleaner, people are friendlier, and the streets are safer. Traditional neighborhood “risk factors” such as high poverty and residential mobility are not as significant as most people assume. Places have higher crime rates in large part because people don’t participate in community organizations, don’t supervise younger people, and aren’t linked through networks of friends (Putnam 2000: 307-318).
Economic Prosperity	A growing body of research suggests that where trust and social networks flourish, individuals, firms, neighborhoods, and even nations prosper economically. Social capital can help to mitigate the insidious effects of socioeconomic disadvantage (Putnam 2000: 319-325).
Health	There appears to be a strong relationship between the possession of social capital and better health. ‘As a rough rule of thumb, if you belong to no groups but decide to join one, you cut your risk of dying over the next year in half. If you smoke and belong to no groups, it’s a toss-up statistically whether you should stop smoking or start joining’ (Putnam 2000: 331). Regular club attendance, volunteering, entertaining, or church attendance is the happiness equivalent of getting a college degree or more than doubling your income. Civic connections rival marriage and affluence as predictors of life happiness (Putnam 2000: 333).

**Table1 Four Outcomes emerged from the accumulation of social capital**

For example, the comment of student R (previously shown) accords with the concept stated by Beem which children are to be raised locally on growth of children. The local society, as the student mentioned, can connect to the willingness to contribute to local society and to reinforce network of local society. Also the contention of “flourished opportunities to the old” the student R gave, are expected to create the secondary effect as maintaining health for the old according to the Table1.

### **3.4 Evaluation of the case method and Etude as study tools**

The story boards were made from the case of the fire brigade and students can identify with the characters in the story through role playing. We also have observed the process of highlighting the awareness as a concerned party and thinking seriously about how to solve the problem. Because the students could role play the case with concrete scenes and cases, particularly using story boards, they tended to consider it deeply and had a serious discussion.

The method of Etude is not conducted very often in Japan but it is widely used for a process of study under various themes at academic organizations in the U.S. and European countries. If they offer a proposal after they consider a case on their own, listen to others then compile those materials, the method of Etude is very effective in getting students to pay attention and offer their opinions clearly.

## **4. Issues and prospects for the future**

When we think about community design, referring to systems engineering or engineering designs are very useful. For example Fukuda (2008) used the words “creating shared value” and explained what kind of ability is required today. In the 20th century the linear model method, which means you aim for a certain target where the achievement judge was made by speed and achieve it as soon as possible, was effective. But he insists that the method is no longer acceptable in this century. Under today’s multiple confused circumstances, a clear aim is not given by somebody else, rather you have to have the ability to set your own aim. In the previous century, the producer and the designer were separated clearly from the user and client, so that it was very important how fast the aim was achieved, while in this century it is believed that the producer and designer have to work with the user and client together to make something valuable. In other words, the time has come when all the people concerned with the matter create the values.

The concept of “creating shared value” will have great meaning in the future when you think about management of community. Even when making a community it is hard to see a clear common direction for everyone. How are we going to plan and design our own community? What should be the strategy for connection to the next generation or making firm community management? What kind of action is required to make a better community as a sustainable social system making the most of local advantages and borrowing previous ideas? This is the first time ever for us to live in an age that requires us to think for ourselves and seek solutions.

If you accept this point, we need to integrate the limited knowledge from the past and also have courage to break through the limit. When we as a team, in which everyone participates, aim at creating shared values by trial and error, the elements of mutual communication ability, sensibility, understanding and foresight will be more important than ever. And these elements can not be obtained easily. If you don’t have the attitude to learn and keep doing it in everyday real life, the idea won’t be well-established. The assertion of requiring practical learning is very persuasive.

As the author started this essay, the Tohoku Earthquake hit on 11<sup>th</sup> March 2011, the function of local fire brigades supporting the people so dedicatedly. Especially ,the contributing leadership and teamwork was amazing and their action reminded us of the bondage and cohesion of the local community members. The series of their collaborative behaviors must be handed down generation to generation, and from social scientific scope, they should be modeled and imply a certain compass for the future community members. Of course regarding this tragedy, from academic interests many scholars and researchers have started to analyze the case to get an idea for preventing and decreasing the damage from natural disasters. Presumably once again the community bondage or local ties should be one of the key words in disasters prevention. To contribute to this field, the author would like to continue analyzing social capital and network implication to support local residents collaborative mutual support.

If we face a case like our research which may happen in real society on a daily basis but to which there is no particular answer, a method like Etude, which gives us the opportunity to tackle and find a solution, will be more significant. I wouldn't be more delighted if this research gave rise to arguments for how we should improve the way of learning in the future.



**Picture 4 Some activities by the local fire brigade and volunteer members  
(After the Eastern Japan Great Earthquake and Tsunami and Fukushima incident)<sup>1</sup>**

**【Videos from Workshops and “Etude”】**

YouTube <http://www.youtube.com/watch?v=gZLeuyMYa5g> (6. July 2011 uploaded)

Blog of Oe Seminar <http://oe-movcap.blogspot.com/> (6. July 2011 accessed)

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<sup>1</sup> These pictures were copied with permission from The Crisis and Risk Management Society of Japan where the author is one of the directors of the board committee. These activities were conducted led by the society with local people and scientists on 28-29 March 2011.

**References**

- Beem, C. (1999). *The Necessity of Politics. Reclaiming American public life*, Chicago: University of Chicago Press.
- Corey, Raymond (1998), *Case Method Teaching*, Harvard Business School 9-581-058, Rev. November 6, 1998.
- Crisis and Risk Management Society of Japan webpage <http://crmsj.org/> (accessed on 10 April 2011)
- Fukuda, Shuichi (2008) *Design Engineering*, Open University Press, Chiba.
- Hammond, J.S. (1976), *Learning by the case method*, HBS Publishing Division, Harvard Business School, Boston, MA.
- New York Times, "From Far Labs, a Vivid Picture Emerges of Japan Crisis" (accessed on 10 April) <http://www.nytimes.com/2011/04/03/science/03meltdown.html?scp=1&sq=Vivid%20Picture%20Emerges%20of%20Japan%20Crisis&st=cse>
- New York times, "U.S. Sees Array of New Threats at Japan's Nuclear Plant" (accessed on 10 April 2011)[http://www.nytimes.com/2011/04/06/world/asia/06nuclear.html?pagewanted=2&\\_r=1&ref=global-home](http://www.nytimes.com/2011/04/06/world/asia/06nuclear.html?pagewanted=2&_r=1&ref=global-home)
- Oe, Hiroko and et al.(2010) *Community Learned through Cases - Relationship and View Points of Local Problem Solving*, DTP Publishing Company, Tokyo.
- Putnam, R. D. (2000). *Bowling Alone. The collapse and revival of American community*, Simon and Schuster, New York.
- Putnam, R. D. (ed.) (2002). *Democracies in Flux: The Evolution of Social Capital in Contemporary Society*, Oxford University Press, New York.
- Omae,K.(2011) "The present situation and future of Fukushima Nuclear Power Plant which Caused melt down"  
<http://www.nikkeibp.co.jp/article/column/20110404/265766/?ST=business&P=1> (accessed on 10 April)
- Sakaiya, Taichi (1996) *Chi-en, Ko-en, Shin-cho Bunko*, Tokyo.

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