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**Conflict Resolution Case Study:
The National Education Information System (NEIS)¹⁾**

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Conflict Resolution Case Study: The National Education Information System (NEIS)

Abstract

The National Education Information System (NEIS), initiated by the Ministry of Education (MOE) in Korea, is an electronic system that manages diverse administrative and academic affairs of all the nation's schools and students through the Internet. In 2003, NEIS touched off a fierce conflict between the MOE and the Korea Teacher's and Education Worker's Union (KTU), and it was not until early 2004 that the case was resolved. The main issues were administrative and economic efficiency vs. personal information protection. The conflict could have been minimized if both the MOE and KTU had taken the participatory problem-solving method during 2002 and if a proper agenda (Agenda 3 in the paper) was developed in early 2003.

Key words: education information system, personal information protection, negotiation, conflict resolution

1. Introduction

The National Education Information System (NEIS) is an electronic data management system that stores schools' educational and administrative matters including admission, budget, and personnel management via the internet. All these are handled by servers built in sixteen educational administration offices across the country that connect all elementary, middle, and high schools.

The NEIS project is composed of two aspects: physical infrastructure that builds the servers, and software (S/W) program development. The Korea Education & Research Information Service (KERIS) serves as the hub of the system, and the Administrative Office of Education in each Province or Metropolitan city serves as a local center. The program is designed to cover all administrative matters in the local office of education as well as those of each school. Since students' data from each school are concentrated in the center, four steps of security measures are prepared to protect private information: electronic authentication, access control, trespass obstruction, and database protection.

The Ministry of Education and Human Resources Development (MOE) underwent a bitter battle with the Korean Teachers and Education Workers' Union (KTU) and other progressive NGOs during 2003. How can we characterize the conflict in NEIS? The NEIS case can be classified as a conflict of interests, a conflict of relations, and a conflict of values. First, the NEIS case showed various conflicts of relations, most notably the distrust between KTU and the MOE. There was a struggle between KTU and KFTA (Korean Federation of Teachers' Associations) over each organization's political influence. The KFTA fully supported NEIS after 2003 with a view to restraining KTU's growing influence.

The NEIS case was also a conflict of interests. The most salient feature was the issue of workload reduction. It was true that the beginning stage input demands of NEIS were rather too much, and those were removed later from the system. Afterwards, teachers' unions also suggested the infringement in teacher authority as NEIS provided significant amounts of academic information to inquisitive parents.

The NEIS case was a conflict of values concerning the protection of private information. The case is significant in that, for the first time, social recognition was placed on the relation between computerization and human rights. It was also the first conflict case after the beginning of the ROH Moo-Hyun government that occurred between the progressive camp, emphasizing the importance of personal information protection, and the conservative camp,

which desired administrative efficiency. These background conditions stirred value conflicts and thus made the NEIS case much harder to solve.

Were there any ways that could have solved the conflict with more ease? How can we evaluate the negotiation results? What were wrong with the stakeholders' ways of handling the conflict, and what could have been done differently? To answer these questions, Chapter 2 will introduce the stakeholders and their interests, and then briefly go through how the case unfolded. Chapter 3 investigates the issues and agendas and evaluates the negotiation results. Chapter 4 presents the evaluation of the conflict management of the stakeholders, and constitutes the main part of the paper. Chapter 5 concludes the article with policy suggestions.

2. Players and Progress

1) Stakeholders and their interests

The Ministry of Education & Human Resources Development (MOE)

The MOE, as the body that initiated NEIS, was confident of the effectiveness that NEIS would bring. At the same time, there was also pressure that the MOE must successfully complete the project it has promised: in June 2001, NEIS was classified as one of the eleven major e-government projects, and thus constrained the MOE to complete NEIS before President KIM Dae-Jung's end of office. As the introduction of the system had been promised repeatedly, giving it up was unthinkable.

The MOE was willing to resolve the NEIS conflict peacefully. The Participatory Government, the nickname for President ROH Moo-Hyun's government, wanted to set a good example of 'dialogue and compromise'. Disagreement was evident even within the MOE. Minister Kwon, the first MOE minister in the ROH Moo-Hyun government, put 'problem-

solving' before 'promoting NEIS' since he did not have any attachment to NEIS unlike the other civil servants in MOE.

The Korean Teachers and Education Workers' Union (KTU)

KTU represents the most progressive ideology among teachers' organizations. Its position towards NEIS changed drastically when new executives came to office in December 2002. The former executives thought the three main controversial chapters could be included in NEIS provided that the input requirements be simplified. The new executives on the other hand, desired the complete abolition of NEIS or NEIS without the three controversial chapters. This paper focuses on the interaction between the MOE and KTU because they were two most important players in the NEIS case.

The Korean Federation of Teachers' Associations (KFTA)

The KFTA consists of school management, such as principals and vice-principals. In this regard, the KFTA is considered to be an opponent to KTU in most issues. During 2002, the KFTA first emphasized the need for more preparation before the implementation of NEIS. However, as the debate unfolded, the KFTA came to strongly support NEIS with a view to reducing the political influence of KTU. KFTA judged that NEIS would offset the influence of KTU. The interest of the KFTA was focused more on weakening the strength of KTU than in the merits of NEIS system itself.

The Korean Union of Teaching and Education Workers (KUTE)

The KUTE is another labor union of teachers that has traditionally maintained a milder position than KTU in most issues. Therefore, the KUTE did not totally oppose NEIS, but demanded improvement of the system, saying that the required information to be inputted was far more than necessary. The KUTE and KTU have different ideas in many issues, but they have sometimes cooperated with each other as labor unions of teachers. Their relationship has therefore been much better than that between KTU and KFTA.

Other NGOs including “The People's Solidarity for Participatory Democracy” (PSPD)

To warn of the possibility of human rights violations from personal information leakage, many other NGOs participated in a joint front for an anti-NEIS platform. Although they did not have interests directly related to NEIS, they wanted to make NEIS case a good precedent that highlighted the importance of personal information protection. The PSPD, a leading NGO in Korea, was one of the major opponents to NEIS. With a start of the ROH Moo-Hyun government in 2003, an ideological conflict became fierce between the conservatives and the progressives, and NEIS was the first tug of war between them.

Parent Organizations

The Parent Organization for Good Education maintained a view similar to KTU in claiming that the rights of parents and students on their information must be protected. On the other hand, the Parent Organization of Love for School had similar opinions with the MOE. These parent organizations were active in participating and expressing their opinions in many joint problem solving mechanisms such as the Committee for Education Informatization.

Private Firms in the Information Technology Industry

Private firms also had interests with NEIS project since they could realize billions of won in profit. While enterprises did not directly appear in the debate over NEIS, they did play a role of supplying data that could point in favor of NEIS.

2) Progress of the NEIS project

The NEIS case typically shows the five stages of conflict: before the conflict, rising tension, crisis, settlement, after the conflict.

Stage One: Before the conflict (2000.1~2002.8)

The beginning of NEIS was in fact in year 2000. In his new year's speech, President KIM Dae-Jung mentioned plans for computerized education. To support his idea, the MOE conducted research projects for Business Process Re-engineering (BPR) and Information Strategy Planning (ISP) starting in September 2000 to March 2001. Promotion of NEIS became active in June 2001 when the Presidential Committee for e-Government chose the system as one of eleven major plans to be completed by November 2002, a month before the next presidential election. Based on the BPR and ISP, NEIS was completed in September 2002 as scheduled by a consortium of Samsung SDS Ltd., the main contractor. In total, fifty-two billion won was used in its development. There was virtually no discussion among stakeholders concerning NEIS during this period. Stakeholders outside the MOE did not even know that they were in fact concerned parties.

Stage Two: Rising tension (2002.8~2002.12)

During this period, the MOE began to advertise NEIS. The Ministry held public hearings for groups of teachers and parents. Most participants showed affirmative attitudes, with the exception of the Korean Teachers and Education Workers' Union (KTU), which demanded that certain input requirements be removed. Thus, the launch date was postponed from the originally planned September 2002 to March 2003. The MOE, in an attempt to end negotiations with KTU quickly, agreed to accept KTU's arguments by reducing input categories. Meanwhile, on November 4th, NEIS opened with the exception of the controversial chapters such as school administration, academic affairs, admission and advancement. The full-scale operation of NEIS with these remaining chapters was planned to begin in March 2003 after further testing.

Stage Three: Crisis (2002.12~2003.6)

Meanwhile, on December 13, 2002, KTU elected a new board of executives. While the former leaders were only trying to correct and improve NEIS, the new executives set the abolition of NEIS as their goal, stating the matter of students' personal information as the most important issue. To reach this goal, KTU intensified their resistance by refusing to accept official NEIS certifications, by leave of absence, by suing the Minister of Education LEE Sang Joo, and by presenting a petition to the National Human Rights Commission of Korea (NHRC). During this period the conflict between the Ministry and the Union was most intense.

In the meantime, the NHRC recommended that three chapters of school administration/academic affairs, health, and admission/advancement be ruled out of NEIS. This suggestion was positive news for KTU. The three were only part of twenty-seven chapters of NEIS, but in terms of workload and importance, they were the major chapters that

would take 65% of the total input requirement. To the MOE's point of view, NEIS without those three, would therefore virtually be the same as discarding the system altogether.

At this, the Minister of the MOE, feeling the need to reach an agreement, negotiated with KTU on May 26th, and drastically accepted their opinions. However, the civil servants in the MOE, local Offices of Education, and the Korea Federation of Teachers' Associations expressed opposition to this negotiation by KTU and the Minister, leading to an official announcement by the MOE different from the original negotiation outcome between the MOE and KTU. However, this revision only triggered stronger resistance from KTU and worsened the conflict.

Stage Four: Settlement (2003.6~2004. 9)

At this point, NEIS was no longer just a matter within the MOE. The Office of the Prime Minister established a Committee for Education Informatization to discuss the three controversial chapters of NEIS. The committee consisted of KTU and other teachers' organizations, parents' associations, government officials, experts, and other NGOs. They held nine meetings, twenty sub-committee meetings, and various joint sessions between sub-committees. As a result, a consensus was reached to build a system for three chapters separate from NEIS.

Stage Five: After the conflict (2004. 9 ~ present)

After the agreement, the MOE decided on and reported plans to build the new version of NEIS at a Cabinet Meeting in November 2004. In February 2005, related laws were revised, preparing an institutional basis for the system. In December 2005, the system was completed

and tested. Finally, in March 2006, NEIS formally launched with the beginning of the new semester.

3. Issues, Agendas and the Outcome of the Negotiation

1) Major Issues

There were four main issues in NEIS case. The first was the agenda of human rights and the protection of personal information. KTU and other parties against the system opposed the collection of student information that might violate human rights. The human rights issue, however, was a new subject for the MOE. The issue brought many agendas into concern as will be introduced later.

The second issue was the cost needed to build the system. To cut down on costs, the number of servers had to be reduced. KTU however, wanted one server for each school to reduce the possibility of information leakage. With the assertion that costs should not exceed the original budget of 52 billion won, the old budget became the cost limit for the new NEIS as well.

The third issue was the positive effects that NEIS was expected to bring, such as efficiency of education administration. The fourth issue was the workload of teachers. The MOE explained that the following effects were anticipated from the utilization of NEIS in comparison with the prior C/S (Client Server). However, KTU had different views.

① Workloads for teachers would be reduced due to computerized administration. In response, KTU emphasized that the job of inputting data that had been the responsibility of the teachers in charge of information technology in each school and would be distributed to all teachers, actually resulting in a greater burden for most teachers. Furthermore, with some

input requirements not quite necessary for administration, the overall workload might in fact increase instead.

② Administrative services to students and parents would substantially be improved, which the MOE contended would raise public satisfaction. Before NEIS, citizens had to visit their schools or administrative offices of education in order to receive graduation certificates, academic transcripts, and other documents to prove schooling backgrounds. Under NEIS, however, these would be easily available with the use of internet. KTU argued, however, this was just a minor benefit.

③ Parents could check their children's academic and behavioral development without having to actually visit the school. This would also raise transparency in the education administration, the MOE said. Despite such strengths, however, KTU worried about the possible influence parents could exercise over students' records. KTU also stressed the importance of personal meetings between parents and teachers for effective consultation.

④ Electronic documents or digitalized administration would enhance efficiency in education administration. This “paperless office” might even change the conservative culture of schools. The MOE especially emphasized the transparency and efficiency by sending high school students' records on-line to universities for application. KTU, however, said that the online transfer of data would increase the possibility of personal information leakage.

⑤ Accurate and diverse statistical data that NEIS would automatically offer to the government online would improve education policies. In the past, it took weeks to collect data manually and conduct them into statistics. With NEIS, it was expected that information would be available in real-time, with remarkably lower costs and enhanced accuracy. KTU, however, viewed this benefit as the source of the personal information leakage, and it also worried that NEIS would tighten control over teachers by comparing different schools.

During its course of evolution, the NEIS conflict experienced a transition in its major issue. Up to December 2002, the main issue was the workloads of teachers and benefits of the

system. However, since December 2002, human rights became the priority issue. Finally, after 2004, costs emerged as the important variable.

2) Agendas and Evaluation of the Negotiation

The following lists the main agendas. Some of the options under each agenda were not actually discussed in the negotiation, but added here to help understand the issues.

Agenda 1: Whether the three controversial chapters (administrative/academic affairs, admission/advancement, and health) should be included in NEIS

Option 1. Include all three chapters in NEIS

Option 2. For the three chapters, build a system separate from NEIS but connect those servers to one another to make it possible to gather information from all schools on-line.

Option 3. Separate the three chapters out of NEIS and make no connection between servers.

Option 4. Use client servers for the controversial three chapters, and for the rest, use NEIS.

It can be mistakenly perceived that personal information would be better protected as the number of data-storing servers increase. However, even with thousands of servers, there would not be significant differences in data protection as long as those servers remain connected to one another. In other words, option 1 and 2 only differed in the number of servers and relevant costs but in fact had no difference either in information protection.

KTU wanted all three chapters to be excluded from NEIS and be managed by C/S method (option 4). The MOE of course preferred option 1, but was ready to accept option 2. For the MOE, however, option 4 was considered to be not much better than the complete abolition of NEIS because the targeted three chapters were the most important part of NEIS.

The negotiation result was Option 2. The most important point in NEIS negotiations was whether or not the information in the three chapters would be collected and shared on-line. In Option 2, the servers are connected to each other to make the collecting and transferring of information on-line possible. Option 2 can be compared to distributing eggs into many baskets, but with all the baskets tied together. In terms of egg protection, this multi-basket method, despite its higher costs, is not much different from one basket method. Similarly, in terms of information protection, the idea of “splitting servers up” had the same result as one big server. Despite option 2 only increased the cost of establishing more servers, the agreement was made to save the face of KTU because many people believed that separation of the three chapters from NEIS would enhance the information protection. The cost for this face-saving was the wasted government budget.

Why, then, had KTU approved the agreement? First, KTU thought that it could enhance information protection by focusing more on Agenda 2 and 3. It is a well-known principle that the more the agendas, the easier to reach an agreement. Additionally, since NEIS was already widely being used, overturning the situation altogether would have been increasingly difficult. This delivers the lesson that time can have an opposite implication for each side. Time was not on KTU's side. Finally, with the growing debate on personal information protection and an increase in protection devices, KTU eventually came to share a common understanding that information stealing or leakage was technologically very difficult. This teaches us the importance in joint fact-finding in the early stage when conflict begins to unfold.

Agenda 2: The geographical location of the server for the three controversial chapters, and the number of schools tied to one server

(This agenda is meaningful only when option 2, 3 were chosen in Agenda 1)

Option 1. Each school operates their own server.

Option 2. Local offices of Education operate servers for each school.

Option 3. At local offices of Education, build a server for each high school but tie every 15 middle or 15 elementary schools to one server.

Option 4. At local offices of Education, try Option 3 and 5 for some years to see which is more effective and efficient before choosing one.

Option 5. Local offices of education operate one server each to elementary, middle, and high schools respectively.

< Table 1: Comparison of options >

Option	Location of Servers	number of Servers
1	each school	Thousands
2	local office of education	Thousands
3	local office of education	Hundreds
4	local office of education	hundreds or 3
5	local office of education	3

Initially, KTU thought it was proper for each school to have their own server (Option 1). However, building a server at each school was very costly and also required huge workload from teachers. For this reason, KTU later insist on Option 2. On the other hand, those concerned with the costs in establishing more servers preferred Option 5 which required fewer servers.

The result of negotiations was Option 3. As mentioned before, Options 1 through 5 did not significantly differ in terms of private information protection. However, the general public mistakenly thought that more servers meant better protection, and this perception of the public was important for KTU.

Agenda 3: Limit of information sharing for each Input Item

Group A: Recorded manually by a teacher in charge and kept confidential even to the other teachers in the same school.

Group B: Shared within the school, but can be transferred outside of the school upon principal's approval.

Group C: Can be provided to other schools or relevant public organizations upon proper authorization.

Since the main feature of NEIS was the flow of information on-line, an input item that is classified to Group A would mean an exclusion from NEIS. On the other hand, Group C information was clearly included in NEIS. KTU wanted as many input items to be categorized in Group A as possible, with information protection in concern. Contrastingly, the MOE desired more inputs in Group C, and Group B was a buffer zone, which played a very important role in settling Agenda 3 and eventually the entire NEIS conflict.

The decision of the Committee for Education Informatization was: A (7%), B (57.6%), and C (30%). Level B was most popular because the health section was classified to B. For instance, the academic ranking of a student was Level C, so that they could be sent to universities. On the other hand, records of disciplinary punishment were Level B, and whether students lived with their parents or not were classified into Level A.

A noticeable fact is that many input items that had been deleted in the agreements of the June 2003 were later restored in 2004 and classified in levels A or B. Thirty seven to fifty six out of 170 items of administrative affairs/academic affairs had previously been deleted in the agreement of June 2003. It is a proof that the MOE was too hasty in the negotiation of the first half of 2003.

Agenda 4: Official launching date

Option	Experimental opening	Official launching
1	spring 2006	spring 2007
2	end of 2005	fall 2006
3	fall 2005	spring 2006
4	spring 2005	fall 2005

After the agreement of the Committee for Education Informatization in February 2004, KTU and the MOE held several negotiations on the date of the official launch of the new system. KTU was concerned that the MOE would want to maintain the 2002 version of NEIS if a modified NEIS was not launched soon. However, the MOE was hesitant to launch the new NEIS too early before the system was fully prepared. Ironically, the MOE's preference was therefore Option 1 whereas KTU wanted Option 4.

The original agreement between KTU and the MOE was Option 4 in September 2004. However, when KFTA complained of being excluded from the talks, Option 3 was selected, reflecting claims of the KFTA. Fortunately, KTU did not show much objection to this minor correction. However, this reminds us of May 2003 when agreements between KTU and the MOE were denied by KFTA.

4. Evaluation

1) Evaluation on Stakeholders

The Ministry of Education & Human Resources Development (MOE)

First, the MOE did not listen to the stakeholders' voice early enough. Up to 2002, however, the interests of stakeholders were not seriously taken into consideration from the policy formulation stage. NEIS was the first case to bring awareness that an IT project could be a matter over which the government should talk to a labor union like KTU. The MOE was only concerned about launching the system by the end of 2002, and did not take into account opposing viewpoints. Sufficient time is also required to convince the inside members of stakeholder groups, especially when negotiating with an organization such as KTU that is composed of many branches and schools. KTU also had a problem: they talked with the MOE without fully understanding of the effects NEIS would bring. However the MOE also must take some blame since they did not provide enough time and information for KTU.

Secondly, the MOE did not receive full support and trust from other stakeholders. KTU and other groups complained that the decision making processes of the MOE in promoting NEIS was not transparent and influenced by private IT firms. With such circumstances, it was difficult for the MOE to act as a conflict solver.

Thirdly, opinions were divided, even within the MOE. The sudden overturn by the MOE in the May 2003 agreements between the MOE and KTU was caused not only by the objection of the KFTA, but also by the disagreement within the MOE.

Fourthly, the MOE also failed to invite important stakeholders to the bargaining table. Bilateral agreements were reached with the KTU in May 2003 and September 2004, but both had to be revised with the objection of KFTA. Although KTU was clearly the main party to deal with, the KFTA, which was supporting NEIS, should have also been included in the negotiations. There are too many organizations in the field of education, and this made it difficult for the MOE to select the right people to come to the negotiation table.

Finally, the MOE was not creative enough in formulating an agenda. The conclusion of the NEIS conflict was more or less obvious - in an age where digitalization prevails, an on-line educational administration system such as NEIS would have to be accepted as a general

trend. The major issue was personal information and human rights protection, but these could have been corrected by setting limits to the users of the information. In other words, Agenda 3 should have been the main agenda in the NEIS conflict from the start.

The Korean Teachers & Education Worker's Union (KTU)

KTU, the other pillar in the NEIS case with the MOE, was also poor in managing conflict. As was the MOE, KTU did not put enough effort in to prevent conflict. Although KTU had a chance to raise the problems of NEIS, it did not do so until late 2002. During 2002, KTU negotiated with the MOE to reduce the number of input items to lessen teachers' workloads, but did not oppose NEIS itself. KTU during 2002 did not realize that NEIS could have a problem in personal information protection. In this regard, not only the MOE but also KTU was not ready to manage a conflict.

It was also a problem for KTU to drastically change their position on NEIS after the new chairperson came in. The new leader can change their policy direction, but when it comes to discussion with other organizations, it is better to keep consistency. Inconsistency creates a harmful reputation as a negotiator in the long run.

In the first half of 2003, KTU adhered to a hard-line attitude that they would not participate in any meeting if they were not discussing a full-scale removal of NEIS. Although Agenda 3 should have been the key to the conflict, KTU refused negotiation and unilaterally demanded the surrender of the MOE. At that point, however, NEIS was widely used in most of the schools, so complete removal of it was not realistic.

Additionally, the methods of resistance KTU chose were excessive from the view of conflict management. KTU accused the Minister of Education of illegal action, held numerous demonstrations, refused electronic authentications and NEIS inputting, sent letters to international organizations such as the International Labor Organization, and engage in

many other activities. Refusing NEIS inputting and electronic authentication were reasonable actions as they were the sources of their bargaining power. However, methods such as suing the Ministers are measures that weakened trust between KTU and the MOE even more. These might seem useful in the short term by putting pressure on the MOE, but it is a saying good-bye to a joint problem-solving. Seeking the assistance from international organizations was not a right decision, as it diminished public support for KTU.

2) Success factors and obstacles

Success factors

After many twists and turns, the NEIS case was eventually resolved. What were the factors that brought the final settlement? First, the establishment of the Committee for Education Informatization, a neutral decision-making body proved to be very helpful. KTU had not even joined the meetings held by the MOE during early 2003, but participated in the Committee under the Office of the Prime Minister (OPM) because KTU acknowledged the neutrality of the OPM. This shows the need for a third party mediator in public conflict management.

Second, Agenda 3, with classification groups of A, B, and C, brought significant progress. It is regrettable that Agenda 3 was only first discussed in the later half of 2004. It teaches us a lesson that making multiple options or grey area can solve a conflict with more ease. The group B was a buffer zone that be interpreted differently by the MOE and KTU.

Third, a step-by-step approach was another success factor. After the first announcement of the Committee for Education Informatization in December 2003 on Agenda 1, an official announcement on Agenda 1, 2, and 3 followed in March 2004. Additionally, bilateral agreements between the KTU and MOE were announced in September 2004 on Agenda 4.

Generally, the most efficient way in negotiation is to settle all agendas at once. However, in a case like NEIS, where dispute is complicated and interests are tangled, a step-by-step approach proved to be more appropriate.

Fourth, time was a factor too. KTU was aware that NEIS was so much widespread that it was very difficult to stop using it. For the MOE, outside pressure was mounting asking for the resolution of the NEIS case before the 2004 general election. Thus, both sides desired to have the problem resolved as soon as possible. As long as the conflict is not progressively worsening, waiting for the right moment for negotiation is one strategy to remember.

Obstacles

The conflict regarding NEIS continued for approximately 2 years, from mid 2002 to late 2004. The reasons are as follow. First, both the MOE and KTU were negligent on matters involving private information protection. Both did not fully realize what effect NEIS would have on personal information.

Second, there was strong distrust between the KTU and MOE. The MOE should have included KTU as a stakeholder from the beginning of the decision making process. As they did not, KTU came to be suspicious of the entire process. In the meantime, KTU chose new executives in December 2002 and overturned all prior discussions with the MOE. In May 2003, with the agreements of the Minister of Education and KTU being overturned, distrust between both sides only grew ever-stronger.

Third, KTU's hard-line ideological position on NEIS in early 2003 was also an obstacle. The advantages of NEIS, as a system that collects and distributes education information online, could have been acknowledged. For an example, closing the port altogether is not a wise solution for solving smuggling. However, KTU only wanted to expand this issue up to the ideological battle between the conservative and the progressive. As a result, the NEIS case

evolved from an interest conflict between the MOE and KTU into a values conflict between conservatives and progressives. This evolution was a serious obstacle in resolving the case.

Fourth, the failure in consensus building within each stakeholder was also an obstacle. KTU was slow in making a consensus within themselves during 2002. The MOE went through the same problem in early 2003. Negotiation with the other stakeholder cannot be successful before making an internal consensus.

Finally, the Office of the President's intervention in the NEIS conflict was an obstacle to the early conflict resolution. The Presidential Office strongly emphasized the importance of early settlement, but this pressure seriously lowered the bargaining power of the MOE. If the NEIS case was not resolved so early as the Blue House wished, the President could dismiss the Minister of MOE but not the Chairperson of KTU. Also ROH government was known to be inclined to the progressive camp including KTU. All these raised the expectation of KTU, but the MOE did not even consider giving up three chapters of NEIS, which delayed the settlement of the conflict.

5. Implications and Policy Suggestions

First, conflicts usually have a tendency to grow itself, and it is best to initiate a participatory decision making process as early as possible to minimize social costs from the conflict. For that goal, the concerned parties and their interests in the agenda must be clearly understood. And all stakeholders that can potentially raise objections and delay progress must be included in the negotiation.

Second, it is important to predict the effects of a policy. Up until 2002, many people did not conceive an IT project becoming a matter for labor-management relations. NEIS was also not recognized as an agenda for human rights. In the flow of digitalization, globalization, and democratization, policy makers are required to have more imagination and forethought than

ever before. For this reason, training in conflict resolution and negotiation should be strengthened for those who are in public services.

Third, for stake-holders such as the MOE and KTU that negotiate each other over many different agenda, there should be an official meeting on a regular basis. Since there is no official occasion, the MOE is having a hard time in attracting KTU to the negotiation table case by case.

Fourth, the NEIS case proves how important respecting the self-esteem of stakeholders is in conflict management. Face-saving becomes more of a concern for KTU than the interest that they originally fought for. This is why cultural and psychological aspects must be included as well in conflict management.

Last of all, a neutral mediator is necessary in public conflicts. The Office of the Prime Minister played a mediator's role in the NEIS case, but the OPM cannot be always neutral in all public conflicts, as OPM is also a part of government. Therefore, non-government organizations that understand both the public sector and the conflict management need to be promoted, and the government will have to help create a market for public conflict mediation.

NOTES

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