A Study on the Disadvantage of Enterprise SNS

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Abstract

Thanks to improvements in IT (information technology) and Web 2.0, enterprise communication has undergone rapid change. Many companies have adopted enterprise social networking services (E-SNS) to serve a variety of purposes. We focus on companies that use E-SNS for discussions or meetings. We see inherent dangers in such usage and believe that knowledge management by E-SNS is difficult to practice in the absence of face-to-face communication's factor. In this paper, we examine the difference between SNS discussion and face-to-face discussion from the perspective of dialectic communication and clarify the difference between newly created knowledge using SNS versus face-to-face communication through an interesting and simple experiment developed from the Unusual Uses Test (UUT). We find that SNS is unable to replace face-to-face communication and warn organizations of the dangers of using E-SNS for knowledge management.

Contents

Chapter 1 Introduction

1-1　Growth of the CA (Collaborative Application) market

　　Thanks to improvements in networking speed, the networking environment has spread dramatically. In response, our lifestyle has been gradually changing. Online services have brought a new diversity to the way we do things, not only in its receptive applications such as the referencing of documents, retrieval services, and online shopping, but also in its uses in formal and informal communication via such popular applications as Twitter and Facebook. Following this trend, enterprise communication has also been changing rapidly. Businesses and their employees have begun to show an interest in CA (Collaboration Application) using groupware to share information through e-mail and file-sharing. According to the survey of IDC Japan in 2013, the Japanese market scale of CA increased by 4.4% in 2012, and it has been estimated that the compound annual growth rate might be 4.9% until 2017. This means that the Japanese market scale of CA would reach roughly $131,146,000,000, making CA one of the most promising markets in Japan.

Figure1

Domestic Collavorative Application/Content Application market
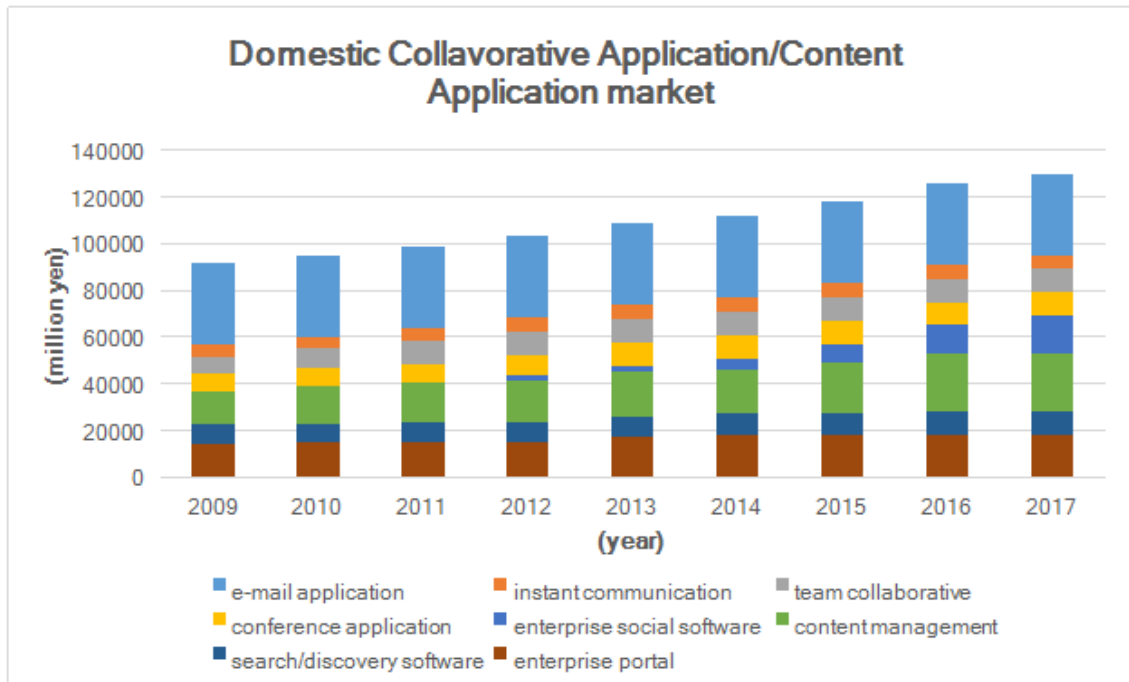
1-2　Emergence of E-SNS

Increasingly companies have attempted to adopt enterprise social software for routine enterprise work. Enterprise SNS (E-SNS) is an application for communication across all departments in an organization, allowing participants to share information and build a community. E-SNS is changing the nature of business communication. Already a vast amount of information is being shared via E-SNS. In fact, E-SNS shows the highest growth rate according to Figure 1 and we believe that it represents a very attractive market in Japan. E-SNS includes such applications as Beat Shuffle, created by Beat Communications, and Yammer, offered by Microsoft Japan Co, Ltd. Beat Shuffle is a networking system consisting of schedule management, Q&A, chat,

community, reference, and message to allow an easy exchange of information among units participating in a particular project. Yammer is a popular application that makes it possible to find information quickly and communicate beyond the formal and informal information channels using blogs, real-time chats, file sharing, links and pictures.

1-3　Case example of E-SNS

As suggested, many companies have begun to use E-SNS for discussions or meetings. In this sense, workers use it to create and manage knowledge. Gulliver International, where used cars are bought and sold, uses Yammer for their group discussions. With Yammer, workers can easily communicate and share information across departments. According to Gulliver's IT manager, Yammer has the ability to convert tacit knowledge to explicit knowledge and make information visible.

Such applications are easy for workers to understand. Meetings were held exclusively via E-SNS, so workers did not need to attend face-to-face meetings, allowing them to take part in multiple projects at the same time. Apart from that, M'GRANT FOOD SERVICE Co., Ltd. and Japanese Customer's Co-operative Union (JCCU) have also adapted E-SNS for discussion or meeting.

1-4　Previous studies on knowledge creation

In recent years, researchers have begun to consider knowledge management.

Yamamoto and Kanbe suggested that E-SNS is valid for knowledge creation by proposing an intermediary knowledge creation model. (Kanbe & Yamamoto,2010) From the perspective of collective knowledge through IT, Hayashi declared that E-SNS facilitates innovation because it can assist in acquiring extensive knowledge. (Hayashi, 2010)

Chapter 2 Knowledge organization in traditional Japanese companies

In this chapter, we focus on knowledge creation using E-SNS. We describe knowledge management and knowledge creation as important contributors to the strengthening of Japanese companies.

2-1　Knowledge creation

For purposes of our discussion, we define knowledge management as not sharing and retaining knowledge, but as the means by which companies constantly create new knowledge through the process of dynamically converting tacit knowledge to explicit knowledge and explicit knowledge to tacit knowledge. (Konno & Nonaka,1999; Takahashi,2007) As used here, tacit knowledge is individual and empirical knowledge that is difficult to represent in concrete form; explicit knowledge is specified knowledge that can be expressed literally, as in pictures or in numbers. (Nonaka & Toyama &

Hirata, 2010; Polanyi, 1958)

2-2   Traditional Japanese knowledge management

Traditional Japanese companies can be described as having three characteristics:

First, Japanese companies typically "start from experience." It is said that the Japanese people inherently believe that an experience is the starting point for all things. (Baba & Suzuki & Yamazaki,1998). Compared to foreign firms, Japanese firms regard experience as extremely important because experience produces a great deal of information. In other words, the Japanese people have a tendency to believe that experience is more important than consideration. Moreover, they insist not only on experiencing but on improving their experience. This characteristic of Japanese companies makes it possible to accumulate and deepen tacit knowledge. (Nonaka, 1991)

The second characteristic of Japanese companies is their desire to "make communities." In Japan, there are many places where people can share their ideas or beliefs and help one another, even if in very informal situations. In short, the "community" plays an important role in the field of knowledge management and in the interaction of knowledge. (Baba & Suzuki & Yamazaki,1998)

Finally, Japanese companies have traditionally been committed to "long-term employment." Compared to foreign companies, Japanese companies tend not to experience a frequent change in workers because of this traditional employment system.

Hence, Japanese company employees have the time and opportunity to accumulate tacit knowledge of their company and interact with other workers. This makes it much easier for Japanese companies to collect tacit knowledge which can be converted to explicit knowledge.

Over time, Western knowledge management, which emphasizes explicit knowledge and the importance of data, has gained a foothold in Japanese companies, causing these companies to reconsider the necessity of tacit knowledge. (Nonaka, 2014) As a consequence, Japanese companies have recently become concerned with traditional Japanese knowledge management.

2-3   SECI model

The SECI model, originated by Nonaka and Takeuchi in 1996, identifies four modes of knowledge conversion: (1) Socialization (from tacit knowledge to tacit knowledge); (2) Externalization (from tacit knowledge to explicit knowledge); (3) Combination (from explicit knowledge to explicit knowledge); (4) Internalization (from explicit knowledge to tacit knowledge). According to Nonaka, knowledge creation through these four processes, detailed below, was the strength of Japanese firms in the 1980s and 1990s.

Socialization

Socialization is a process for connecting tacit knowledge to tacit knowledge. At its core is the notion of "sympathy". Tacit knowledge is difficult to formalize for others, even though its existence is understood by them. The socialization process used to communicate or transfer such tacit knowledge depends on the five senses. On-the-job-training (OJT) and apprenticeships are good examples. In an apprenticeship system, apprentices work together with professionals. Through hands-on experiences, observation, imitation, and practice, the apprentice acquires tacit knowledge or know-how from the professional.

Externalization

Externalization is a process for converting tacit knowledge to explicit knowledge. Here the key is "essential investigation of communication." Individuals sometimes do not realize the existence or the nature of a certain tacit knowledge because the tacit knowledge is invisible and has changed dynamically. In such cases, new knowledge may be created through the process of converting tacit knowledge to explicit knowledge. Here, others may be able to convert the tacit knowledge of an individual to literal information or data. For example, the special skills that expert workers have acquired over time could be put into a training manual, possibly leading to proposals for improving efficiency.

Combination

Combination is a process for connecting explicit knowledge to explicit knowledge. For example, simulating data by connecting explicit knowledge from an individual worker with explicit knowledge from the organization. Through this process, new knowledge is created. Recently, IT has increased our ability to connect and combine explicit knowledge and thus improve our ability to create new knowledge.

Internalization

Internalization is a process for converting explicit knowledge into tacit knowledge. Explicit knowledge created through internalization is shared throughout an organization and converted into tacit knowledge by individuals. By reading documents or manuals about their jobs and the organization, and reflecting on them, trainees can internalize the explicit knowledge written in such documents to enrich their tacit knowledge base. Explicit knowledge can also be internalized through simulations or experiments that trigger learning by doing.

These SECI processes can be summarized in two words: communication and practice. Communication is the key to converting tacit knowledge to explicit knowledge, as in Externalization, and for connecting knowledge from individuals to knowledge from organizations, as in Combination. Practice is essential in converting explicit knowledge

to tacit knowledge through a sharing of experience, as in Internalization and in converting tacit knowledge to tacit knowledge, as in Socialization.

From above case example, E-SNS is used for communication, providing the means to efficiently discuss multiple projects. Studies have suggested that E-SNS facilitates communication across all the departments of an organization (Yamamoto & Kanbe, 2010) and enables the construction of a transverse organization through its networking capability, (Ogawa & Ota & Kato & Suwa,2009). SNS can be described as a device for activating communication. (Koga, 2009) Based on these descriptions, we consider SNS to be a device for "communication" rather than "practice."

Nonaka indicated that "dialectical" communication is an important factor in knowledge creation. This "dialectic" allows us to get rid of inconsistences and achieve an improved level of creation. (We explain what is meant by dialectical communication in Chapter 3.)

Chapter 3 Framework

In this chapter, we focus on "dialectical" communication that we mentioned in chapter2. We pick up two important factors of communication from the perspective of dialectic. Thereafter, we examine the difference between SNS communication and face to face communication by using those two factors.

3-1　Factors of "dialectical" communication

As mentioned, dialectical communication is an important factor in knowledge creation. And what do we mean by "dialectic"? Dialectic is a way of thinking and communicating. It developed from Socrates and his use of dialogue and discussion as a method of intellectual investigation. In this paper, we consider the factors of "dialectical" communication as identified by Hegel since they are closely related to Nonaka's notion of knowledge creation. (Fuji & Hatori & Komatsu,2009)

Hegel's dialectic consists of affirmative propositions, negative propositions, and synthesis: First an affirmative proposition is presented (thesis). Then a negative proposition opposed to the affirmative is offered (antithesis). Finally synthesis occurs when the conflict between the propositions is resolved and a new proposition, different from the affirmative and negative, is formed. By repeating this process again and again, we move closer to the truth. This movement is called Aufheben. (Fuji & Hatori & Komatsu,2009)

Dialectical communication essentially closes the gap of ideas among participating individuals in their approach to the truth. Unfortunately, there are often practical obstacles to employing this sort of dialectic. Fuji (2009) said that these obstacles are, someone who does not listen completely to the ideas of others and who discusses only

his/her own ideas, or someone who adamantly refuses to change his/her mind and argues other people into silence, or someone who adjusts the ideas of others to fit his/her own thinking. If those things happen, it is impossible to communicate dialectically. (Fuji & Hatori & Komatsu,2009)

Two words can be used to summarize the conditions necessary for effective dialectical communication: self-assertion and exclusion of others. Self-assertion refers to an unwillingness to change or abandon one's own opinion. Exclusion of others implies an unwillingness to listen and try not to understand the opinions of others.

3-2   Characteristic of SNS communication

Previous studies suggest that there are clear differences between CMC (Computer-Mediated Communication), including E-SNS, and face-to-face communication. Sproull & Kiesler argue that CMC communications are less inhibitory than face-to-face communication, allowing offensive or insensitive behavior that is sometimes labeled "flaming." (Kiesler & Sproull,1991) Flaming happens in CMC communication because of the anonymity and lack of connection inherent in the process. In contrast to face-to-face communication, CMC communication lacks visual and auditory impressions, producing an environment in which people tend to be insensitive to others during their communication. (Kiesler & Sproull,1991;Kimura & Tochiku,1998).

Given our discussion above, we have constructed a framework based on the notions

of "self-assertion" and "exclusion of others". (See Figure 2.)

Figure2 Framework of factors from the perspective of dialectical communication

High

《Self-assertion》

SNS Communication

Low ← → High

《Exclusion of others》

Dialectical
Communication

Low
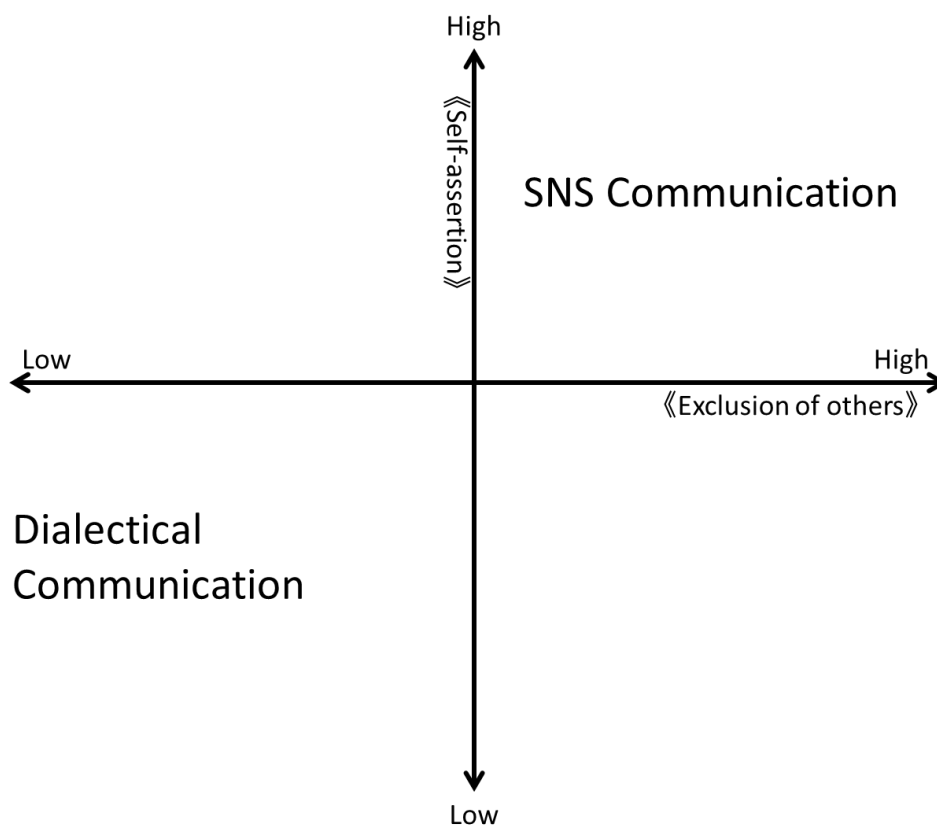
Source: made from previous studies

Using this framework, we propose the following hypothesis:

H$_1$; People cannot communicate dialectically using SNS

Moreover, insofar as Section 3-1 suggested that dialectic communication closely relates

to our knowledge creation ability, we propose a second hypothesis:

H$_2$; Knowledge creation cannot be done using SNS

Chapter 4　Demonstration

To test the two hypotheses, we conducted a simple experiment in which we compared ideas created from SNS discussions to those created from face-to-face discussions. Furthermore, we examine SNS discussion from the points of self-assertion and exclusion of others.

4-1　The experiment

We used the UUT (Unusual Uses Test) to measure a group's knowledge creation ability. UUT is a test of creativity in which people are asked to list as many unusual uses as they can for a particular object (Buchanan & Lindgren 1976; Yamaguchi 1997). We asked test respondents—first individually, then in groups—to list as many unusual uses as they could for CD-ROM Discs.

First of all, we gathered approximately 200 cooperators of this project. All of them are students of University of Toyama. And we chose 63 students of our university. From these 63 respondents, we formed 21 groups of three. Eleven of the groups were to develop their responses using SNS. The other 10 groups were to use face-to-face discussion.

Finally, we made groups at random because we wanted participants to discuss with strangers. We confirmed that the average intimacy level of the SNS groups and that of the face-to-face groups were essentially the same.

We set up two sessions:

(1) Individual session

First, participants were asked to list, on their own, as many unusual uses of CD ROM discs as they could within 3 minutes. The participants were not allowed to communicate or share information with others. All participants were in the same classroom during this session.

(2) Group session

We then had our 11 SNS groups generate ideas using only SNS discussion and our 10 face-to-face groups generate ideas using only face-to-face discussion. SNS groups were moved from classroom to computer room, and face-to-face groups stayed the same classroom.

Group discussions lasted 15 minutes. During this session, we prohibited group members from using their individual ideas as their group's ideas; rather we asked them to create ideas as a group. The group's ideas were recorded by each participants. It means that each participants filled out forms of group ideas. During the SNS discussions, test respondents used a computer chat device. Even though

there were small differences in the frequency with which participants used a computer, we confirmed that all of them could type without difficulty.

(3) Questionnaire survey

We examined the two factors, self-assertion and exclusion of others, by administering a six-question survey questionnaire in which we asked each respondent whether they agreed or disagreed with the statement presented in the question. Participants responded using a 5-point scale in which a value of "1" indicated strong agreement and a value of "5" indicated strong disagreement with the statement. Three questions in the survey related to self-assertion and three questions related to exclusion of others:

Question1: My ideas influenced the group's ideas during the discussion. (self-assertion)

Question2: I argued my ideas very well during the discussion. (self-assertion)

Question3: I didn't hesitated to express my opinion during the discussion. (self-assertion)

Question4: I listened to others' opinion carefully during the discussion. (exclusion of others)

Quenstion5: I tried to get along with others during the discussion. (exclusion of others)

Question6: I tried to understand others' opinion deeply. (exclusion of others)

A total of 74 ideas were created in the group session—31 from the SNS discussions and 43 from the face-to-face discussions. There were six uninterpretable ideas, three from the SNS groups and three from the face-to-face groups. In this phase of the study, we did not count the ideas created in the individual session since our primary focus was on organizational creativity. In all, then, we measured the creativity of 28 ideas from the SNS groups and 40 ideas from face-to-face groups, excluding the six uninterpretable ideas.

4-2   Measuring creativity

We measured the creativity of an idea using three criteria: originality, interest and practicality (Hida & Miura,2002). In our study, to be "original" was defined to mean "to be different from anything that anyone had thought of before"; to be "interesting" was defined to mean "to be worthy of one's attention"; to be "practical" was defined to mean "to relate to a real situation in the near future."

After collecting our group responses, we asked 107 individuals who had not participated in the UUT test to evaluate the creativity of each group's ideas. More specifically, each of these 107 evaluators was asked to assign to each idea a score using a five-point scale for each of the three criteria. The composition of the group of 107 evaluators was as follows: Gender—44.8% male, 47.6% female, and 7.4% unanswered;

Age—3.7% teenagers, 92.5% in their twenties, 0.9% in their thirties, and 2.8% in their

40s or older. The evaluators did not know which ideas came from the SNS groups and

which were from the face-to-face groups.

4-3   Experimental results

The table 1 shows the average responses for each of the six questions presented to

our 63 UUT respondents, divided into SNS discussion groups and face-to-face

discussion groups. For example, the value 3.30303 in the upper left cell of the table

indicates that the average score on Question1 ("My ideas influenced the group's ideas

during the discussion.") for members of the SNS groups was 3.30303. This compares to a

2.875 average score on the same question for members of the face-to-face groups.

Table 1: Average of questioner answers

	Question1	Question2	Question3	Question4	Question5	Question6
SNS	3.30303	3.727273	2.424242	3.606061	3.878788	3.787879
Face-to-face	2.875	3.09375	1.75	3.8125	4.03125	4

To determine significant differences for the six questions in the survey, we used the exact binominal test. For purposes of the test, we defined an answer of 4 or more as an indication that an individual agreed with the statement and an answer of 3 or less as an indication that an individual did not agree with the statement. We set the significance level at 5%, which gives a critical region outside -1.96 to +1.96.

For the test, we used

p_A= proportion of all SNS discussion participants who would agree with the given statement.

p_B= proportion of all face-to-face discussion participants who would agree with the given statement.

H$_1$: $p_A \neq p_B$

$$\frac{\bar{X} - \bar{Y}}{\sqrt{\left(\frac{1}{n_A} - \frac{1}{n_B}\right)\bar{p} - (1 - \bar{p})}} \sim N(0,1)$$

Table 2 :Result of questionnaire
Question 1

	Sample size	number of people who agreed	proportion of people who agreed
SNS	N$_a$=33	28	0.84
Face-to-face	N$_b$=29	18	0.62

Z= 2.095343

Question 2

	Sample size	number of people who agreed	proportion of people who agreed
SNS	$N_a=33$	23	0.69
Face-to-face	$N_b=29$	13	0.44

Z= 1.980063

Question3

	Sample size	number of people who agreed	proportion of people who agreed
SNS	$N_a=33$	18	0.54
Face-to-face	$N_b=29$	7	0.24

Z= -1.28219

Quesion4

	Sample size	number of people who agreed	proportion of people who agreed
SNS	$N_a=33$	20	0.61
Face-to-face	$N_b=29$	25	0.86

Z= -2.25463

Question 5

	Sample size	number of people who agreed	proportion of people who agreed
SNS	$N_a=33$	22	0.66
Face-to-face	$N_b=29$	27	0.93

Z= -2.55147

Question 6

	Sample size	number of people who agreed	proportion of people who agreed
SNS	$N_a=33$	19	0.57
Face-to-face	$N_b=29$	27	0.93

Z= -3.18992

Test results indicated a difference in "self-assertion" between the SNS discussion groups and the face-to-face discussion groups. (Table 2) In particular, there were

significant differences for Question1 and Question2.   The survey gave an SNS discussion group proportion that was higher than the face-to-face discussion group proportion for both Question1 and Question2, which indicated to us that individuals tend to be self-assertive in SNS discussions as compared to those participating in face-to-face discussions. On the other hand, there isn't significant difference for Question 3. However, this question does not indicate obstacles of dialectics because those are someone who adamantly refuse to change his/her own ideas and argues other people into silence. All things considered, individuals tend to self-assertive in SNS discussion rather than face-to-face discussion.

We also found a difference in "exclusion of others" between SNS discussion group participants and face-to-face discussion participants. (Table 2) Question4 has to do with how carefully people listen to the opinions of others; Question6 deals with how deeply people understand the opinions of others. Both questions relate to exclusion of others. The fact that the SNS proportion is lower than the face-to-face proportion in both Question4 and Question6 indicates that SNS participants tend not to listen and understand others' opinions as compared to participants in face-to-face discussions. Moreover, we found a significant difference in Question5, which deals with how people get along with others. If people are not acceptable, they tend to interrupt or reject the opinions of others. We interpreted the fact that the Question5 proportion for SNS participants was lower than the proportion for face-to-face participants to mean that

SNS participants tend not be acceptable when compared to participants in face-to-face discussion. We interpret this to mean that SNS discussions tend not be acceptable as compared to a face-to-face discussion process.

Finally, we measured the "creativity" of ideas using the scores provided by our 107 evaluators. The table 3 shows the averages for each of the three criteria, broken out by discussion group type:

Table 3: Average "creativity" scores

	original	Interesting	practical
SNS	3.06397	3.04294	2.623609
Face-to-face	3.18718	3.150612	2.900067

To determine significant differences, we again used an exact binominal test. We defined an idea as "creative" according to a given criterion if its average score was over 3 for that criterion and "not creative" according to a given criterion if its average score was 3 or less for that criterion. We set the significance level for our test at 5%, which gives a critical region outside -1.96 to +1.96.

Table 4: Result of creativity

"original"

	Sample size	number of original ideas	proportion of original ideas
SNS	N_a=28	16	0.571429
Face-to-face	N_b=40	34	0.85

Z= -2.56562

"interesting"

	Sample size	number of interesting ideas	proportion of interesting ideas
SNS	N_a=28	16	0.571429
Face-to-face	N_b=40	29	0.725

Z= -1.22813

"practical"

	Sample size	number of practical ideas	proportion of practical ideas
SNS	N_a=28	3	0.107143
Face-to-face	N_b=40	18	0.45

Z= -3.01306

Applying the test, we found significant differences for "original" and "practical", but not for "interesting." (Table 4) (We believe that if we had explained the meaning of "interesting" more carefully before asking the question, we might then have found a significant difference here, as well.)

To summarize, there were differences in the "creativity" of ideas produced using SNS versus those produced from face-to-face discussions.

Chapter 5 Discussion

5-1   A suggestion of our studies

From our demonstration, results indicated a difference in "self-assertion" between the SNS discussion groups and the face-to-face discussion groups. SNS discussion groups tend to have obstacles of dialectical communication. Moreover, we also found a difference in "exclusion of others" between SNS discussion group participants and face-to-face discussion participants. In short, our study suggested that SNS discussion cannot communicate dialectically. Interestingly, there was a difference in "understanding of group's ideas" among those participating in SNS discussions. For example, the idea which a group member regarded as a group idea, was not written on other's paper as a group idea. It was shown in 6 of the 11 groups. This would seem to indicate that SNS participants could not easily understand the ideas of others and could not develop ideas effectively within the group.

Furthermore, there were differences in the "creativity" of ideas produced using SNS versus those produced from face-to-face discussions because we found significant differences for "original" and "practical". Actually, we did not find a significant difference for "interesting". However, table 3 shows that ideas which were created by SNS discussion groups tend to be lower level than those of face-to-face discussion groups. We clarified that there are difference both quality and quantity between ideas created using SNS discussion and those of face-to-face discussion. We assume that

E-SNS is unable to effectively foster knowledge creation because people cannot communicate dialectically. Even if these differences between SNS and face-to face were something small in our demonstration, these differences will be increased in the case of long discussion.

Finally, there are issues for reflection which should be improved in the future study. Our study involves relatively small sample sizes. In addition, there is inequity of evaluator's age. We must demonstrate in a large sample size and be fairly from the perspective of ages in the future. Moreover, our measures of "self-assertion" and "exclusion of others" are incomplete. We must examine this issue more carefully in future study.

5-2   A suggestion of previous studies

Uetake argued that firms and their workers must share the context for accumulated knowledge due to the diversity of human resources (Uetake,2010), implying that there are serious limitations for companies that attempt to use E-SNS to produce innovative ideas and products. Our studies suggested that SNS discussion tend not to be acceptable rather than face-to-face discussion. In other words, participants involved in the exchange of ideas and information are prevented from sharing the background of the words used to express ideas when there is an exclusion of others in a

discussion. It is for this reason that many companies are unable to create knowledge using SNS. Yamamoto and Kanbe suggested that E-SNS is valid for knowledge creation (Kanbe & Yamamoto,2010). Moreover, from the perspective of collective knowledge through IT, Hayashi declared that E-SNS facilitates innovation because it can assist in acquiring extensive knowledge (Hayashi, 2010). However, our study suggested that SNS discussion cannot communicate dialectically. That is why SNS discussion cannot create knowledge. All things considered, created knowledge which previous studies suggested is lower level than those of face-to-face discussion. Such knowledge does not relate strengthen of companies. Moreover, Nonaka discussed that recently, IT has increased our ability to connect and combine explicit knowledge and thus improve our ability to create new knowledge and this process closely relates to dialectics (Nonaka,2010). However, our study suggested that SNS discussion cannot communicate dialectically. That is why, we assume that IT has increased only the chances of sharing and connecting knowledge but not knowledge creation.

After all, future studies about E-SNS should divide the meaning of knowledge management, only sharing and conveying information and knowledge creation.

5-3   Expansion of our study

In recent globalization and improvement of IT, our environment has been changing rapidly. Adapting these situation, the concept of Dynamic Capability (DC) has

attached great deal of attention in the field of management strategy.

A dynamic capability is the firm's ability to integrate, build and reconfigure internal and external ability to address rapidly changing environment (A.Schuen & G.Pisano,1997). We assume that our study closely relates to DC in the field of management strategy. Employees must create new knowledge continuously when companies try to improve their ability for adapting these situations. We suggest that E-SNS discussion cannot create advanced knowledge for adapting rapidly changing environment because the quality of knowledge created using SNS is lower level than that of face-to-face. In conclusion, our study can be developed in the field of DC as well.

5-4　A proposal for companies

Using an experiment to measure creativity, we showed that SNS communication (specifically, E-SNS) is unable to effectively foster knowledge creation because people cannot communicate dialectically. However, E-SNS does have some important uses, including conveying and storing information or data, and allowing for communication across all departments of an organization.

NTT data adapted an E-SNS to break down sectionalism in the company. As a result, an existing enterprise network was rebuilt and strengthened. At Mitsubishi, UFJ Research & Consulting used an SNS to constantly update participants on the progress of a major consulting project. By using this E-SNS, workers were able to

understand the current situation and reduce by half the time needed to complete the project. It seems clear, then, E-SNS is useful for a number of applications but, as we have shown, not for knowledge creation. Improvements in IT facilitate the sharing of information and the construction of increasingly efficient enterprise networks, but they still fail to provide a sound vehicle for knowledge management. Thus, while SNS can serve as a useful complementary device for routine work, it cannot replace face-to-face communication in the process of true knowledge creation.

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Supporting data

2015/10/27 pictures during group discussion

個人セッション用解答用紙　　　　　　　　<u>氏名</u>

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

裏面はメモ用紙になっています

集団セッション用解答用紙　　　　　　氏名　　　　　　グループ番号

解答はできるだけ詳しく用紙の中に記入してください。

1
2
3
4
5
6
7
8
9
10
11
12
13

裏面はメモ用紙になっています

・解答が 13 個を超える場合には紙をもう一枚用意しますので、挙手をお願いします。

・解答用紙が複数枚になる場合には、すべての用紙にグループ名を記載し、その用紙が何枚目であるかを右下の欄に記入してください

・解答の終了後アンケートがありますので、そのままお待ちください。

・不明な点があれば挙手をお願いします。係りの者が伺いに参ります。

～今回の実験についての評定～

実験にご協力いただきありがとうございます。最後に、この実験に関するアンケートへの回答をお願いします。質問は全てで7個あります。よろしくお願いします。

【1】　グループのメンバーの実験以前の関係について

①　グループのメンバーの顔も名前も以前は知らなかった
②　グループのメンバーの顔や名前は以前から知っている。
③　グループのメンバーと以前から会えば話す程度の仲である
④　グループメンバーとは以前からある程度親しい仲である
⑤　グループメンバーとは以前から最も親しい友達である。

　1人目　　　　　　　　　　　　1　－　2　－　3　－　4　－　5
　2人目　　　　　　　　　　　　1　－　2　－　3　－　4　－　5

【2】今回の実験について

1、　私の意見や情報はグループの話し合い影響を与えた
　　　全く思わない　1　－　2　－　3　－　4　－　5　非常にそう思う

2、　自分の意見やアイディアを主張した。
　　　全く思わない　1　－　2　－　3　－　4　－　5　非常にそう思う

3、　積極的に自分の考えを述べることはためらわれることはなかった
　　　全く思わない　1　－　2　－　3　－　4　－　5　非常にそう思う

4、　私はメンバーの言うことによく耳を傾けた
　　　全く思わない　1　－　2　－　3　－　4　－　5　非常にそう思う

5、　メンバーはみんなで仲良く話し合おうとした
　　　全く思わない　1　－　2　－　3　－　4　－　5　非常にそう思う

6、　メンバーみんなのいろいろな考えをよく知ろうとした
　　　全く思わない　1　－　2　－　3　－　4　－　5　非常にそう思う

お忙しい中、ご協力本当にありがとうございました。

内田ゼミナール　企業内 SNS 班