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# Delivering *Jugyou Kenkyuu* for Reframing Schools as Learning Organizations: An Examination of the Process of Japanese School Change

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## Introduction

The concept of learning organizations encourages a rewarding school environment and fosters an educational culture which provides opportunities for change, for reflecting on action, for learning from each other, and for collaborative learning activities methods of observation, reflection, journaling and ethnography (Fauske & Raybould, 2005; Gorelick & Tantawy-Monsou, 2005; Sun & Scott, 2003; Silins & Mulford, 2002).

School improvement theory has developed over many years, but the idea that a school can learn, and efforts to reframe schools as learning organizations have become increasingly prominent during the last decade (Minnett, 2003; Eisner, 2002; Ballantine & Spade, 2001; Mohr & Dichter, 2001; Gray, 2000; Senge et al., 2000). As Senge et al. argue, "schools can be re-created, made vital, and sustainably renewed not by fiat or command, and not by regulation, but by taking a *'learning orientation',* [which] means involving everyone in the system in expressing their aspirations, building their awareness, and developing their capabilities together" (2000:5).

Integrating this idea into reframing school and teacher professional

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development suggests a new approach and opportunities for teachers to work together, to share experiences and to learn from each other. Lieberman (1995) characterized effective professional development as that which is "grounded in inquiry, reflection, and participant-driven experimentation, naming the role of teacher-researcher as an appropriate means" (Levin and Rock, 2003:136). As a result, teachers become able to think more deeply about their educational experiences and efforts through exchange and understanding with other teachers (Xu, 2003; Levin and Rock, 2003; Smylie, 1995).

Conventionally, most Japanese schools have a school-based training system called *jugyou kenkyuu* (lesson study). *Jugyou kenkyuu* is collaborative research done at the school level on the teaching-learning process using practical quality circles and involves such activities as questioning, planning, acting, observing, reflecting and re-planning. *Jugyou kenkyuu* has a very significant effect on developing teachers' competencies, improving quality of teaching, promoting school change, enhancing student learning, and in recognizing teachers' common stake in the future of the school system.

Moreover, for most Japanese teachers, learning and teaching is traditionally collaborative work, and the most effective kind of in-service training is where ideas and experiences are shared and reflection is accomplished through discussion in small groups and networks (TCSAA, 2006; NTKKP, 2004; Sarkar Arani & Matoba, 2002).

A growing number of studies have suggested that in contrast to teachers' gains from learning about mathematical formulas, theoretical or abstract principles, they are thought to acquire more skills and professional knowledge through observation, practice, reflection, shared information and collaborative research related to the classroom activities that comprise *jugyou kenkyuu* (Lewis, et al., 2006; Sarkar Arani & Matoba, 2005; Lewis et al., 2004; Chokshi & Fernandez, 2004; Stigler & Hiebert, 1999; Stigler, et. al., 1996; Inagaki and Sato, 1996).

To help expand our understanding of this concept, particularly the impact of *jugyou kenkyuu* on changing schools as learning organizations, this research examines capacity of Japanese school for organizational learning and the process of school change through applying *jugyou kenkyuu* as a shared professional culture for acquiring professional knowledge and developing organizational learning.

This study was conducted in a school-university partnerships funded

over three years (2002-2005) by the Nagoya University and the Tokai City Board of Education in the central Japan. The partnership project was designed to help teachers change their assumptions about school leadership, leadership for learning and educating students.

Data sources for this study included classroom observation and ethnographic notes, interviews with teachers, lessons plans, lessons analysis, teacher self-reflection, and an examination of other relevant school documents, including reports on the school-university partnerships and approach of *jugyou kenkyuu* in each subject matter. During the interviews we asked teachers to talk about what had occurred in their classrooms, their teaching styles, and what they had learned from the process of lesson study.

This paper first clarifies the role of *jugyou kenkyuu* for creating an effective environment in schools for teachers to learn from each other and for developing more learning-centered education that focuses on the real needs of students. Secondly, it examines various practical strategies used by both professors and teachers through active school-university partnerships to develop schools that can learn and implement an organizational learning model focused toward self-sustaining change.

**1. Japanese School Capacity for Organizational Learning**

The literature characterizes a learning organization as one that learns, reflects, adapts to change, shares experiences, creates knowledge and continuously improves (Silins and Mulford, 2002; Senge et al., 2000,1999 ; Senge, 1990; Argyris and Schon, 1996). Recent research on schools that learn shows that the teaching and learning process as a collaborative effort for which the most effective training consists of an exchange and discussion of ideas and experiences within a network of small groups (Matoba & Sarkar Arani, 2006a, 2006b; Fauske & Raybould, 2005; Silins and Mulford, 2002, Senge et al., 2000; Marks, et al., 2000). Also, in terms of professional culture in Japan, the literature has found that quality improvements in teachers are essentially based on mutual development between the teacher and the student (Sarkar Arani & Matoba, 2006, 2005, 2002; Lewis et al., 2006, 2004; Chokshi & Fernandez, 2004; TCSAA, 2006; NTKKP, 2004; Matoba et al., 2004; Stigler & Hiebert, 1999).

Marks et al., (2000:241) have identified the following central concepts associated with learning organizations:

- identifying and correcting problems

- learning from past experience
- acquiring new knowledge and
- changing the organization (Silins and Mulford, 2002:427).

Marks et al., (2000) have characterized six dimensions of school capacity for developing organizational learning from a review of the literature on teacher empowerment and the capacity for organizational learning based on a study of six schools. These dimensions are school structure, participative decision-making, shared commitment and collaborative activity, knowledge and skills, leadership, and feedback and accountability (Silins and Mulford, 2002:428).

Similarly, *jugyou kenkyuu* may be considered a model of professional practice that has the potential to change the culture and environment of schools and to promote organizational learning (Matoba & Sarkar Arani, 2006a; 2006b). *Jugyou kenkyuu,* as a method of collaborative research, allows for the exchange of experiences between teachers, collaborative planning, participatory learning, the enhancement of professional dialogue among teachers, and teacher reflection. These activities provide teachers with opportunities for empowering themselves professionally in their relationships with students in their classroom activities, and they emphasize learning from practice, classroom improvement, and raising teaching outcomes.

In general, *jugyou kenkyuu* is based on a quality circle consisting of four stages: Planning, Implementing, Reflecting, and Revising. First, teaching staffs devise a plan for collaboration in doing research on teaching. After implementation of the plan, they evaluate and reflect upon the success of the process. In practice, this process is a collaborative activity and therefore enhances the school's capacity for organizational learning.

Every school in Japan has a committee for planning and coordinating the activities of school-based teacher training programs. Various school problems are discussed during a faculty meeting at the beginning of each academic year in April. The meeting focuses upon key school issues as they relate to the learning environment. The following is an examination of the process of Planning, Implementing, Reflecting, and Revising within a quality circle for collaborative research on teaching using an example from fieldwork conducted in a Fukishima Junior High School as a public school in Tokai City.

**1.1. Planning***: Defining the problem, Making a comprehensive plan, Devising lesson plans*

All teachers first discussed in detail the research theme they had chosen to focus upon for the year, for example, improving teacher-student interaction in the teaching-learning process. The group then discussed the content and teaching methods used in all grades for subjects such as mathematics, and then cooperatively developed several lesson plans that made up a comprehensive plan. Finally, the teachers discussed ways to improve the lesson plans before implementation. In this manner they prepared themselves as best they could before teaching the lessons.

**1.2. Implementing***: Implementing the lesson plan as experimental lessons, Re-planning* Lessons*, Re-introducing the new version of the lesson plans*

In the next stage, one of the teachers agreed to give a lesson based upon the lesson plan cooperatively devised with colleagues. Other teachers became active observers during this class session and made ethnographic notes on what transpired in the classroom during the lesson. Each teacher had a specifically assigned role. One teacher video taped classroom instructional activities, two others examined the entire teaching and learning process, another teacher focused on the teacher's classroom management style, three examined the teacher-student interaction, and yet another observed student-student learning relationships in small groups.

**1.3. Reflecting***: Sharing observational data, Reflecting and Evaluating*

After the lesson was taught, all teachers met again as a group to share observational data, reflect upon and evaluate the lesson plan and its implementation by the volunteer teacher. During this session they examined the appropriateness of the teaching theme, the materials used, instructional methods, problems with the teacher's performance, teacher-student interaction in detail and the characteristics of individual pupil's learning in the classroom.

**1.4. Revising***: Investigating new teaching strategies, Revising the lessons, Reporting & dissemination, Devising a new version of the unit plan*

In the last stage, teachers discussed revisions to the lessons plan based upon their observations and reflections, suggested new teaching-learning strategies, shared their findings and conducted self-directed professional

development and self-improvement activities. The teachers devised action steps to be taken based on what was learned and what must be achieved to enrich classroom practice.

This approach (planning, implementing, observing, reflecting, and revising) enables teachers to learn from each other, to improve their teaching in practice and to promote organizational learning. These activities also provide teachers with opportunities to raise their professional skill level and improve their relationships with students. According to Stigler & Hiebert:

> "This kind of planning [implementing, reflecting and revising] is decidedly intellectual in nature; these teachers are thinking deeply about the options available to them and the way the structured classroom activities will facilitate students' understanding of mathematics. There is real excitement as this process unfolds that is obvious to those who observe the weekly meetings of lesson study groups" (1999:120).

As our research finding show, *jugyou kenkyuu* involves interrelated factors of the schools' capacity for organizational learning such as teachers' collaborative participation in their professional development, shared decision making, the creation of new professional knowledge, the exchange of ideas and experiences, and self-reflection (Matoba & Sarkar Arani, 2006a, 2006b; TCSAA, 2006; NTKKP, 2004; Matoba et al., 2004).

**2. Reframing School as a Learning Organization**

Senge (1990) developed a theory of shared leadership for a learning organization using a systems perspective, which involves shared leadership, common vision and collaborative mission for expanding organizational learning. However, the application of this theory to the school-university partnerships examined here was found to be problematic. Some fundamental challenges included differences in terms of educational culture, and assumptions teachers hold regarding school, learning, students' needs, and the knowledge and learning process.

Nagoya University researchers and partners from Tokai City schools in the program examined various practical strategies used by both professors and teachers to provide flexibility in the learning environment, which contributed to reframing the school culture as a learning organization. Most stakeholders in the school-university partnerships, as a result of their participation became

more aware of the challenges that they faced (Berreth, 1999). As Garvin argued, "learning organizations are not built overnight. Most successful examples are the products of carefully cultivated attitudes, commitments and management processes that have accrued slowly and steadily over time" (1993:91).

Throughout the implementation of *jugyou kenkyuu* as a model for collaborative school-based research at Fukishima district school, including Fukishima Junior High School, Fukishima Elementary School, and Funajima Elementary School, partners from both institutions made use of the following nine essential strategies to reframe the school as a learning organization.

**2.1. Bring partners together.** Opportunities should be provided for both teachers and researchers to meet, listen to one another, and be engaged in authentic dialogue. The Fukishima district school organizes many informal meetings, which are somewhat common in Japan and can often be more effective than formal gatherings.

**2.2. Build relationships for sharing ideas.** Collaborative partners hold both formal and informal meetings to foster individual as well as group dialogue about their ideas and assumptions toward collaborative activities and a common mission. In the district school, all participants worked on trying to achieve an atmosphere of equality during their participation in team discussion and dialogue and in their sharing of knowledge and experiences.

**2.3. Clarify the roles of participants in collaborative activities.** Identify the roles and tasks of all of participants for both individuals and institutions. In one example from a formal meeting for implementing *jugyou kenkyuu* in Fukishima junior high school a teacher reported:

> "In the lesson plan meeting with Professor Matoba from Nagoya University we learned to find effective ways to clarify the role of participants in *jugyou kenkyuu*. We reviewed the lesson plan and after a long discussion we could designate teachers for the following tasks: implementation of the lesson plan, recording the instructional process, observation of specific student activities during the lesson, examination of teacher-students interaction, taking of ethnographic notes, and summarizing and reporting on the discussion and feedback meeting held after the lesson" (TCSAA , 2006:93-94).

**2.4. Establish and use a common language.** Time spent building shared language and meaning, although frustrating, has certain advantages. This is especially important for school-university partnerships where teachers and researchers have different values and perspectives.

Teachers at Fukishima changed their assumptions toward communication and language, as in the following exchange in which a school teacher did not hesitate to indicate his lack of comprehending the professor's explanation.

> "Teacher: Sorry, but I have no idea what you just said. It is difficult for me to visualize lesson analysis. But I would like to see the lesson analysis process in practice. Do you have any visual documents to show what happens in practice during lesson analysis?
>
> Matoba: To gain a thorough understanding of the lesson analysis process, you first have to carefully review all of your documents and data. Please carry out two group studies on lesson analysis and then review your data. After that I will give you step by step advice on how to do your lesson analysis" (TCSAA , 2006:101).

**2.5. Highlight both the process and the outcomes.** Schools are under increasing pressure to produce tangible results. For school-university partnerships to be maintained, the issue of how outcomes will be assessed should be considered. At the very least, school districts need to clarify what can be achieved by school-university partnerships. Vice principal Mouri discussed the pressure his school is under to produce results:

> "The Japanese approach to kaizen (improvement) places focus on process rather than on outcomes. On a very hot day last summer, a researcher visited our school and asked me point blank in front of teachers about the outcomes coming from partnerships with Nagoya University. When I heard the question, I felt pressure to show results for our collaborative projects with Nagoya University. Since that summer meeting, I have been asking my colleagues what has been done during the three-year school-university partnerships and what have the outcomes been? Presently, we have a team working with Nagoya University partners to determine partnerships outcomes. It seems in general that results of the partnerships provide new energy for more collaborative research in school."

**2.6. Search for a common mission.** Try to find points in common among teachers, principals and educators that can be built upon. This requires the skill to listen to others, and to facilitate contact and communication between students, teachers, parents, community members and educators. These linkages can help all stakeholders to understand how school-university partnerships can help them to achieve common goals. One specific way this can be done is by developing a school's mission statement, or by working from the language of existing mission statements to emphasize collaborative activities.

The school-university partnership partners decided to jointly publish a report on the process of collaborative activities in practice. They published a practical manual containing information on the reporting process, the reality, challenges, findings and relationships of the school-university partnerships in practice (see TCSAA, 2006 and NTKKP, 2004). This kind of common mission supports collaborative activities in schools and gives motivation to the participants.

**2.7. Look for shared values/vision and ideas that are transferable from teaching to areas of leading and learning.** Involve all staff to participate in creating a shared vision and a new paradigm for learning. School teachers in Fukishima junior high school started having many personal perspectives and assumptions. Researchers asked all participants to discuss and write down their personal visions. This opportunity contributed toward the development of school as a learning environment for teachers' self-realization.

School-university partnerships have a strong ethical basis, and encourage educators to cultivate caring and civic responsibility. School reform means changing the school culture, which requires learning new skills, new language, and new attitudes.

Researchers developed an integrated approach for inquiry and reflection on lesson and lesson analysis that involved carefully observing, recording, analyzing and reporting the results of school-based research for use in revising lessons.

This approach for classroom-based research expands opportunities for teachers to write and express themselves in the meetings for reflection and revising lessons. Ultimately, teachers assumed mutual responsibility for sharing their school-based research findings and in asking for assessment.

**2.8. Build a culture of collaboration in school.** This objective is one that reinforces a new model for school-university partnerships. Vice Principal Mouri remarked that many teachers are not ready to open up their classrooms to university researchers who visit to investigate the teaching environment and who may have something critical to say. Schools need to change teachers' assumptions toward evaluation and they should promote a culture that is more conducive for collaboration. Mr. Mouri explains:

> "Because of traditional top-down relationships and direct partnerships with university scholars, teachers don't like to open their classrooms to researchers. They feel that professors only visit their school to give advice and do no not come to learn and do research in an equal and cooperative manner. Therefore, we held several meetings with teachers to help them understand our new school-university partnerships. I also told my staff that the purpose is to learn how to do lesson analysis and that process enables us to understand each student's needs better. The partnerships aren't for evaluating teachers, but for focusing on teaching. Of course it takes time to change their mindsets, but I am happy that our university colleagues support us in our efforts to improve our school culture and teachers' ways of thinking".

**2.9. Recognize that change takes time.** Bringing teachers and educators together to share experiences and to do collaborative research on classroom activities is time-consuming. Time is needed for data collection, analysis, and reflection, thinking about shared vision and mission, individual needs of students, and strategies for promoting leaning. Senge et al., (1999) argued that the main challenges to sustaining momentum in learning organizations include such things as lack of enough time and support, irrelevancy of goals, inconsistent follow-through, and fear and anxiety over being assessed. Indeed, many similar challenges were faced in the school-university partnerships, especially in terms of trying to encourage leadership for learning, in the cultivation of new attitudes and commitments toward reframing schools as learning organizations.

## Conclusion

The school-university partnerships have demonstrated that raising teacher quality, promoting school change, and enhancing learning and student development are important and closely interrelated factors. Indeed, improvements in the classroom have been directly linked to mutual development of teacher and student.

The successful application of *jugyou kenkyuu* to reframe schools as learning organizations requires the development of a school culture and environment conducive to collaborative activities, in which participants are free to think critically, to develop plans for enhancing educational leadership, to devise and implement innovative lesson plans, to anticipate students' thinking, to carefully observe classroom activities, and to give teachers a central role in developing these practices.

The school-university partnership with Fukishima district school allowed for an innovative approach to be implemented for improving the school environment. *Jugyou kenkyuu* and lesson analysis, as main components of the partnership program, had noticeable impacts on changing this district school from an institution of teaching to a learning organization.

The findings from this study helped to clarify the role of *jugyou kenkyuu* as a shared professional culture, and the development of which may help to revitalize and restructure schools. Academic researchers, educational administrators, teachers and school leaders may respond positively to school-university partnerships that emphasize *jugyou kenkyuu* for building school capacity in expanding organizational learning and changing role of teachers from teaching to leading and learning.

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