

CAPACITY DEVELOPMENT IN THE EDUCATION SECTOR – FOCUSED ON THE RELATIONSHIPS AMONG INSTITUTIONS, INCENTIVES AND BEHAVIOURS –

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1. Introduction

Improving the quality of mathematics and science (M&S) education by improving the quality of teaching of teachers is the main approach of the technical cooperation of JICA in the basic education sector¹ up until now (JICA IFIC 2007b). Characteristics of major approaches in M&S education cooperation have been analyzed to draw some lessons learnt for project formulation and implementation (JICA 2004, JICA IFIC 2007b). Analyses based on the perspectives of capacity development (CD) of projects for M&S education and in-service teacher training (INSET) are also reported (Mabuchi and Yokozeki 2004, JICA IFIC 2006).

The Strengthening of Mathematics and Science in Secondary Education (SMASSE) Project implemented in Kenya is regarded as one of the most successful projects in the M&S education cooperation in JICA. Some of the success factors of SMASSE are already reported (JICA Social Development Cooperation Department 2002, JICA IFIC 2007a).

Taking SMASSE as a case study, this paper analyzes the relationship among informal and formal institutions, incentives and behaviors of individuals in the process of institutionalization. By using the framework that distinguishes interior from exterior of individuals, organizations and societies, it is explained how the interiors influence the exteriors and vice-versa. Based on the analysis, some suggestions will be made regarding the relationship between technical cooperation and a process of institutionalization. Finally some recommendations are made on technical cooperation from the perspective of CD.

2. Background

2.1 In-service education and training (INSET) for teachers in basic education

Among several issues to be addressed to improve the quality of education, the majority of the JICA's technical cooperation projects aim to improve the quality of teaching in M&S teachers. Approaches for improving the quality of teaching can be divided into two kinds: Pre-service training (PRESET) and In-service training (INSET). While PRESET targets students studying in teacher education institutions who are to be a teacher, INSET targets incumbent teachers.

Because many developing countries do not have a continuous INSET system, the necessity of providing opportunities for teachers to improve the quality of teaching is generally high. Because of this high demands, most of the projects in the M&S education cooperation by JICA are related to INSET (JICA 2004).

2.2 Technical cooperation as CD

JICA has recently mainstreamed the CD perspective into its basic operational principles of technical cooperation projects (JICA 2006). Supporting CD needs to address various issues at different levels beyond implementing a single project. For example, most of the successful projects of JICA not only transferred knowledge, skills and experience, but also created an environment which enhances the utilization of those knowledge and skills. This environment is often called an

¹ JICA's technical cooperation in the education sector are categorized as basic education, higher education, and vocational and technical education and training.

“enabling environment”.

One of the important roles that technical cooperation can play in supporting CD is to support partner countries in achieving tangible results which can be used to convince the society including the Ministries of Education, parents and teachers of the importance of the changes that the partner countries envisage. For example, by presenting the positive results that have been achieved by pilot projects, policy recommendations can be made which are convincing.

2.3 An issue of concern

As Baba and Iwasaki (2001) argues in their paper that “Institutions for universalizing educational practices have two aspects: formal and economic aspect at societal and organizational levels; and attitudinal and psychological aspect at individual level”, it is necessary to consider not only the aspect of organizational and institutional development but also the aspect of incentives, values and mind-sets of individuals in the scope of technical cooperation in order to make institutions to be functional. Likewise, supporting CD processes of developing countries requires paying attention not only to the “explicit” aspect such as skills acquisition and establishing a system, but also to the “tacit” aspect such as organizational cultures, incentives and mindsets.

In terms of the explicit aspect, some lessons have already been drawn from analyses of the implementation processes of past experiences of JICA’s projects in M&S education cooperation (JICA 2004). However, little literature argues the importance of incentives in the technical cooperation in the education sector. As one of such examples, Hochachka (2006, 2007) discusses the importance of having an integral perspective paying attention to both of interior and exterior of individuals and collectives in international development.

By using the framework which is developed by incorporating the integral perspective that Hochachka uses in her analyses, the author analyzes the relationships among the interiors and exteriors of the society, organizations, and individuals. In the following sections, the author analyzes the

In the following sections, the SMASSE project is taken as an example which has successfully developed the capacity of developing countries to sustain the project outcomes. A brief overview of the project will be provided in the section three. In the section four, by using the framework that has been developed by incorporating the integral perspective that Hochachka uses, a hypothetical analysis is explained as to what changes in the interiors of individuals, organizations, and societies have promoted the institutionalization of INSET and how those institutions influence mind-sets and values of individual teachers.

3. A Brief Overview of SMASSE as an Example of INSET Project

SMASSE in Kenya has successfully institutionalized a sustainable INSET system (JICA, Social Development Cooperation Department 2002). This section provides an overview of SMASSE including the context and approaches taken in the project, and summarizes the success factors based on the CD concept.

3.1 Context of the project

Since the independence in 1963, the Kenyan government has attached great importance to education to cope with the demand of the people as the fundamental right and to develop human resources at managerial level in the political and economic sector. Since 1970 access to education has rapidly expanded with the government budget as well as with the self-help efforts by the guardians and communities in the spirit of “Haranbee²” that was advocated by the first President Kenyatta.

In the 1990’s, under the 7th and 8th National Development Plans, the Kenyan government emphasized the importance of skills development through education and training to achieve sustainable development through industrialization. Hence, the government prioritized M&S

² “Haranbee” roughly means that “Let us pull together and get the job done” in Swahili (JICA IFIC 2007a).

education and technical and vocational education and training (TVET).

Although the access to primary and secondary education increased, quality of education was not satisfactory, in particular, regarding mathematics and science subjects. For instance, in the examination conducted for students completing secondary schools in Kenya, called Kenya Certificate of Secondary Education (KCSE), results of mathematics and science were not performed well compared to other subjects, which raised concerns not only by the government but also by the parents and communities (JICA Project Formulation Study Department 1995, 1996, JICA Social Development Cooperation Department 2002, JICA IFIC 2007a). In response to the pressure from the parents on improving the quality of education, the Secondary School Heads Association in the Nairobi Province, for instance, organized INSET with the financial support of the parents and schools (JICA Project Formulation Study Department 1996).

It was under these circumstances when the Kenyan government made a request to the Japanese government for technical cooperation in establishing an INSET system for teacher training in order to improve the capacity of students in mathematics and science at secondary level.

	Phase I (PDM Second Version)	Phase II Domestic Components ³
Overall Goal	Capability of young Kenyans in Mathematics and Science is upgraded.	Capability of young Kenyans in Mathematics and Science is upgraded.
Project Purpose	Quality of Mathematics and Science education at secondary level is strengthened through INSET among teachers in the Pilot District.	Quality of Mathematics and Science education at secondary level is strengthened in Kenya through INSET for teachers.
Expected Output	<ol style="list-style-type: none"> 1. A system of training for the District trainers in Pilot Districts in Mathematics and Science will be established at KSTC. 2. A system of INSET in Mathematics and Science will be established in the Pilot Districts. 3. Role of KSTC and District INSET centers as resource centers will be strengthened. 	<ol style="list-style-type: none"> 1. A system of training for the District trainers in Mathematics and Science will be strengthened at National INSET center. 2. A system of INSET in Mathematics and Science will be established in the Districts. 3. Role of SMASSE National INSET Center and District INSET Centers as resource centers will be strengthened.

Table 1: Goals, Purposes and Outputs of SMASSE
Source: Modified the table, p. 6, of JICA IFIC (2007a).

In Kenya at that time, although INSET was occasionally conducted, most of which were mainly organized by external development partners, there was not an INSET organized regularly and continuously. Thus, the project aimed at institutionalizing an INSET system in which all the incumbent teachers in Kenya can participate continuously. Table 1 below summarized the overall goals, project purposes and expected outputs of the SMASSE Phase I and Phase II.

Training methods for INSET can be divided into two types: a cascade method and a cluster method. Considering the purpose of the training and the political and economic contexts, an appropriate method is determined. SMASSE adopted the cascade method considering that the educational administration in Kenya is relatively centralized and the INSET was expected to disseminate standardized contents with acceptable quality nationwide (Mabuchi and Yokozeki 2004).

In this cascade method, first National Trainers at the national level are trained who are to provide training for District Trainers, and then the District Trainers are to provide training for teachers in each District (Figure 2).

³ Phase II of SMASSE consists of the two components: Domestic component which is aimed to expand the INSET nationwide in Kenya and the Regional component which is to expand the INSET system to other countries in Africa. As this article deals with only in-country activities in Kenya, PDM of the Regional component is not included.

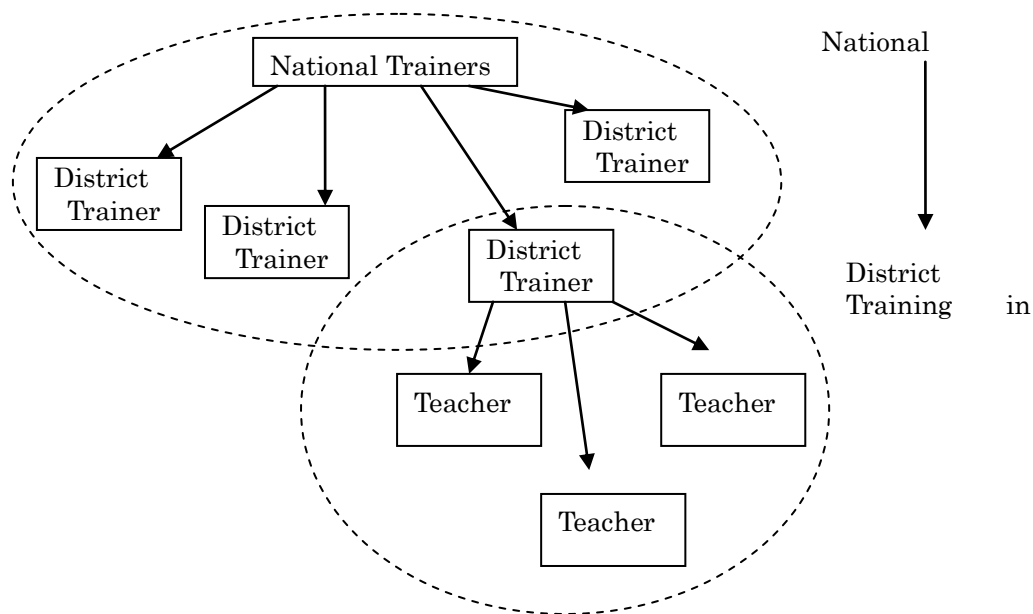


Figure 2: Cascade Method for INSET

3.2 Contributing factor to CD (1): Ownership and endogeneity

SMASSE has attached the great importance to the ownership of Kenya from the project formulation stage through the implementation stage. As the detail of the approach adopted by SMASSE is reported by JICA IFIC (2007a), only issues related to institutions and incentives are touched upon below.

(1) Ensuring the needs

As stated in 3.1, when SMASSE was formulated, priorities of the political, economical, and societal needs of Kenya were carefully examined in order to decide the possibility of institutionalization of INSET. Because improving the ability of students in mathematics and science was one of the most prioritized issues in Kenya at that time, JICA was aware that the Kenyan government would by all means secure the budget and personnel necessary for institutionalizing INSET. Because of this awareness, JICA was able to wait until the Kenya government is prepared for the project. Through this process during the formulation of the project, the ownership of the Kenyan side was strengthened⁴.

(2) High quality training as non-pecuniary incentives

JICA was certain that pecuniary incentives such as a per diem allowance would spoil the sustainability of the project, JICA did not agree to bear the cost of per diem to be paid to the participants of INSET. Although the Kenyan government agreed to bear the cost for per diem for the participants and trainers when necessary, as they did not have the budget enough to pay the per diem, it has not been paid in the project. As a result of this, the quality of INSET itself must be the non-pecuniary incentive for the participation.

(3) Effective use of monitoring and evaluation

In order to for the Kenyan counterparts to develop the capacity to improve the quality of the INSET system by themselves, a Monitoring and Evaluation Unit was established to monitor the quality of training sessions and classroom practices. The monitoring activities for which Kenyan counterparts themselves visited schools and district training centers provided national and district trainers with opportunities to objectively reflect their activities they have implemented in the National Training Workshops, which made them aware of the areas of improving the quality of their own activities. In this way, monitoring and evaluation activities created attitudes of Kenyan counterparts to identify and solve problems by themselves.

⁴ JICA-IFIC (2007a), p. 10.

Furthermore, by presenting effectively the results of the monitoring and evaluation activities to those stakeholders who have the power to formulate policies as well as who can influence them, SMASSE successfully convinced them of the importance of INSET and created a supportive environment for INSET. Sensitization through the presentation of the positive results of the project contributed to creating the shared value in the society that INSET is useful to improve the teaching mathematics and science. The creation of the shared value, which can be interpreted as “informal institutions,” have contributed to establishing formal institutions (p.77, JICA IFIC 2007a).

3.3 Contributing factor to CD (2): Comprehensive approach

The sustainability of the SMASSE Project is rated as high (JICA Social Development Cooperation Department, 2002) because SMASSE was designed to enable the partner country to sustain the system established by the Project with own budgets and human resources.

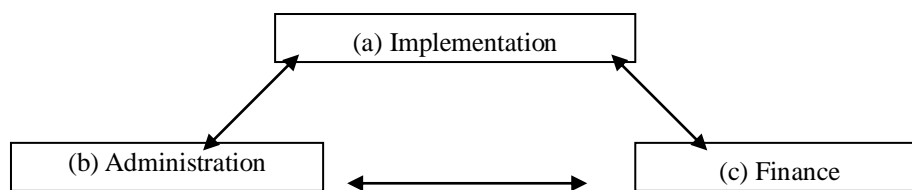


Figure 3: SMASSE Triangle
Source: JICA Social Development Cooperation Department (2002)

Taking cognizance of the importance of strengthening the three aspects of an institution, namely, “administration”, “implementation” and “finance” both at national and district levels for sustainability, strengthening the three aspects have been emphasized from the outset of the Project, which is called “SMASSE Triangle” (Figure 3).

(a) Strengthening the aspect of implementation

Major elements of the aspect of implementation include: strengthening the capacity of training centers and the capacity of trainers at national and district levels. In terms of the capacity of training centers, at national level the National Training Center was renovated which was furnished with educational materials and at district level one of the secondary schools in the districts was selected as a District INSET Center (DIC) which was also furnished with educational materials.

In terms of the capacity of trainers, at national level full-time trainers were selected, who were sent to Japan, the Philippines, and/or Malaysia for training and at district level capable teachers were selected as District Trainers, who were trained at the National Training Center.

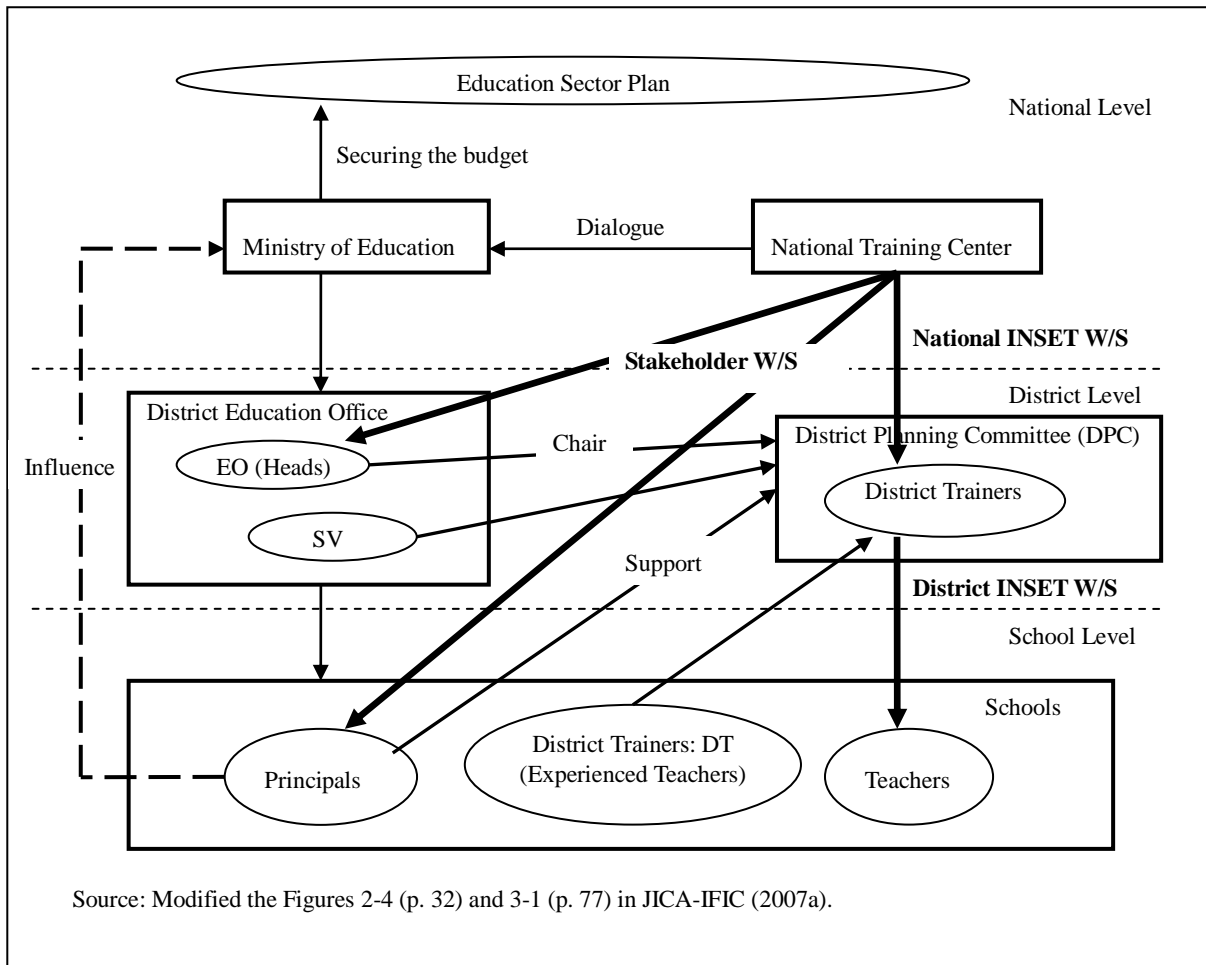


Figure 4: Implementation Structure of SMASSE

(b) Strengthening the aspect of administration

Regarding the aspect of administration, in order to implement INSET smoothly at national and district levels, key personnel at each of the levels are sensitized to the purpose and merits of the project through stakeholder workshops, who are also invited to decision-making bodies so that their ownership of the project can be strengthened. For example, at district level, all the major stakeholders are involved in the District Planning Committee (DPC) chaired by the Education Officer (EO) who is the head of the District Education Office (DEO) which have the administrative power. Other members of the DPC include a District Supervisor (SV) as a District INSET Coordinator, a representative from the Secondary School Heads Association in the district, who takes charge of financial matters, and the principal of the District In-service Training Centers which is a selected school (Figure 4).

(c) Strengthening the aspect of finance

Since the beginning of the project, highest attention has been paid to the sustainability of the activities after the project. The budget necessary for conducting training at national level has been secured by the Ministry of Education (MOE) as part of the recurrent budget and the budget necessary for district level training has been covered by the “SMASSE Fund” which accumulates one percent of tuition fees collected from the students.

The three aspects of the SMASSE Triangle are summarized as shown in Table 4.

In this way, the SMASSE Project has strengthened the capacities of individuals—skills and knowledge necessary to conduct training, capacities of organizations—management structure and administrative capacity to plan and organize training workshops, and capacities of the institution—securing the budget necessary for activities.

	(a) Implementation	(b) Administration	(c) Finance
National Level	<p>- Strengthening the capacity of National Training Center (Reconstruction of National Training Center and provision of educational materials)</p> <p>- Strengthening the capacity of National Trainers (Securing full-time trainers and training them in Japan and Asia)</p>	<p>- Establishing Joint Coordinating Committee (JCC) (Members: Representatives from MOE, JICA, Districts and SMASSE Project Team)</p> <p>- Establishing National Planning Committee (NPC) (Members: Representatives from MOE, KSTC and SMASSE Project Team)</p>	<p>- Securing budget at National level</p>
District Level	<p>- Strengthening the function of the District Centers (Provision of educational materials to selected secondary schools)</p> <p>- Strengthening the capacity of District Trainers (Securing trainers at district level and training them at National Training Center)</p>	<p>- Establishing District Planning Committee (DPC) (Members: Representatives from District Education Office, Inspector, Principals, and District Trainers)</p>	<p>- Establishing SMASSE Fund</p>

Table 4: Three aspects of SMASSE Triangle

Source: Adapted from a memo written by Mr. Naganuma, JICA Expert

4. Relationships among institutions, incentives, mindsets, and behaviours in the institutionalization of INSET

4.1 The importance of understanding the interactions among individuals, organizations, and institutions

Section 3 briefly summarized as to how SMASSE successfully established a sustainable system of INSET by emphasizing on the endogenous and comprehensive perspectives. This section examines as to how the approaches, activities that SMASSE adopted and outcomes from the approaches are interrelated in the society⁵ of educational stakeholders in Kenya.

JICA defines “capacity” as the “the ability of developing countries to solve problems on their own” and “capacity development (CD)” as “the ongoing process of enhancing the problem-solving abilities of developing countries by taking into account all the factors at the individual, organizational, and societal levels” (JICA IFIC 2006). The document also explains that “the capacity is a body comprising of any elements such as a relationship among stakeholders, institutions, policies, social systems, knowledge and skills, etc.” and that “activities will not be sustained unless such mechanisms and institutions that sustain and enhance the activities are in place in addition to improving the capacities of individuals and organizations that implement the activities (JICA IFIC 2006). Then, the document also states that “what is most important when implementing technical cooperation is that paying attention to the interactions between elements comprising of the capacity, in particular, mechanisms and institutions which enable the activities to be continued and strengthened”.

⁵ In this context the “society” comprised of stakeholders in the field of education including teachers, schools, District Education Offices, Ministry of Education, students, parents, etc.

Although much literature points out the importance of the comprehensive approach for CD, only a few of them analyzes the interactions among the actors, influences of the approaches on actors in institutionalizing INSET. As Matsuoka (2004) argues that “in order to conceptualize and theorize the process of the formation of social capacity, it is important to clarify the capacities and behaviors of the actors comprising of the society, and the elements that influence those capacities and the behaviors and, moreover, how a bundle of institutions function which control the capacities and behaviors”, it is also necessary for technical cooperation to understand the inter-linkages between actors, institutions, and activities and outcomes of the technical cooperation in order to deepen the understanding of the holistic perspective.

Hence, this section will identify what kinds of incentives are provided to individuals (teachers), organizations (schools), and societies (stakeholders in the field of education), and clarify the relationships among them in the process of institutionalizing INSET.

4.2 Interiors and exteriors of individuals, organizations and societies

Table 5 shows an analytical framework that discriminates between the interiors and the exteriors of individuals, organizations, and the societies. “Interiors” include anything that cannot be observed from the outside but happen the inside. “Exteriors” include anything that can be observed objectively from the outside. Interiors and exteriors at each level can be defined as follows⁶:

- (a) The interior of a society includes anything regarding a society that cannot be observed from the outside but exists and influences organizations and individuals in the society, such as shared values, cultures, and common senses. This can be referred to as Informal institutions.
- (b) The exterior of a society includes anything regarding a society that can be observed and can be explicit and be described objectively. Examples of this category include laws, policies, and economic systems which are referred to as formal institutions.
- (c) The interior of an organization includes anything regarding an organization that cannot be observed from the outside but exists and influences individuals in the organization such as organizational cultures. It can be referred to as informal institutions.
- (d) The exterior of an organization includes anything regarding an organization that can be observed from the outside such as organizational decisions, organizational strategies, and organizational behaviors. This can be included as formal institutions.
- (e) The interior of an individual includes anything regarding an individual that cannot be observed from the outside but happens inside of the individual, for example, feeling, thought and belief.
- (f) The exterior of an individual means anything regarding an individual that can be observed from the outside such as appearances and behaviors. In this paper, only behaviors are discussed as it focuses on behavioral changes.

	Interior (Unobservable/Tacit)	Exterior (Observable/Explicit)
Society	(a) Interior of society E.g., Shared value, culture, common sense	(b) Exterior of society E.g., Law, social/economic systems
Organization	(c) Interior of organization E.g., Organizational culture, organizational climate	(d) Exterior of organization E.g., Organization’s rule, organization’s strategy, organizational behaviors
Individual	(e) Interior of individual E.g., Feeling, thought, belief	(f) Exterior of individual E.g., Appearance, behaviors

Table 5: Interiors and Exteriors of Society, Organization, and Individual⁷

⁶ A framework that has four quadrants, namely, the interior and the exterior of an individual and the interior and the exterior of a collective, is called an AQAL model (All Quadrants, All Levels). This model is used for analyses in the field of international development. See Hochachka (2006, 2007) for the detail.

⁷ Although the model used in this article is based on the AQAL model, this model is different from the AQAL model in that the “collective” in the AQAL model is divided into two: “Organization” and “Society” which are used to

While definitions of “institutions” differ depending on scholars, according to North’s definition, “institutions are the rules of the game in a society, or more formally, the human devised constraints that shape human interaction (North 1990)”. Aoki (2001) pointed out that “appropriate formalization of concepts like institutions depends on the purpose” and that the “constraints” in North’s definition may be “something informal (e.g., social norm, customs, and codes of conduct) or something purposely designed or formally stated”. According to the definitions above, Table 5 can be interpreted as shown in Table 6 in terms of the relationships among formal and informal institutions and mindsets and behaviors of individuals.

	Interior	Exterior
Society	Informal institutions	Formal institutions
Organization		
Individual	Individual’s mindset, feeling, thought, and belief	Individual’s behavior

Table 6: Relationship among Formal and Informal Institutions and Mindsets and Behaviors of Individuals

Taking SMASSE as an example, by applying this framework, the process of institutionalization of INSET and the relationships among formal and informal institutions, mindsets and behaviors of individuals are analyzed in the next section (Figure 7).

4.3 Institutions necessary for institutionalization of INSET

As explained in Section 3, SMASSE aimed to institutionalize INSET. In order for the institutionalized INSET to function, it is necessary for teachers to be motivated to participate in INSET. Hence, it is important to appropriately incorporate incentives in the INSET system to motivate teachers to participate in the training⁸. In the case of SMASSE, the following incentives are in place for teachers to participate in INSET.

(1) Attractiveness of the INSET itself

If the quality of INSET is good enough to interest teachers, and applying the knowledge and skills learned through INSET to classroom practices motivates students, teachers are motivated to participate in INSET. This incentive is most important as it is more endogenous and more intrinsic for a teacher than any other incentives to be explained below. Therefore, the most important incentive for teachers to attend INSET is to offer what the participating teachers feel interesting and useful (See the arrow⁹ (a) in Figure 7).

(2) Institutions that directly force teachers to participate in INSET

Some institutions directly force the target group to do what is expected. In the case of SMASSE, INSET has been made compulsory based on the decisions made by the Stakeholder Meeting in May 2001 and May 2002, and by the Secondary School Heads Association in 2001 (p. 41, JICA IFIC 2007a) (See the arrow (b) in Figure 7).

Principal’s permissions and/or orders will also strongly influence the attendance of teachers to INSET (See the arrow (c) in Figure 7).

explain about the CD concept of JICA.

⁸ Motivations are defined as something coming up from the within that makes people to do something, and incentives are defined as something that motivate someone from the outside to do.

⁹ Thickness of the arrows in Figure 7 indicates the likeliness of the incentives to make someone to do something. The thicker the arrows are, the more likely the things happen.

(3) Institutions that promote teachers to participate in INSET

In addition to (1) and (2) above, there are some institutions that encourage teachers to participate in INSET. For example, the necessity of developing high order thinking skills is stipulated in education policies and syllabuses in Kenya. As “ASEI lessons” aim to develop high order thinking skills, the stipulation of the necessity in policies and syllabuses is likely to motivate teachers to attend INSET (See the arrow (d) in Figure 7).

Moreover, if there is a policy stipulating that “attendance at INSET is a requirement for promotion”, it will almost force teachers to participate in INSET. If there is another policy stating that “a teacher will be assessed positively if delivering student-centered lessons”, teachers will be also encouraged to attend INSET to acquire skills and knowledge necessary to implement student-centered lessons (See the arrow (e) in Figure 7. The arrow is shown in broken lines because these policies do not exist at present).

(1), (2), and (3) mentioned above are the factors that motivate, force or encourage teachers to attend INSET. Hence, it is crucially important to provide those incentives by formulating necessary policies (formal institutions) to institutionalize INSET.

In addition to those institutions, there are other institutions which are essential to institutionalize INSET as described below.

(4) Institutions essential to institutionalize INSET

In order to institutionalize a sustainable INSET model, it is essential to secure the financial resources to implement INSET after the technical cooperation has finished. For example, SMASSE has secured the budget at national levels by securing the national budget and at district level by establishing the “SMASSE Fund”, as explained in 3.3 (c). These are the institutions essential for institutionalized INSET to be sustained (See the arrow (f) in Figure 7).

As a secondary effect, the SMASSE Fund has also increased the awareness of the parents and guardians towards teachers’ performance in the classroom as they are aware that the money for the fund comes from the tuition fees they have paid. Their awareness towards teachers’ performance puts pressure on teachers to show better performance. This pressure works as an incentive for teachers to attend INSET activities more seriously (See the arrow (g) in Figure 7).

4.4 Process of the formulation of informal and formal institutions

As explained above, INSET has become compulsory based on the decisions made by the Stakeholder Meetings and the Secondary School Heads Association. Because of the deep concerns about the low performance in mathematics and science were shared through the society including Ministry of Education, districts, schools, and parents and communities, high expectations for INSET seem to have urged the stakeholders to support the institutionalize INSET (See the arrow (h) and (i) in Figure 7).

In addition to the expectations, efforts made by the SMASSE Project Team to visualize the effectiveness of INSET in the pilot districts by presenting the positive results collected from monitoring and evaluation activities (Refer to 3.2 (3)), succeeded to create confidence of the stakeholders in the INSET, which have gradually changed the informal institutions in the society (See the arrow (j) in Figure 7).

It was especially important to show the achievements to those stakeholders who are able to formulate institutions such as policy-makers and who are influential to those policy-makers, for instance, principals and parents in the case of SMASSE.

4.5 Incentives offered by institutions and intrinsic incentives

As discussed in 4.3 and 4.4, in order to institutionalize INSET, at least, three kinds of institutions are necessary: 1) institutions that “directly force” teachers to participate in INSET; 2) institutions that are “essential” to institutionalize INSET, for instance, SMASSE Fund, in this case; and 3) institutions that “promote” teachers to attend INSET, for instance, the stipulation of the importance of developing high order thinking skills.

Although there are no policies in terms of assessments and/or promotions at present in

Kenya which provides advantages to those who have attended INSET, it will be effective to formulate such policies in order to strengthen the institutionalization of INSET.

However, as shown in 4.3 and 4.4, in order to enforce formal institutions effectively, the confidence of teachers in INSET, which motivates teachers to attend INSET is important (See the arrow (a) in Figure 7). Without the confidence in INSET, formal institutions may not function properly. Therefore, the quality of INSET is essentially important to determine the degree of effectiveness of INSET.

From this viewpoint, while the comprehensive view and the endogeneity are important in technical cooperation based on the concept of CD, the quality of the outputs and outcomes of the technical cooperation, namely, the quality of INSET in this case, is also crucially important.

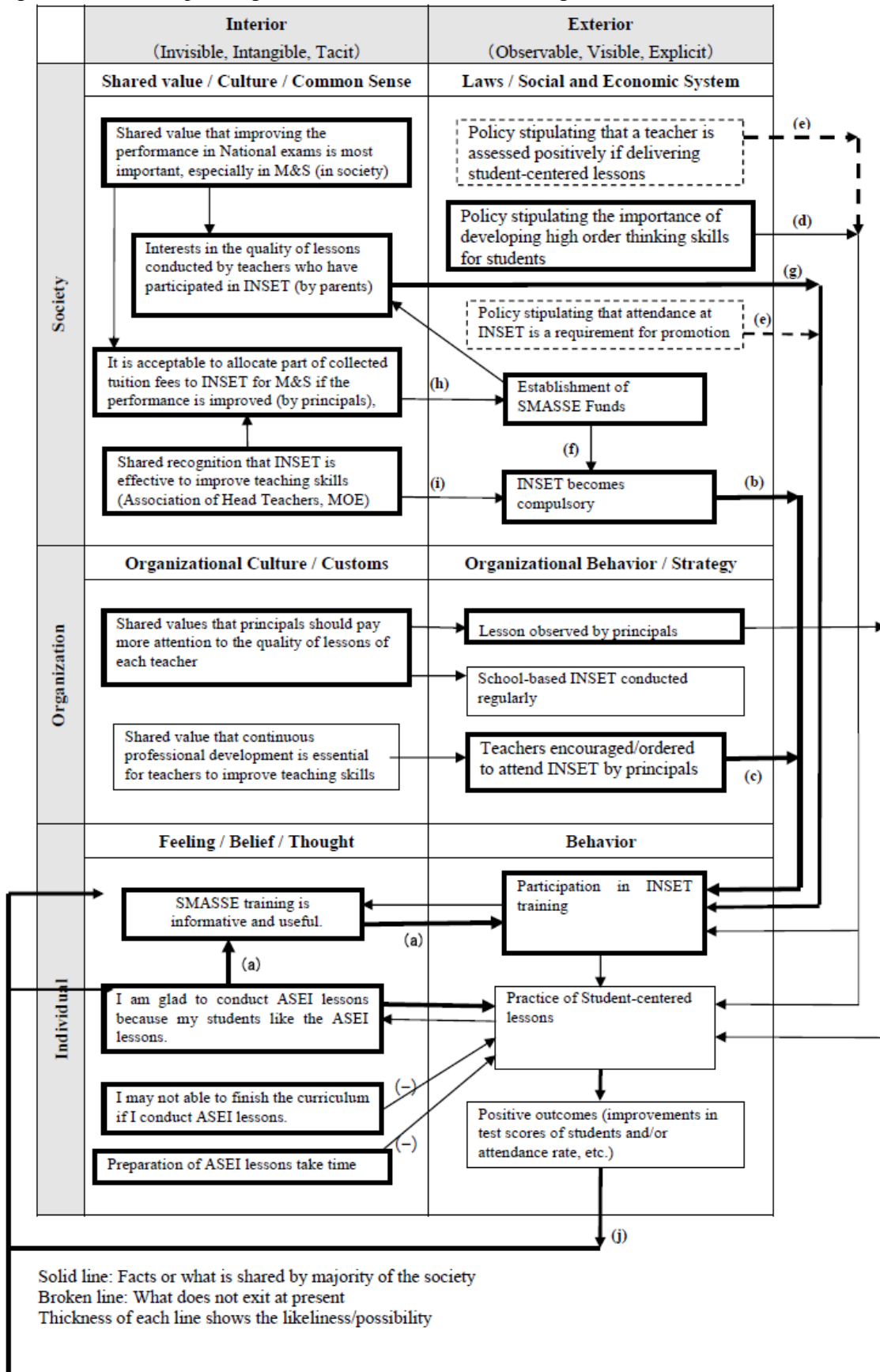
5. Conclusion

Taking the SMASSE Project as an example that has succeeded to institutionalize INSET in Kenya, the paper examines the relationships among formal and informal institutions, incentives, mind-sets and behaviors of individuals in the process of the institutionalization of INSET.

The following points have been found to be particularly important when technical cooperation is implemented based on the CD concept:

- (a) to observe not only formal institutions in the developing countries, but also informal institutions including incentive structures, organizational cultures, values shared in the communities and the society;
- (b) to surely produce results through technical cooperation activities;
- (c) to present the positive results to those stakeholders who have the power to formulate institutions and who are influential to those policy makers for advocacy; and to formulate formal institutions such as policies at least three kinds of institutions: 1) institutions that “directly force” teachers to participate in INSET; 2) institutions that are “essential” to institutionalize INSET, for instance, SMASSE Fund, in this case; and 3) institutions that “promote” teachers to attend INSET, for instance, the stipulation of the importance of developing high order thinking skills.

Figure 7: Relationship among Institutions, Incentives and Changes in Mindset



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