

Teachers' Institution and Participation in a Lesson Study Project in Zambia: Implication and Possibilities

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1. Background

To ensure quality education all over the country is the ultimate goal for all countries. However, a problem lies here. Real quality education probably means not uniform education but the best education which varies from student to student, from school to school, and from area to area. Even though we take the stance of “the greatest happiness for the greatest number”, time is always moving and factors such as individuals and society are fluid and so it is not an easy task to find an optimum solution, if not the best. And the above expression unconsciously seeks for a teacher who is like a craftsman of fine arts, who is able to respond to such fluid and individual situations and find the optimum solution or approximation to such solution. And furthermore, in order to ensure this over the country, it is necessary to produce such craftsmen in massive quantity.

Let us review quality education briefly. In the economically advanced countries, quality education, especially the quality of teachers is the focus. In 1974, the Ministry of Education, Japan and OECD-CERI jointly hosted an International Seminar on Curriculum Development in Tokyo. In the seminar, a new paradigm was proposed by the term Rashoumon Approach, which emphasized more on impromptu-ness and multi-facets of teaching, and teacher education was given more emphasis in that paradigm. In the USA after the U.S. National Commission on Excellence in Education (1983), public awareness about education was raised. Stigler et. Al. (1999) pointed out that quality of teaching influence quality of learning and lesson study and action research (Sagor, 2000) may be employed to improve it. These movements reflect a fundamental shift of the teacher's role and profession¹.

On the other hand, even in the developing countries quality education is quite important as well as attainment of quantitative expansion towards the realization of Education for All (1990), which requires national commitment. It is however, necessary to consider not only education policy decided at the national level but also improvement of classroom practices, which cannot be automatically brought about by such policy. So the lesson study which aims at realization of quality education at the classroom level and its improvement, calls attention to many countries

¹ Sagar lists up professionalization of teaching as a reason for introduction of action research.

(e.g. Indonesia, Bangladesh)².

Once again returning to the discussion at the beginning, it is useful to fix an activity in the form of an institution in order to bring about uniformity. It is, however, difficult to take such a flexible treatment corresponding to the given situation once it is fixed as an institution. The theme of this paper concerns how difficult it is to balance these two.

The institution can be expressed as “social factors to bring about uniformity to individual behavior – a system of role expectation, values, a system of norms, culture and etc”, and among them, the education institution is “a collective name of various systems such as organizations, mechanisms in relation with compulsory education or primary education” (The Japan Society of Educational Sociology eds, 1986). This institution brings about the expectability, stability as an intended function and, on the other hand, it also brings about hindrance and blockade as a reverse function. This paper considers complementarities of the lesson study approach and institutional approach and at the same time the institution from the perspective of these functions³.

2. Institution and Context of Teacher Education in the Developing Countries

It is needless to say that teacher quality is important to secure quality education.⁴ It is necessary to have such endeavors to improve the competence of teachers through pre- and in-service teacher education. These are two related issues of the definition of quality and the strategies to improve quality. For example, if the quality of a teacher is defined in terms of amount of knowledge, it is necessary to increase the knowledge in order to improve the quality of the teacher. In other words, designing teacher training requires images of the teacher’s growth.

Furthermore, it matters in international cooperation whether the quality here and there are the same and how we should engage ourselves in the improvement of quality if they are different. This difference requires careful treatment but does not prove that it is impossible to have international cooperation.

Here we review at first the institution which supports teacher development and then discuss it further from the perspective of international cooperation.

2-1 Teacher Development and the Institution to Support Development

In our ever-changing modern society with the development of science and technology and our way of life, the required competence becomes more sophisticated and complicated because

² According to the JICA (Japan International Cooperation Agency) Open Symposium on January 31st, 2009, 12 countries somehow introduce the lesson study approach in technical cooperation projects.

³ Institution has an intended function (function to enable: routinization, expectability, stability, sustainability) and a reverse function (function to limit: hardening, limitation, alienation) (The Japan Society for Educational System and Organization, eds, 1994)

⁴ The ideas of Teacher Proof Curriculum and programmed learning sought for the possibility in the 1960s to attain good quality of education, without depending on the quality of teachers.

it should correspond with changing social demands and seek for a more suitable way to teach children. Thus competence will not be complete at a certain time but will continue to grow for a life-long period. First of all, it is necessary to differentiate the institution (pre-service education) which aims at formation of knowledge, skills and attitudes to become a teacher at the initial stage, and the institution (in-service education or teacher training) which aims at improving qualification and competence even after the initial stage.

The former provides a basic course and aims at the formation of the minimum knowledge and skills as a teacher and, at the same time, issuance of a teacher license. The latter aims at renewal of the teacher's license and, more importantly, transforming the first-hand experience in the classroom to sophisticated practical wisdom (phronesis). In some cases the in-service education is conducted systematically and periodically (Refer to Table 1 and Appendix) and it is conducted in other cases voluntarily according to the needs of schools or teachers.

Table 1 Pre-service and In-service Education for Teachers

	Organization in charge	Content
Pre-service Education	University, Teachers college	Liberal Arts, pedagogy, subject contents etc
In-service Education	Central and local education administration, education center, university, model schools, school based training	Subject contents, pedagogy, management, case study, lesson study etc

This in-service education may correspond to the renewal of a teacher's license⁵ or upgrading of salary scale⁶ depending upon the country's policy. In this case, teachers may perceive professional growth in terms of salary but it is necessary to differentiate salary increment from competence growth and (self-) perception about it. Extremely speaking it is possible that the salary increases but the competence grows only a little or not at all.

Coming back to the above issue, it is important to grasp the core of quality teachers as reflective practitioners (Schön, 1983) and community of inquiry (Jaworski, 2006). It is yet to be clarified how to address this in the in-service training and identifying process of change and promoting and hindering factors for such change.

2-2 Issues of Teacher Education in Developing Countries

As for teacher quality, UNESCO (1997) encourages a teacher's image as a lifelong learner in the developing countries and describes innovative cases to support teachers in this line. It is important to create and combine various trainings effectively and efficiently within the limitation of minimum budgets and to tackle the above complexity. There are, however, unique

⁵ The Central Council of Education stated in Reply 2002 to teacher education that the renewal system of teacher certificates and graduate school for teaching professionals will be introduced in correspondence with a new teacher image.

⁶ In Japan, the high standard of salary for teachers was maintained in comparison with that of other public servants according to the Human Resource Securing Act (1973).

problems for developing countries. Some problems are as follows:

- ① Quantitative expansion before quality improvement
Firstly, in some countries there may not be enough teachers and unqualified teachers may have to be employed to secure enough number of teachers. Under such circumstances, securing enough teachers is given preference.
- ② Unqualified teachers
Secondly, there exist unqualified teachers in correspondence with the above problem. They undergo training besides that needed in order to acquire a certificate. This is an important occasion for them to improve competence. However, there is a danger that the certificate itself may become an objective of the training.
- ③ Negative assets from colonial period
Thirdly, there is a negative asset regarding attitudes from the colonial period. People in high positions are expected to behave according to the position. Education during the colonial period was exactly connected to continuation and perpetuation of such an authoritarian system. Suddenly the teacher is required to use reflective thinking as a new competence due to education reform, but values and attitudes, which they have inherited unconsciously, may have the possibility to hinder growth of such competence.
- ④ Inadequate working conditions
Fourthly, such inadequate working conditions as to the small amount and delay of salary and allowances in addition to lack of textbooks and education facilities influence working ethics and the attractiveness of the job. Under this condition, teachers are usually paid daily allowances when the government conducts teacher training. As a result, there is a danger that the main purpose of participation in training may become financial gain, and it becomes difficult to conduct autonomous and voluntary training.
- ⑤ Non-existence or weakness of subject-based research
And finally, the non-existence of subject-based education research is a persistent problem. Even in the developed countries, subject-based education research has emerged just recently, and so in these countries it is imperative to have curriculum and textbook development and teacher education, based on school practices and research on them.

In order to design teacher education in developing countries, it is necessary to ensure implementation of the effective programs and at the same time to overcome the above problems. In this context, it is an invincible task to consider how to issue qualification to many unqualified teachers and to improve quality despite a limited budget, how to nurture proactive attitudes and professionalism despite a wait-and-see mentality and inadequate working conditions, and how to realize quality education suitable for children despite premature subject-based education research. All these also require a reinterpretation of basic questions such as who leads, what to take up, and how to engage in the work in the improvement of teacher quality.

2-3 Lesson Study Approach in Developing Countries

In order to tackle these issues, various teacher training programs, including lesson study, are being implemented in developing countries. Some of them are curriculum and teaching material development⁷, teacher education (cascade system⁸), teacher resource center (Taniguchi, 2006), and school based training. For example, each has a unique focus on teaching material development or coverage, and uniformity of information.

Table 2 Comparison of two approaches

	Institution focused approach	Lesson study approach
Who	Education planner (Administrator)	Teachers
What	Policy development (Implementation)	Lesson
How	Top-down, law, policy	Bottom-up, collaboratively, Cycle of Plan-Do-See
Characteristics	Stability, expectancy, uniformity	Creativity, flexibility, multifoldness

Among these, the lesson study approach aims at lesson improvement by cooperation among colleagues in a school or among schools in the area. Since this is based on daily practice and problems, the teachers are likely to be autonomous and flexible rather than being passive in the institution approach. It requires teachers to be more proactive and positive⁹. On the other hand, the institution such as policy and law is established to ensure quality improvement and the teachers are expected there to perform rather uniformly according to the requirement of the institution. Top-down training by institutions in many countries result in the creation of passiveness and dependency, and it may be an unintended reverse function which the institution creates unconsciously against the intended function. It can not be denied that curriculum development at the national level and cascade system of training may have such effects.

Of course, the lesson study approach itself also has a limitation. Collaboration and proactiveness of teachers cannot be forced. In that sense, lesson study does not guarantee something to happen automatically and thus it provides simply a forum for possible development.

⁷ Few specialists are engaged with development, and the developed materials are disseminated to others through training.

⁸ It refers to the training system which is conducted at several stages such as National-District-School.

⁹ According to Inagaki (1995), the lesson critique meeting fell into formalism at the end of Meiji period (around 1900).

3. Consideration of the Lesson Study Project in Zambia from an Institutional Context

Zambia has been implementing the project based on the lesson study approach¹⁰. Here we shall examine it in terms of prerequisites, outcomes, issues of the approach as well as future possibilities.

3-1 Background of the Lesson Study Project

In Zambia lesson study was introduced to shift chalk-and-talk lessons, which mainly aim at the transmission of knowledge, to participatory lessons, which aim at the development of children's thinking and activities. Behind this movement, there is an education policy which targets development of human resources with various abilities of not only knowledge and understanding but also of interests, attitudes, thinking abilities and skills¹¹. Therefore, teachers are required to develop these various abilities in children.

The education policy put more emphasis on the teacher resource center in the sense that it can correspond with the needs of individual schools and teachers, and requires little cost for the government as well as teachers¹². And the education section in the Fifth National Development Plan has a focal activity of continuous professional development of teachers in correspondence with poor performance in the SACMEQ test¹³ (Republic of Zambia, 2006, p. 152). In this context, she introduced in 1998 an institution called SPRINT¹⁴ to conduct in-service training among the group of schools called zone. Under this SPRINT, teachers who teach the same grades and/or subjects were supposed to meet regularly, but the purpose and method of such meetings were not clear. Thus in 2006 the Ministry of Education started introducing lesson study into the teachers' meeting initiated by SPRINT¹⁵. The aims of the Ministry through lesson study are 1) improvement of teaching competence, 2) nurturing awareness of responsibility and pride as a professional, and 3) vitalization of the institution. As of August 2009, three provinces

¹⁰ Education cooperation by Japan to Africa can be represented by Kenya's SMASSE project where SMASSE stands for Strengthening Mathematics and Science at Secondary Education. In 1998, a JICA technical cooperation project was started in Kenya, and the movement of lesson improvement through teacher training has expanded into 33 countries and one region through SMASE-WECSA (Strengthening Mathematics and Science Education- Western, Eastern, Central and Southern Africa) Association. Among these Zambia engages herself in institutionalized lesson study activities of teachers, the case which is taken up in this paper.

¹¹ Ministry of Education (1996, p. 5) sets up as the objectives educating its own people with not only knowledge but also various abilities such as analytical, creative and imaginative abilities as well as moral and ethical values.

¹² Ministry of Education (1996, p. 116) set up resource centers at the province, district and zone level nationwide to enable this kind of training.

¹³ For example, SACMEQ (2000) for grade 6, Zambia is placed at 13th position for reading and 12th position for arithmetic out of 14 participating countries in eastern and southern Africa.

¹⁴ SPRINT stands for School Programme of In-service for the Term. All schools for basic education (primary: grade 1 to 7, upper primary: grade 8 and 9, and high: grade 10 to 12) are targeted at.

¹⁵ Upon the request of Ministry of Education, JICA supported technical cooperation project, SMASTE (Strengthening Mathematics, Science and Technology Education) School-based CPD (Continuing Professional Development), and assisted introducing lesson study. As of June, 2009, the project is implementing lesson study in Central, Copperbelt and Northwestern Provinces under Phase II.

have introduced the lesson study approach.

3-2 Implementation of Lesson Study

In Zambia, lesson study is conducted in a cycle which contains 8 activities 1) setting an issue and theme, 2) preparing an experimental lesson collaboratively, 3) implementing and observing the lesson, 4) reflecting on the lesson, 5) improving the lesson plan based on reflection, 6) implementing and observing the improved lesson, 7) reflecting on the lesson again, 8) summarizing the activities (Ministry of Education, 2007, p. 4). During the semester, teachers form a group according to subject and/or grade, and they are supposed to conduct a cycle of lesson study every month. And in order to promote this activity at school, the workshop for school administration is also held during holidays, and provides the administration with an opportunity to reflect on the lesson study in the previous term and to plan for the coming term through sharing information. District and provincial education offices sometimes set up the theme, which the schools within the area are to engage in¹⁶.

A notable difference between lesson study in Zambia and that in Japan is whether the concerned educators and education administrators have a common understanding about the target lesson image to be realized through lesson study. Zambian counterparts describe the image as “learner-centered”, as written in the education policy, but few of them are able to express clearly what that lesson would look like beyond the abstract expression¹⁷. So it is not that they use lesson study as a means to attain the clear objective of an ideal lesson. Rather having some ambiguity in the objective or target image, they conduct lesson study by trial and error and at the same time explore an image of the ideal lesson and lesson study. In this point, any “weakness of subject-based school practices and research” becomes critical, and at the same time the characteristics of lesson study, “flexibility and autonomy rather than uniformity”, are expected to play a significant role.

3-3 Effects and Issues of Lesson Study

More than three years have passed since the introduction of lesson study, and more than 80 % of upper basic schools (grade 8 and 9) and high schools¹⁸ now conduct lesson study. As results, there are various changes observed in teachers and children.

Through lesson observation and interviews, changes in teachers are noted as “more teachers write lesson plans, set the lesson objective clearly, develop a more interactive lesson process, and increase activities in the lesson” (JICA, 2007, pp.21-23). Changes in children are not expected as much for such short period of the project, but according to interviews of

¹⁶ For example, the theme such as “how to write good lesson plans” and “effective questioning technique” are set up according to the needs of teachers in the area.

¹⁷ It is related to the fact that education administrators and educators have learned in the knowledge-transmission style of lesson.

¹⁸ According to JICA (2007, p.24), during Phase 1 of the project, 213 schools have introduced lesson study as of March 2007 out of the 255 target upper basic schools (grade 8 and 9) and high schools (grade 10 to 12).

teachers and school administration as well as lesson observation, changes noted are “time for activity increases, number of children who say their opinion during the lesson increases and they are able to discuss among themselves” (ibid. p.23). The schools, which continue lesson study, show such positive change as “teamwork among faculty members increases, school administration understands importance of teacher training, the school plan for in-service training is developed, and utilization of resources within school are reviewed” (ibid. p.23).

Some observations reveal that when teachers recognize the increment of improvement in their own skills through lesson study, their willingness and proactiveness towards lesson study increases. If there are several such teachers in the school, teamwork and positive attitudes among the faculty members are enhanced, and this gives a positive impact on the whole faculty. As a result, school-based training functions very effectively. Therefore, the model of transformation through lesson study may be described as a gradual change from an initial increment in increasing teachers’ skills, to an attitudinal change to more active implementation of lesson study by the school.

Of course not all schools are conducting the lesson study very effectively. In the first stage, almost all schools introduced it, according to the directive from the Ministry. Later some schools showed positive changes. On the other hand, some other schools conduct lesson study just because of an order from the Ministry and/or even stop it in the middle of the term¹⁹. From a preliminary comparison of these, stakeholders share the view that the success of lesson study depends on 1) school administration’s understanding and support, 2) technical input for teachers to improve teaching skills, and 3) teamwork among the teachers within a group. And another important fact is flexibility in terms of participants, time and methods according to school conditions.

The Zambian government has a plan to introduce this lesson study, which is currently conducted only in three provinces, to other parts of the country. The above three factors should be addressed in order to disseminate it effectively by utilizing the existing framework and institutions.

4. Conclusion

When there is an example of a good lesson, it is natural to put forth effort to disseminate it to other classrooms, schools, and areas, and so to institutionalize such effort, where the institution is set up to widely disseminate the good practice. This paper, however, has pointed out that the condition varies from classroom to classroom and the realization of quality education at the school level is not easy. That means that there is always a human factor

¹⁹ The implementation of lesson study is based on the monitoring report by the education administrators, the school report, which is about the workshop at the end of term. For example, 27 out of 164 schools, which reported to have implemented lesson study during the second semester, 2006, did not report during the third term. This means that either they stopped the lesson study or at least their attitudes towards lesson study deteriorated.

involved in the classroom and conflict between this human factor and the institution, which tries to control it.

In this paper, lesson study and the institution are considered in the context of Zambia. It is found that at first, the lesson study was introduced as a tool to realize into the classroom the policy and ideal described at the national level. And it is recognized that the existing system smoothens such introduction. This complementarity of lesson study and institution is the first point of this paper. Secondly, lesson study is the effort to improve quality at the school level and it has the potentiality to develop creativity of teachers. The history, however, shows that there is also a danger to kill such creativity if we are concerned only about formal procedure. Some Zambian schools, which stopped lesson study, may be trapped in this formalism. Finally, there are many teachers who become involved proactively in lesson study. Here is a situation where we cannot simply say it is wrong if the educational change was brought from the top. Especially in the developing countries, which have not yet developed subject-based practical wisdom and/or research, it may be found to be meaningful when it is forced at the beginning.

If quality education mentioned at the introduction of this paper is to have wide dissemination, it will be necessary to embody and share the image of a good lesson through a certain kind of institutionalization and at the same time to have a creative and collaborative environment at the school level. As for the former, the less concrete the image of a good lesson is, the more it lacks substance. In the Zambian case, however, where the concrete image did not exist at the beginning, it is gradually being formed and shared among teachers through implementation, observation, and reflection of practical experiences. As for the latter, the school teachers used to be placed in a weak position to wait for instruction from the central government or authority. However, it is the teacher who does implement educational activity every day in the classroom. It is necessary for teachers to engage themselves actively in the activity.

Furthermore, subject-based practical wisdom and/or research should be nurtured in the long term as follows:

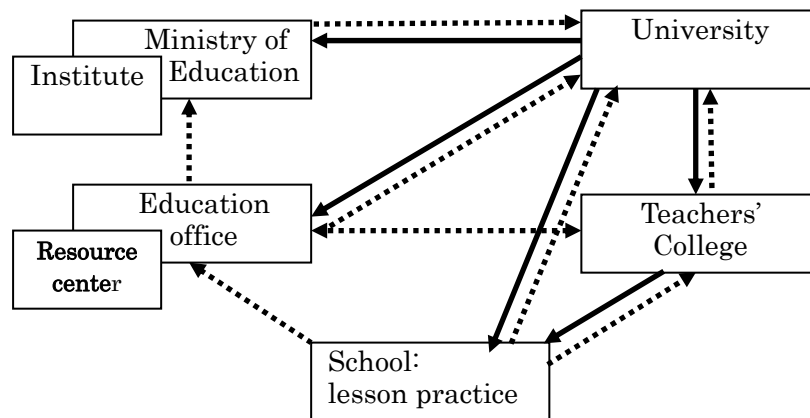
(1) Establishment and accumulation of subject-based practical wisdom and/or research

Lesson study aims at improving the quality of lessons and teachers' competence based on their daily practice. In this sense it is concrete and teachers can easily take the initiative. They, however, tend to focus on the present. The issue should be understood in a deeper way in relation to curriculum development, textbook development, and teacher education. It is therefore necessary for experienced teachers, curriculum developers and university researchers to reflect and theorize the relationship between lesson practices and broader views such as curriculum, textbook and teacher education. And it is necessary to verify again such reflection and theory in the lesson practice. It is a tremendous task to develop theory from scratch where there is no home-grown theory. That is why it is necessary to clarify common points and differences, and strength and weakness of daily lesson practices and to further theorize through abstraction.

(2) Education and the supply of educators and education administrators and the formation of

subject-based education specialists

If we are to look at the longer term, we should be able to see a certain cycle. Good quality education raises children’s understanding and at the same time teachers’ commitment towards the profession and this will heighten society’s recognition of their profession. When this continues, high potential people aspire to be a teacher and this improves the quality of education further. All this forms a positive cycle of education improvement. In some countries, teachers from basic schools may be promoted to education officers in the Ministry and to faculty in the university. In this case the human resource circulation may



include even the ministry and university, and so it may be expected that the whole system, curriculum and teacher education are to be improved.

- ▶ Training and provision of human resource
-▶ Promotion and assignment of human resource

Figure 1 Human resource circulation

If this cycle functions somehow well, a professional group (Yoshida, 2003) will be formed through academic gathering and lesson study conference, and will accumulate knowledge and experience beyond the generation. Here human resource circulation, connection of professionals, accumulation of knowledge and experience and its influence on the next generation have significant meaning in this accumulative process.

The second point is a basis of educational endogenous development (Baba, 2007a). And it is necessary to describe and analyze the process on how this knowledge and these human resources are accumulated and/or circulated in a longer interactive process. It requires a detailed description about human resource circulation and institution building as well as under what kind of conditions, how to tackle the issues, and what process to take, what change occurs.

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APPENDIX

MEXT, Japan System of Teacher Education

