

Journal article

Title: Leading from Within

Author(s): Boss, Suzie

Source: Lesson Study: Teachers Learning Together. Northwest Teacher v2 n2 Spr 2001

Abstract: This publication takes a look at lesson study both in its Japanese form and as it is being implemented in the United States. It contains the lesson study process, the rationale for using such an approach, and illustrates how teachers and administrators around the United States are taking the first steps toward adapting and implementing lesson study. This article shows how lesson study builds teachers' instructional skills and also moves administrators in new directions.

Title: A New View of Professional Development

Author(s): Stepanek, Jennifer

Source: Lesson Study: Teachers Learning Together. Northwest Teacher v2 n2 Spr 2001

Abstract: This publication takes a look at lesson study both in its Japanese form and as it is being implemented in the United States. It contains the lesson study process, the rationale for using such an approach, and illustrates how teachers and administrators around the United States are taking the first steps toward adapting and implementing lesson study.

Title: Creating Happy Memories

Author(s): Weeks, Denise Jarrett

Source: Lesson Study: Teachers Learning Together. Northwest Teacher v2 n2 Spr 2001

Abstract: This publication takes a look at lesson study both in its Japanese form and as it is being implemented in the United States. It contains the lesson study process, the rationale for using such an approach, and illustrates how teachers and administrators around the United States are taking the first steps toward adapting and implementing lesson study.

Title: A U.S.-Japan Lesson Study Collaboration Reveals Critical Lenses for Examining Practice.

Author(s): Fernandez, Clea; Cannon, Joanna; Chokshi, Sonal

Source: Teaching and Teacher Education v19 n2 p171-85 Feb 2003

Abstract: Describes a professional development initiative based on implementing Japanese lesson study in a U.S. school. Japanese teachers acted as lesson study coaches. Researchers documented processes engaged in by participants. There were many crucial differences between groups. American teachers found it difficult to sustain a vision of teaching as a site for their learning.(SM)

Title: Learning from Japanese Approaches to Professional Development: The Case of Lesson Study.

Author(s): Fernandez, Clea

Source: Journal of Teacher Education v53 n5 p393-405 Nov-Dec 2002

Abstract: Describes the Japanese professional development practice of lesson study and its articulation within the Japanese educational system, discussing insights gained from research that explored the feasibility of lesson study in a U.S. setting, noting challenges faced by American teachers trying to adopt the research focus that is inherent in lesson

study, and reflecting about what the study of lesson study can teach about efforts to improve teaching.

Title: A Practical Guide to Translating Lesson Study for a U.S. Setting.

Author(s): Fernandez, Clea; Chokshi, Sonal

Source: Phi Delta Kappan v84 n2 p128-34 Oct 2002

Abstract: Describes "lesson study," a Japanese professional development process for teachers that focuses on a systematic examination of their teaching practices. Includes a brief overview of the lesson-study process, advice for setting up lesson study, and strategies for working on study lessons.

Title: Beyond "Lesson Study": Comparing Two Ways of Facilitating the Grasp of Some Economic Concepts.

Author(s): Pang, Ming Fai; Marton, Ference

Source: Instructional Science v31 n3 p175-94 May 2003

Abstract: During three discussion sessions, two groups of five teachers each developed a shared lesson plan, one for each group, for the teaching of a difficult economic concept. Differences in learning outcomes are interpreted in light of observed differences in how the concept was dealt with in the different classrooms.

Title: Learning from Japanese Lesson Study.

Author(s): Watanabe, Tad

Source: Educational Leadership v59 n6 p36-39 Mar 2002

Abstract: Describes the use research lesson-study groups for teacher professional development in Japan, including activities associated with these groups, where they are held, what they do and do not do, and how U.S. teachers can emulate research lesson study.

Title: Does Lesson Study Have a Future in the United States?

Author(s): Lewis, Catherine

Source: Nagoya Journal of Education and Human Development n1 2002

Abstract: This paper introduces "lesson study" as used in Japan to improve instruction. Lesson study is the process of planning, conducting, and discussing the research lesson for teachers to study. Four features are identified as essential to Japanese lesson study: (1) a shared long-term goal for teachers; (2) important lesson content; (3) careful study of students; and (4) live observations of lessons. Teachers learn from lesson study and research lessons because of the opportunity to think carefully about goals of the particular content area, unit, and lesson and about long-term goals for students. Research lessons give teachers a change to learn from other teachers, and they offer a way to deepen knowledge of subject matter. Studying research lessons helps a teacher develop instructional expertise and build the capacity for collegial learning. They allow the teacher to develop "the eyes to see students." Several features of the Japanese educational landscape support lesson study, including a shared and frugal curriculum, established collaboration, a belief in improving teaching through collective effort, and the practice of critical self-reflection. Japanese teachers face a certain stability in educational policy and tend to focus their instructional improvement time on instruction as they maintain a focus on the whole child. Some of the barriers facing lesson study in the United States are described.

Title: Cooperative Learning: Student Perceptions of the Changing Structure of Learning.

Author(s): Jules, Vena

Source: Contemporary Education v63 n3 p191-94 Spr 1992

Abstract: Presents secondary students' perceptions of cooperative learning (CL) in an attempt to understand how and why CL benefits students affectively and cognitively. After describing the structure of learning and schooling, the article discusses how CL promotes positive interdependence, social skills, work skills, and individual accountability.

Title: Research on Teacher Learning: Studying how Teachers' Knowledge Changes.

Author(s): Ball, Deborah L.; McDiarmid, G. Williamson

Source: Action in Teacher Education v10 n2 p17-23 Sum 1988

Abstract: A description is given of how research is being conducted on what teachers are taught and what they learn in 11 diverse preservice, induction, inservice, and alternative route teacher education programs. The work combines case studies of programs with longitudinal studies of participants' learning.

Title: Learning Studies in Science Education

Author(s): Belanger, Maurice

Source: Rev Educ Res 39, 4, 377-395, 69 Oct

Title: A lesson is like a swiftly flowing river: Research lessons and the improvement of Japanese education.

American Educator, Winter, 14-17 & 50-52. (1998a)

Author: Lewis, C. & Tsuchida, I.

Available at <http://www.lessonresearch.net/res.html>

An excellent article for those new to lesson study because it captures the heart of Lesson Study. The author explains how Japanese teachers share lessons, refine teaching and collaborate on the way to introduce concepts and engage students and teachers in the exciting process of learning.

Title: A proposal for improving classroom teaching: Lessons from the TIMSS video study.

In Elementary School Journal, 101, 3-20.

Author: Hiebert, J., & Stigler, J. W. (2000).

This article first presents data from the TIMSS Video Study of Teaching (from the United States, Germany and Japan). Many teachers in the U.S. believe they are changing the way they teach; yet the core of their practice remains the same. The authors propose a research and development system for improving teaching in the U.S. The focus of the article is on the Japanese process of lesson study and the conditions that would enable such a process to function effectively in the U.S.

Title: A Teaching Style that Adds Up.

Education Week. February 23, 2000

Author: Hoff, David

Through an effective, detailed description of an eighth grade math lesson on the Fibonacci sequence, the author shows how an American teacher at Paterson School 2, in New Jersey, has used lesson study and the Japanese way of teaching to improve his teaching methods. Focus of the article is on the actual lesson.

Title: **Research for Better Schools.** (Spring/Summer 2002). Currents Newsletter, Vol. 5(2). Philadelphia: Research for Better Schools.

Available at <http://www.rbs.org/currents/0502/index.shtml>

The entire Spring/Summer 2002 issue of RBS Currents is devoted to lesson study and may be read on-line. It includes many useful articles discussing important aspects of lesson study, and a complete list of lesson study resources. Titles include: What Is lesson study? From the teacher: Facing the challenges of lesson study; From the principal: It's a matter of time; The role of 'knowledgeable others', and Developing effective use of the backboard.

Title: **Against the odds, America's lesson study laboratory emerges.**

Research for Better Schools (Fall, 2000). Currents Newsletter, Vol. 4(1). Philadelphia: Research for Better Schools.

Available at <http://www.rbs.org>

Title: **Japanese method benefits all teachers.**

Results, (December/January 2001).

Author: Richardson, J., National Staff Development Council.

Available at http://www.rbs.org/lesson_study/readings_and_resources.shtml

This article is based on an interview with Lynn Liptak of Paterson School 2 in New Jersey. Liptak describes her school's experience implementing lesson study in collaboration with the Greenwich Japanese School. She reflects on the lessons learned during their first three years.

Title: **Using lesson study to improve teaching**

Results, November 1999, National Staff Development Council.

Author: Sparks, Dennis. (1999)

http://www.rbs.org/lesson_study/readings_and_resources.shtml

A concise review of Stigler and Hiebert's book *The Teaching Gap: Best Ideas from the World's Teacher for Improving Education in the classroom*. Describes the impact of the collaborative process and the need for strong leadership as key elements of the lesson study process.

Title: **A new view of professional development.**

Northwest Teacher, 2:2, 2-5. (Spring 2001).

Author: Stepanek, J.

Available at <http://www.nwrel.org/msec/nwteacher/>

Title: **Lesson study: Teachers learning together.**

Northwest Teacher, 2(2). (Spring 2001).

Author: Weeks, D., & Stepanek, J. (Eds.).

<http://www.nwrel.org/msec/nwteacher/>

The focus of this issue is the lesson study process, the rationale for using such an approach, and how teachers and administrators around the U.S. are taking the first steps toward adapting and implementing lesson study.

Title: Collaboration in Japanese and American Schools: The challenge of balancing consistency and change.

World Studies in Education, 1:2, 55-79, (2000).

Author: Bjork, C.

This study explores the cultural and institutional factors that both enhance and undermine collaboration amongst teachers in public schools in the Japan and United States. The author suggests that collaboration is unlikely to be a pervasive force in US education due to cultural constructs.

Title: Responsibility for Improving the Quality of Teaching in Japanese Schools: the Role of the Principal in Professional Development Efforts.

Education and Society 18:3 21-43, (2000).

Author: Bjork, C.

This article compares the role of the principal in the United States and Japan, reviewing the influence of societal and cultural roles. The author views the structure of administrative authority to be fundamentally different in the two countries, and posits that the strength of professional development efforts in Japan is a result of teacher-driven initiatives.

Title: The roots of Japanese educational achievement: Helping children develop bonds to school.

Educational Policy, June 95, 9:2, 129-52. (1995).

Author: Lewis, Catherine.

In this article the author presents a compelling argument that Japanese elementary schools succeed in promoting students' academic achievement because they meet children's human needs. Describes how strong, positive and emotional bonds between child and school are developed and how academic achievement follows. Nine qualities of Japanese elementary education are outlined that enable Japanese elementary schools to be responsive to children's needs for belonging, contribution, and competence.

Title: The Basics in Japan: The Three C's.

Educational Leadership 55:6, 32-37, (1998b).

Author: Lewis, C. & Tsuchida, I.

Available at <http://www.lessonresearch.net/res.html>

The focus of this article is on three core interdependent values: connection, character and context. The authors describe how the "National Course of Study for Elementary Schools" lays out specific goals for building these values in the elementary school experience.

Title: Planned educational change in Japan: The shift to student-centered elementary science.

Journal of Educational Policy, 12(5), 313-331, (1997).

Author: Lewis, C., & Tsuchida, I.

The authors describe three features of the Japanese system that may facilitate planned change: 1) Japan has broad national goals for elementary education and textbooks that are aligned with these goals which are focused on the whole child, and Japanese; 2) The goals are translated into classroom practice through the collaborative work of the teachers in research groups developing research lessons; 3) Some elements of the educational content (for example, the practice of self-critical reflection) may support

planned educational change.

Title: **Beyond fourth-grade science: Why do U.S. and Japanese students diverge?**

Educational Researcher, 29(3), 4-14. (2000).

Author: Linn, M., Lewis, C., Tsuchida, I., & Songer, N.

Available at <http://www.aera.net/pubs/er/arts/29-03/mlinn01.htm>

Title: **Context matters: Teaching in Japan and in the United States.**

Phi Delta Kappan, vol. 73 Issue 5, (January 1992). 359-366.

Author: Sato, N. & McLaughlin, M.W.

This article examines a collaborative study between researchers at the University of Tokyo and at Stanford University on the different, culturally embedded conceptions of teachers and teaching in the United States and Japan. Important conclusions include the social and cultural nature of education and learning in both countries and the implications for both students and the teaching profession.

Title: **The Japanese model of professional development: Teaching as craft.**

Teaching and Teacher Education vol. 14, no. 5, 451-462, (1998).

Author: Shimahara, N.K.

This article discusses how a peer-based model that encourages peer collaboration, planning, and management drives elementary professional development in Japan. With the perspective of teaching as a craft, craft knowledge undergoes the process of creation, reformulation, and transmission promoted by peer teachers rather than by university teacher training programs.

Title: **Teaching is a cultural activity.**

American Educator, Winter 1998, 4-11. (1998).

Author: Stigler, J., & Hiebert, J.

Explores the importance of culture in the teaching profession. This article juxtaposes the differences between U.S. and Japanese systems of teaching in the context of cultural beliefs about how students learn and the teacher's role in the learning process. The authors suggest that educational improvement could result from greater awareness of the cultural scripts used in teaching.

Title: **Understanding and improving mathematics instruction: An overview of the TIMSS video study.**

Phi Delta Kappan, 79:1, 14-21. (1997).

Author: Stigler, J., & Hiebert, J.

Available at: <http://www.pdkintl.org/kappan/kstg9709.htm>

This article reviews the videotape portion of the Third International Mathematics and Science Study (TIMSS), which captured "typical" mathematics instruction in Germany, the United States, and Japan. The authors discuss the level of mathematical knowledge of the students, the teachers' role in developing concepts and lessons, and expectations for students. The authors conclude that the Japanese approach to teacher development contrasts starkly with the U.S. and German approach to teacher training. They argue that the US system of inducting teachers into the profession lacks mechanisms to ensure continuous improvement in mathematics instruction.

Title: **Mathematics classrooms in Japan, Taiwan, and the United States.**

Child Development, 58, 1272-1285. (1987).

Author: Stigler, J., Lee, S., & Stevenson, H.

Studies were conducted in Chinese, Japanese, and American classrooms during mathematics classes. The authors found significant cross-cultural differences in variables related to classroom structure and management. These cultural differences closely parallel the differences in mathematics achievement among China, Japan, and American students.

Title: **How Asian teachers polish each lesson to perfection.**

American Educator, 15(1), 12-47. (1991).

Author: Stigler, J., & Stevenson, J.

This study compares elementary mathematics instruction in Taiwan, Japan, Chicago, and Minneapolis. The authors suggest that Asian teachers use proven inductive methods of instruction within the framework of a standardized curriculum. They contrast this with the teaching conditions in the US and conclude that American teachers are overstressed and have less time to devote to conducting lessons than their Asian peers.

Title: **Anticipating children's thinking: a Japanese approach to instruction.**

NCTM's Mathematics Education Dialogues. (November 2001).

Author: Watanabe, T.

Available at: http://www.nctm.org/dialogues/2001-11/20011110_print.htm

Title: **American educators interest and hopes for lesson study (jogyokenkyu) in the U.S. and what it means for teachers in Japan.**

Journal of Japan Society of Mathematical Education, Volume 83, No. 4: 24-34. (2001).

Author: Yoshida, M.

Conference papers

Title: **Lesson Study with Action Research: Is the 4-Column Writing Method 4 Real?**

Author(s): Keeney, Martha A.; Paganelli, Susan; Smith, Jevonne; Quinn, Kathy; Krane, Amy; Jacobs, Beverly; Toaz, Peggy; Ansberry, Vicky; Shultz, Lauren; Kehoe, Eve; Craven, Kristyn; Neuin, Barbara; Stepnicka, Tebra; Bruce, Carolyn; Snodgrass, Donna; Salzman, James

Paper presented at the Annual Meeting of the Mid-Western Educational Research Association (Columbus, OH, October 16-19, 2002).

Abstract: Action research is designed with the intent of assisting educators in assessing the effectiveness of their building and classroom practices. Lesson study helps teachers use ongoing collaborative peer-insight and feedback about student responses to instruction to develop high quality lessons. Middle school teachers from an outer-ring suburb of Cleveland, Ohio, combined lesson study with action research to determine whether the four-column writing method improved student responses to extended answer questions such as those found on the Ohio Proficiency Test. The four-column model is intended to be an organizer for responses, which models the process students should develop as a way to answer extended response items. Results for 160 students in the control group and 148 in the experimental group indicate that fifth graders instructed using the four-column writing method performed significantly better than those

receiving other traditional writing instruction used in the same school. Three appendixes contain writing prompts, scoring rubrics, and a lesson plan for the four-column method.

Title: Lesson Study and Teachers Knowledge Development: Collaborative Critique of a Research Model and Methods.

Author(s): Lewis, Catherine; Perry, Rebecca; Murata, Aki

Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 21-25, 2003).

Abstract: During "lesson study" teachers formulate long-term goals for student learning and development, collaboratively work on "research lessons" to bring these goals to life, document and discuss student responses to these lessons, and revise the lessons in response to student learning. This document summarizes the content of a symposium to discuss the relationship of lesson study and teachers' knowledge development. Panelists presented models, methods, and examples of lesson study and discussed capacity development through lesson study. Three examples of lesson study in action are described. One involved a third-grade lesson study group. The second example contains meeting notes, transcripts, teacher interview results, and student mathematics interviews from a kindergarten lesson study group with an outside mathematics specialist. The third example describes videotapes and transcripts from an ad hoc lesson study group that planned, taught, and revised a research lesson during a 2-week summer workshop.

Title: Teacher-Initiated Lesson Study in a Northern California District.

Author(s): Perry, Rebecca; Lewis, Catherine

Paper presented at the Annual Meeting of the American Educational Research Association (84th, Chicago, IL, April 21-25, 2003).

Abstract: This report describes how lesson study is being implemented in one Northern California school district, drawing on research conducted in the district over 3 years via interviews with project leaders and participants; videotapes/audiotapes of the lesson study work (e.g., planning, research lessons, and lesson colloquia); workshops designed to build lesson study; and various artifacts (lesson plans, student work, schedules, and agendas). Over the 3 years, the number of participating teachers has increased from 28 to 78. The report describes three major categories of adaptations (toward a more balanced lesson study cycle, toward a greater focus on student learning and development, and toward explicit building of collaboration and shared leadership). Although lesson study is often described as a specific set of practices, (e.g., planning, teaching, observing, and revising a lesson), these practices do not guarantee that the lesson study will offer opportunities for teachers to learn. The report suggests three components that may be essential for lesson study to contribute to instructional improvement: a balanced, coherent lesson study cycle; access to content and pedagogical knowledge; and personal/collegial qualities that support learning. A lesson plan template is appended.

Title: Vehicle To Connect Theory, Research, and Practice: How Teacher Thinking Changes in District-Level Lesson Study in Japan.

Author(s): Murata, Aki; Takahashi, Akihiko

Proceedings of the Annual Meeting [of the] North American Chapter of the International Group for the Psychology of Mathematics Education (24th, Athens, GA, October 26-29, 2002). Volumes 1-4; see SE 066 887.

Abstract: Lesson study is the major form of professional development in Japan and has attracted attention in the United States in recent years. Lesson study currently conducted in Japan varies in terms of length, structure, and scale. District-level mathematics lesson study gathers teachers from different schools who share an interest in teaching the subject, and the discussion can focus more on particular aspects of teaching mathematics or content issues than that of in-school lesson study. The results of the survey indicate that lesson study provides opportunities for better communication among teachers, researchers, and administrators by presenting concrete classroom teaching examples surrounding particular educational ideas and/or issues, thus minimizing the gap among theory, research, and practice. Implications to U.S. schools are discussed.

Title: Lesson Study: The Core of Japanese Professional Development.

Author(s): Lewis, Catherine

Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 24-28, 2000).

Abstract: This paper describes research lessons, which form the core of a larger process called lesson study within Japanese elementary science faculty development. Research lessons are actual classroom lessons with students which are: observed by others; planned for a long time, usually collaboratively; designed to bring to life particular goals of education; recorded; and discussed. Types of research lessons include within-school lessons, lessons open to teachers outside the school, and lessons as part of national conferences. After presenting an example, the paper discusses the impact of research lessons, examining how they contribute to the improvement of education. The strengths of research lessons are: individual professional development; learning to see children; spreading new content and approaches; connecting individual teachers' practices to school goals and broader goals; competing views of teaching bump into each other; creating demand for improvement; shaping national policy; and honoring the central role of teachers. Several features of Japanese education support research lessons: a shared, frugal curriculum; established collaboration; belief that teaching can be improved through collective efforts; self-critical reflection; stability of educational policy; instructional improvement time focused on instruction; and focus on the whole child. The paper concludes by discussing lesson study's future role in the United States.

Title: Eye of the Storm: Promising Practices for Improving Instruction: Findings from the 2000 Wingspread Conference (2001)

Author: Council for Basic Education.

Available at <http://www.c-b-e.org>

Title: Lesson Study as a model for improving teaching: insights, challenges, and a vision for the future.

Author: Fernandez, C., and Yoshida, M. (2000).

Paper prepared for Wingspread 2000 Conference. Reprinted in Eye of the Storm: Promising Practices for Improving Instruction. Findings from the Wingspread Conference, October 2001.

Available at <http://www.c-b-e.org>

This article contains early reflections based on one year of lesson study implementation at Paterson School 2 in New Jersey. The authors identify features of lesson study that

inform how to structure teacher learning, uncover challenges that U.S. schools are likely to face when try to engage in lesson study, and present their vision for how to implement lesson study in a powerful way.

Title: Lesson Study in the San Mateo-Foster City School District.

Paper presented at the American Educational Research Association (2002 Annual Meeting), New Orleans, LA .

Author: Perry, R., Lewis, C. & Akiba, M. (2002).

Available at <http://www.lessonresearch.net/res.html>

This detailed research paper describes the development of lesson study in a United States school district over approximately two years. The authors documented the change and growth in knowledge of lesson study and subject matter by the practitioners.

Title: Journey beyond TIMSS: rethinking professional development.

Paper presented at ICME-II (International Conference on mathematics Education), Hangzhou, China.

Author: Wang-Iverson, P., Liptak, L., & Jackson, W. (2000).

Available at http://www.rbs.org/lesson_study/journey_beyond_timss.shtml

This is a brief overview of lesson study as a response to TIMSS. Can be downloaded and printed as a brochure.

Title: Traditions of school mathematics in Japanese and American elementary classrooms.

Paper presented at the International Conference of Mathematics Education, Quebec City, Canada, August. (1992).

Author: Stigler, J., Fernandez, C., & Yoshida M.

Title: Lesson study [Jugyokenkyu] in elementary school mathematics in Japan: A case study.

Paper presented at the American Educational Research Association (1999 Annual Meeting), Montreal, Canada. (1999).

Author: Yoshida, M.

Available by email to: myoshida@globaledresources.com

Book/Book chapter

Title: A User's Guide to Japanese Lesson Study: Ideas for Improving Mathematics Teaching.

Author(s):Curcio, Frances R.

Publication Year:2002

Notes:Includes videotape.

Corporate Source: National Council of Teachers of Mathematics, Inc., Reston, VA.

Abstract: This guide and accompanying videotape are a product of the seminar "Analyzing the Teaching of Mathematics in Japan and the United States" held in Tokyo, Japan, following the 9th International Congress of Mathematical Education in August, 2000. The purpose is to introduce the concept of Japanese lesson study to the American mathematics education community. The videotape captures the essential elements of

lesson study such as collaborative planning, lesson observation, analytic reflection, and ongoing revision. The User's Guide supplements the videotape by providing some background information about lesson study and implications for professional development in the United States. The guide also contains some resource materials including a translation of the detailed plan of the grade 2 lesson featured in the videotape, a translated transcription of excerpts of dialogue between a teacher and his pupils that occurred during the lesson, a selected bibliography and a list of lesson study web sites, and templates summarizing ideas related to Japanese lesson study that are ready for use at professional development sessions.

Title: Learning about lesson study in the United States.

In E. Beauchamp (Ed.), *New and old voices on Japanese education*. Armonk, New York: M.E. Sharpe. (2001)

Author: Fernandez, C., Chokshi, S., Cannon, J., & Yoshida, M.

Available at <http://www.tc.columbia.edu/lessonstudy/readings.html>

This article provides a one-year exploration of lesson study in an American school that had the on-going support and guidance from experienced Japanese educators trained in the art and craft of lesson study. The authors report how this collaboration between American and Japanese teachers shaped their understanding of lesson study, and how it informed their thinking about what it will take for American teachers to incorporate the essence of lesson study into their work.

Title: Bringing the NCTM standards to life: Exemplary practices for middle school.

Author: Germain-McCarthy, Y. (2001).

In *Eye on Education*. Larchmont: N.Y.

This excerpted chapter describes the Lesson Study experience at Patterson School 2 as seen through the eyes of the author in spring 2000. A detailed fifth grade mathematics lesson plan and a transcription of the debriefing discussion is included. The author also provides a contact list and resource and reference guide.

Title: Lesson study: A handbook of teacher-led instructional improvement.

In: *Research for Better Schools*. (2002): Philadelphia

Author: Lewis, Catherine

Available at: <http://www.rbs.org/catalog/pubs/pd55/shtml> or

<http://www.lessonresearch.net/orderform.html>

This handbook illuminates both the key ideas underlying lesson study and the practical support needed to make it succeed in any subject areas. In lesson study, teacher's plan, observe, and refine "research lessons" designed to bring to life their long-term goals for student learning and development. This handbook provides practical resources including schedules, data collection examples, protocols for lesson discussion and observation, and instructional plans for mathematics, science, and language arts. Contributions by US lesson study pioneers Lynn Liptak, Tad Watanabe, and Makoto Yoshida.

Title: The Teaching Gap: Best ideas from the world's teachers for improving education in the classroom. (1999). New York, NY: Summit Books.

Author: Stigler, J., & Hiebert, J.

This groundbreaking book compares mathematics teaching practices in Japan and Germany with those in the United States. Stigler and Hiebert present results from the

TIMSS and propose U.S. teachers use a process similar to that of the Japanese: lesson study. Their hypothesis is that if the U.S. educational system can find a way to use lesson study for building professional knowledge of teachers, teaching and learning will improve.

Title: Improving classroom teaching: Enabling the potential of standards-based reform, Findings from the 2000 Wingspread Conference, Eye of the Storm: Promising Practices for Improving Instruction

Author: Hiebert, James. (2001). Council for Better Education, Washington, D.C.

Available at <http://www.c-b-e.org>

Concerns what TIMSS tells us about importance of changing the culture of teaching, and why the standards movement needs to focus on teaching in order to improve the achievement of all students. After giving a brief description of lesson study, this paper presents three important guidelines the author says cannot be violated if classroom practice is to be improved.

Title: National standards and school reform in Japan and the United States.

Teachers College Press. (March 2002)

Author: DeCoker, Gary (Editor)

A comprehensive look at national standards in Japan. Provides detailed analyses of education policy, textbooks and teacher education. This work presents important implications for the future of American educational policy. Of special note are detailed descriptions of professional development, curriculum and the relationship between the public and private sector.

Title: Educating Hearts and Minds: Reflections of Japanese Preschool and Elementary Education. New York: Cambridge University Press. (1995)

Author: Lewis, C

In-depth exploration of elementary classroom life in Japan.

Title: Lean and friendly: How did Japanese elementary science textbooks get that way?

In G. DeCoker (Ed.) Creating a national text: National standards and educational reform in Japan and the United States. Teachers College Press. (March 2002).

Author: Lewis, C. & Tsuchida, I.

Title: Teaching and Learning in Japan. New York: Cambridge University Press. (1996)

Author: Rohlen, T. & Le Tendre, G. Editors

This book is largely a collection of preprinted essays on the very broad theme of education in Japan. The essays range from pre-school and elementary through middle school and beyond. It provides background reading for teachers unfamiliar with Japanese education. Of special note are the detailed essays by Lewis and Kotloff and Sato, which describe Japanese classrooms.

Title: Learning to teach in two cultures. New York: Garland. (1995).

Author: Shimahara, N. & Sakai, A.

Based on data collected over a three-year period in Tokyo and the United States, this ethnographic study of beginning elementary school teachers offers insight into the professional similarities and cultural differences that affect the teacher induction process

in the two nations. The final chapter offers a synopsis of the findings and places them within a global educational context, including a comparative analysis of school systems.

Title: **The Learning Gap.** New York: Summit Books. (1992).

Author: Stevenson, H. & Stigler, J.

This book examines elementary teaching methods in five cities in Asia and the United States.

Title: **How Do Japanese and U.S. Elementary Science Textbooks Differ? Depth, Breadth, and Organization of Selected Physical Science Units.**

In National Standards and School Reform in Japan and the United States, Teachers College, Columbia University. (Chapter 3, p.35 -45). (2002)

Author: Tsuchida, I. & Lewis, C

Title: **The role of outside experts in lesson study.**

In Lewis, C., Lesson Study: A handbook of teacher-led instructional improvement.

Philadelphia: Research for Better Schools. (2002).

Author: Watanabe, T.

Research Reports

Title: **The Perceptions of Teachers and Administrators on the Impact of the Lesson Study Initiative.**

Author(s): Byrum, Jerri L.; Jarrell, Ruth; Munoz, Marco

Publication Year:2002

Country of Publication: U.S.; Kentucky

Abstract: A lesson study initiative was implemented in 25 high schools/learning centers in the Jefferson County, Kentucky, school district. The lesson study initiative is a professional development process in which teachers collaborate to systematically examine their practice and to improve the effectiveness of the experiences they provide to their students. This is done by groups of instructors who teach, critique, revise, and reteach lessons. The end product is a new culture, within which teachers continually build professional knowledge through routine reflection, constant improvement of lessons, and regular measurement of their effectiveness through student results. A participant-oriented evaluation model was used to determine the impact of the lesson study initiative on professional development. Qualitative data were collected using classroom observation. Additional data collected involved critique and feedback sessions, team response forms, and individual response forms. Results indicated that the initiative was popular with the teachers and administrators. The rewards they experienced while participating included opportunities to collaborate with others and applying what was learned to all lesson planning. Respondents concurred that the biggest threats to the lesson study initiative were the cost and time involved in the process.

Title: **Non-Traditional Learning Study: Research Note.**

Publication Year:1982

Corporate Source: Moraine Valley Community College., Palos Hills, IL. Office of Institutional Research.

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Abstract: A study was conducted at Moraine Valley Community College (MVCC) to determine the characteristics of individuals who had taken courses through the college's Non-Traditional Learning (NTL) sub-division. The records of students who had taken specified NTL courses during spring 1981, fall 1981 or spring 1982 were retrieved and analyzed. Study findings, based on the examination of 1,259 student records, included the following: (1) 25% of the students were between the ages of 19 and 21, and 18.8% were between 22 and 24 years of age; (2) 62.8% of the students were single, 59% were female, 95% were Caucasian, and 97% lived in the MVCC district; (3) the overall non-completion rate for NTL courses was 19% and the overall mean grade was 3.22; (4) the overall completion rate for NTL courses was higher than that for non-NTL courses (19% vs. 12%); (5) over 52% of former NTL students earned less than 6 credit hours, 21% earned between 6 and 8.99 credit hours, and 21% earned between 9 and 14.99 credit hours in their most recent semester at MVCC; and (6) 35.8% of all courses taken by former NTL students in their most recent semester were in non-credit community education courses, 31.2% were in baccalaureate courses, and 24.8% were in occupational career courses. Tables providing detailed study results comprise the bulk of the report.

Government Reports

Before It's Too Late: A Report to the Nation from The National Commission on Mathematics and Science Teaching for the 21st Century (2000)

Available at: <http://www.ed.gov/inits/Math/glenn/toolate-execsum.html>

This government report presents a set of ambitious goals for improving mathematics and science teaching and specific action strategies for achieving each of them. The report includes results from the TIMSS and names and briefly describes the Japanese approach, lesson study.

Germain-McCarthy, Y. (2001). Studying classroom teaching as a medium for professional development. US-Japan Teacher Development Workshop Steering Committee: Bass, J., Usiskin, Z., & Burrill, G. (Eds.) Mathematical Sciences Education Board, Center for Education & US National Commission on Mathematics Instruction, International Organizations Board. Washington, DC: National Academy Press.

Stigler, James. (1997). Lessons in perspective: how culture shapes math instruction in Japan, Germany and the United States. California State University Institute for School Reform, July 1997

Available at http://www.rbs.org/lesson_study/readings_and_resources.shtml

This report includes a summary of a presentation given by the co-author of *The Teaching Gap*, on his role in the video component of the TIMSS study.

Other materials:

Title: Lesson Study: An ethnographic investigation of school-based teacher development in Japan. Unpublished doctoral dissertation. University of Chicago. (1999).

Author: Yoshida, M.

This through ethnographic examination of a year in the life of a mathematics lesson study group in Hiroshima, Japan. Formed on the basis for The Teaching Gap's account of lesson study his study consisted of both a large-scale survey as well as case study observations of a teacher group conducting two research lessons at two elementary schools in the Western Region of Hiroshima Prefecture, Japan.