

**INSTRUCTIONAL LEARNING TEAMS: COMBINING THE POWER  
OF THE JAPANESE LESSON STUDY WITH INTELLECTUAL QUALITY**

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## ABSTRACT

Changing teacher practices to improve student learning is a perennial challenge in United States public schooling. According to DuFour and Eaker (1998) and Smith (2003) for teachers' practices as a whole to change, faculties within schools must build a community of practice. Every profession periodically struggles with the provocative question related to practice: is it a craft or an industry? We actually feel this is a false dichotomy and that widespread and expert practice (industry) can be achieved through a collaborative environment focusing on the development of professional wisdom (craft). We believe such a "middle road" can be obtained in our professional development model: Instructional Learning Teams (ILTs). ILTs promote school improvement while also providing a process through which teachers can focus on more than day-to-day matters, collaborate with other professionals, re-energize themselves, and have time for sustained reflection about beliefs and practices. For over a century, American teachers have been disenfranchised as passive receivers of university-based research. We aim to contribute to Stenhouse's radical argument: "Research...[is] the route to teacher emancipation" (cited in Cochran-Smith & Lytle, 1993, p. 4). Two of twenty contrasting ILTs are highlighted in this paper.

The research questions that guided this investigation were: 1) What changes in discourse that we use to talk about instruction, learning, and achievement occur over the course of the study? 2) How does the ILT model influence teachers' instructional practices? Qualitative research methodologies were employed to begin to answer these questions. Additionally, rubrics developed by Newmann, Secada, and Wehlage (1995) were used to frame discussions and analyze instruction. It was found that the manner in

which teachers engaged in conversation about instruction, learning, and achievement were so qualitatively different, that teachers began to refer to their observations in terms closely aligned with those of authentic pedagogy. In addition, teachers were acculturated into a collaborative environment designed to foster reflection and systematic investigation of what we call school.

#### INTRODUCTION TO LESSON STUDY AND AUTHENTICITY

Learning to teach well, even for veteran teachers, is a complex, uncertain, and difficult task. However, quality teaching is an essential ingredient to increasing student achievement and promoting student understanding (Haycock, 2002; Newmann & Associates, 1996). This argument rests on the premise that if schools want students to read well, do mathematics and science, understand history, solve problems, communicate ideas, and reason, then we have to provide teachers with different professional development opportunities than they have had in the past (Stigler & Hiebert, 1999).

The ILT model allowed teachers a drastically different and meaningful way to examine their practices. It provided them with a framework for new discourse, acculturating them into a profession committed to working on improved practice and improved student learning and performance. This type of team and individual study is a “rigorous examination of one’s own practice as a basis for professional development, the idea is that each school, and indeed each classroom, is a laboratory in which the curriculum and problems experienced as problems by teachers are subjected to empirical examination by practitioners” (Henson, 1996, p. 53).

One key to promoting and increasing student achievement lies in improving instructional practices. The literature is ripe with examples and evidence that changing

teachers' instructional practices is difficult because of the cultural nature of living within a specific and constrained type of teaching practice (Brown, Cooney, & Jones, 1990; Stigler & Hiebert, 1999; Zeichner & Gore, 1990). There are also a handful of examples that clearly demonstrate that teachers can change their practices to be more consistent with what the reform documents suggest (see NCTM, MSEB) and increase student achievement on standardized measures as well as promoting deeper understanding of ideas (Fennema, Carpenter, Franke, Levi, Jacobs, & Empson 1996). A study of these issues resulted in a powerful fusion of lesson study and intellectual qualities

### Lesson Study

The Japanese lesson study, which gained international prominence during the Third International Mathematics and Science Study (TIMSS) (Stigler & Hiebert, 1999), is similar to action research in that it is a systematic inquiry about an instructional problem. While lesson study forms the core of Japanese professional development, it is still a novelty for American teachers. This is not surprising to most teacher educators because we do not prepare preservice or inservice teachers to conduct classroom research or study their practice (Darling-Hammond, 1994; Kincheloe, 2003; Lampert, 1999). In fact, "the low involvement [in research] is attributable, at least in part, to the failure of preservice programs to prepare and require students to conduct research" (Henson, 1996, 55).

We propose that teachers not only engage in work with theory and practice in concert, but also become involved in lesson studies. This provides a format for all teachers to facilitate their development as professionals, where they learn about their

practice, and increase student performances. As Japan is significantly different in social and educational characteristics, lesson study must be adapted to the American context.

The lesson study process incorporates many elements of effective professional development experiences (Dufour & Eaker, 1998; Laucks-Horsley, Hewson, Love, & Stiles, 1998; Lewis, 2002; Stigler & Hiebert, 1999). The steps include:

1. Collaboratively identify a question or difficulty the team would like to explore.
2. The team investigates current research on the identified issue that enables them to become knowledgeable about best teaching practices and to learn how students' think about that topic.
3. The team creates a lesson or series of lessons that addresses the identified issue.
4. One team member teaches the lesson, while the others actively observe, take notes, and, if possible, videotape the lesson. This documentation of teaching and learning provides an avenue for the next step.
5. Reaction, reflection, and modification of the lesson. During this process, teachers investigate the instructional strategies chosen and the student responses using this data to generate alternate possibilities, leading to a modification of the lesson(s).
6. A different team member teaches the modified lesson. The time period between the 1st and 2nd teaching of the lesson varies. The standard period for Japan is several days. The schools in the United States practicing lesson study have chosen periods from several days to several weeks. Steps 4 through 6 repeat until the team is comfortable with the results. Following this, the lesson is

analyzed as a whole in which student understandings and performances are acknowledged and attributions to success or failure are delineated.

7. Every lesson study concludes with a detailed written report that can be employed by other teachers in their classrooms (Henson, 1996; Stepanek, 2001). Depending upon the novelty of findings, the report's dissemination may occur at the school, district, region or national level in Japan. The challenge for American educators is to find a wide audience in our fragmented educational environment.

Because American teachers are not used to this type of professional development nor used to critiquing one's practice, we introduce the lens of intellectual quality. Newmann and Associates (1996) proposed the use of rubrics for what they called authenticity or intellectual quality. These rubrics (Newmann et al, 1995) focused the discussion of team members around specific elements of the tasks given to students, the type of instructional practices performed, and student work. The intellectual quality model has demonstrated that teachers whose pedagogy rates higher on the rubrics have students who perform higher on standardized achievement tests than teachers who rate lower on the scales (Newmann & Associates, 1996).

### Intellectual Quality

As educators, one of our charges is to foster ways of knowing, which prepare students to make connections, to communicate about ideas, to reason, and to solve traditional and novel problems. Newmann and Associates (1996) demonstrated that when teachers focused on construction of knowledge, disciplined inquiry, and value beyond

school, students at differing cognitive abilities and backgrounds increased their scores on traditional achievement tests. Intellectual quality is defined by these three constructs.

### Construction of Knowledge

Constructing or producing knowledge means that students engage with tasks that require making sense of a situation or phenomenon through discussions and exploration that rely on their prior knowledge and available resources (Newmann & Associates, 1996; Newmann, Secada, & Wehlage, 1995). This differs from asking students to reproduce or copy knowledge that has been given to them. As opposed to most school learning, rarely is there merely one way to derive a solution and often times there is the opportunity for more than one correct solution to be found.

### Disciplined Inquiry

Disciplined inquiry relates to the intellectual processes that students go through while solving problems (Newmann & Associates, 1996; Newmann, Secada, & Wehlage, 1995). These processes include three components: use of prior knowledge, development of in-depth understanding, and elaborated communication. Prior knowledge consists of each student's existing knowledge of facts, rules, algorithms (whether informal or formal), and general knowledge relevant to the problem at hand. In most conventional classrooms, which include k-12 and university courses, teachers remind students of applicable prior knowledge that they should have learned and then present problems for students to practice reproducing this knowledge. This type of rote practice does not afford students with the opportunities to build relational knowledge, where existing understandings are used to make sense of new information. Elaborated communication, the third component of disciplined inquiry, entails written and oral conversation that goes

beyond recitation. Students need to express their ideas through words, symbols, and products, with other students and with others more experienced in the field.

### Value Beyond School

Engaging students in tasks that have value beyond the immediate activity is the third intellectual quality standard. “Authentic achievements have aesthetic, utilitarian, or personal value apart from documenting the competence of the learner” (Newmann & Archibald, 1992, p. 74). Giving students the chance to work on realistic problems or communicate their understanding to an audience outside of school, adds value to the task that goes beyond learning it simply to advance in school. As does helping students recognize and enunciate the connection between school learning and activities outside of school.

The idea that learning involves a deepening process of participation in a community of practice has gained significant ground in recent years (Smith, 2003). Professional Learning Communities and the Instructional Learning Team model are examples of educational communities. “Reculturing” of schools is necessary to promote this type of reform for teachers. This paper describes the characteristics of communities in practice, professional learning teams, and the Instructional Learning Team model. A case study of two schools that implemented the ILT model will be presented and their results explored.

### ILTs and Professional Learning Communities

One way to analyze Instructional Learning Teams is to situate them against the research on professional learning teams. Initially, ILTs built communities of practice. This meant each member was expected to fully participate via collaboration and

reflection on shared goals. One way to do this was to structure the conversations around objective measures, such as the task, the instruction, and students' work. The teachers had to share in the process of building the lessons and reflecting on the pedagogical process leading up to student performance (Stewart & Brendefur, 2005; Fullan, 1993, Rogoff, Turkanis & Bartlett, 2001).

Fullan (2001) stated that “most strategies for reform focus on structures, formal requirements, and event-based activities [that] do not struggle directly with existing cultures and which new values and practices may be required” (p. 34). Restructuring happens many times, while reculturing is necessary for change to occur and be sustained. Reculturing is how teachers come to question and change their beliefs and habits (Fullan, 2001). We believe the most fundamental way to reculture schools is transform them into professional learning communities (DuFour & Eaker, 1998; Dufour, Dufour, & Eaker 2005). The idea is to promote school improvement while also providing a process through which teachers focus on more than day-to-day matters, collaborate with other professionals, re-energize themselves, and have time for sustained reflection about beliefs and practices.

Researchers have listed critical elements as being essential to creating professional learning communities: shared norms and values, focus on student learning, reflective dialogue, deprivatization of practice, collaborative teams, action orientation and experimentation, continuous improvement, and results orientation (Dufour & Eaker, 1988; Lois, Kruse & Marks, 1996). This paper focuses on the first four elements to analyze the strength of the ILTs.

## Shared Norms and Values

To bring teachers and administrators together for the purpose of participating in a professional learning community they must share a common vision of values central to teachers' work. Shared understanding of common values and a collective commitment to guiding principles are what separates a learning community from traditional school faculty. These guiding principles include such things as teachers' beliefs about students' ability to learn, priorities in education, and the roles of parents, teachers and administrators. The following questions must be asked: "How do we facilitate and measure student learning?" "How will we respond when students do not learn?" These questions must be asked and the answers clearly communicated with parents and students and reinforced by the actions and practices of teachers and the school district as a whole. Mission, vision, and values are integrated into each element essential to learning communities.

## Focus on Student Learning

By focusing on student learning, teachers begin to professionalize their discussions. Asking, what is most important for students to learn and how do we get students to understand and apply the material becomes the driving force of change. Attention to student learning is the core of professional learning communities. Faculty discussions and actions centered on enhancing student learning through improved instruction are the basis for improving opportunities for learning. By collaborating and communicating with other teachers, a clear consistent message is developed and sent to students.

## Reflective Dialogue and Collective Inquiry

Reflection on curriculum, instruction and student development as a group can lead to a greater awareness of the practice of teaching and its effect on students. Continual questioning of the status quo, testing strategies, teaching methods, and educational practices is the catalyst for growth in a professional learning community. Collective inquiry can lead participants to recognize that the process of searching for answers is often more important than having an answer.

## Deprivatization of Practice

Deprivatization of practice works together with reflective dialogue. In order to remove isolation, teachers must engage in dialogue. They discuss gaps left by teaching materials and offer alternative ideas and supplemental materials. It is also helpful to have teachers discuss ideas with teachers a grade below and above – vertical collaboration. This allows teachers to better understand prior and future expectations.

These issues can be overwhelming for a teacher working alone. Peers can be a source of insight and feedback which helps improve instruction. By sharing uncertainties about teaching, teachers can learn to talk about what it is they do when they are teaching and create a supportive environment (Warren-Little, 1996).

Additionally, when the task of looking at student work becomes a pivotal component of educators collaboration and beliefs about practice, the private nature of teaching as it was historically conceived is challenged. Jointly looking at student work and making adjustments to practice helps to deprivatize and improve practice.

## METHODOLOGY

In the fall of 2002, Stewart and Brendefur (2005) began the Instructional Learning Teams Project (ILT). The intent of the project was to increase students' academic understanding and achievement through the formation of teacher teams from Creating High Performance Schools (CHPS) districts (a statewide school improvement initiative). The ILT project used the Japanese Lesson Study process and the Principles of Intellectual Quality (Newmann, Secada, & Wehlage, 1995). The initial phase of the project began with 20 teams actively participating.

Each team decided upon a math or literacy focus, using state and/or other assessments to decide upon a specific area for improvement. After appropriate lessons were designed, the lesson plans which included the tasks students were to complete as a consequence of the lesson were scored using the authentic pedagogy rubrics. In most cases, the lessons were videotaped as they were taught and the student work collected at the conclusion of the lesson. Using the rubrics as the evaluation framework, the teams met to critique the instruction and the student work. Where possible the lesson was then changed and taught again, until the student work resulted in appropriate rubric scores.

To examine the interaction of professional learning communities, the instructional learning team process, and authentic pedagogy, the experiences of two participating schools will be described below.

### Schools

Amity (pseudonym) is a middle school in the Intermountain West attended by approximately 700 6<sup>th</sup>-8<sup>th</sup> grade students. Forty teachers are employed on the instructional staff. While there is a building administrator to oversee daily operations, this district

employs a chief educational officer and an instructional guide to direct instruction for this and two other schools.

The instructional learning team at this school was composed of a team leader and five teachers. Although they were in close physical proximity to one another, these teachers did not share similar grade levels and/or curricular subject areas. They taught a variety of subjects, including art, special education, language arts, world history, and Title One reading. The team decided upon developing teaching strategies for using writing in their classrooms as their focus, and met 12 times after school from January 2003 to May 2003 for approximately two-three hours per week. While the CEO and building administrator did not attend any of the meetings or observe any of the lessons taught, the CEO did attend ILT training sessions at Boise State University.

Washington (pseudonym) is an elementary Title One school with approximately 500 students located in the city of Boise. Fifty-four percent of the students receive free or reduced lunch. There were two instructional learning teams in this school who met regularly once a week. A team leader guided and oversaw both teams. The principal did not attend any of the ILT meetings, nor observe any of the lessons taught.

#### Professional Development

The first task of the team was to familiarize themselves with lesson study and principles of intellectual quality. Three rubrics were used to score the principles; student task (lesson plan), classroom instruction, and student work. All meetings and instructional sessions were videotaped. This provided opportunity for critiquing, reflecting, modifying and improving at all stages of the cycle.

The goal for the ILTs was to create a lesson and move through the following process:

1. *Lesson Plan Design*
2. *Score Task Rubric:* Through structured conversation, they scored the lesson they had designed, using the task rubrics. Familiarity with this rubric initially took some time. However, eventually its use became routine after a few scoring sessions.
3. *Modify Tasks:* Based on their conversation generated from the rubric, each team modified the tasks associated with the lesson.
4. *Teach and Video:* A designated team member went back to his/her classroom and taught the lesson. The facilitator videotaped the instruction.
5. *Score Instruction Rubric:* At the next meeting, the team watched the videos or excerpts from them and critiqued the instruction using the rubric.
6. *Collect and Score Student Work:* Teams collected student work. Each teacher then sorted student work into three piles of low, medium and high level. They met as a group and evaluated the student work using the student work rubric.
7. *Modify Lesson:* Utilizing the rubric for instruction and critique of student work, the teams the team made additional modifications to the lesson. They revisited the lesson and honed instruction to the point that they knew what part of the instruction was responsible for advancing learning, and what part was not effective.
8. Repeat the cycle (steps 1-9) for new lessons.

## FINDINGS

### Shared Norms and Values

#### Amity

Louis, Kruse, and Marks (1996) stated that “shared values find expression in school practice” (p.181). Although Amity’s Website states “Our mission is to challenge students to become confident, self-directed, lifelong learners who are responsible citizens within their communities,” some members of this instructional learning team were initially concerned about shared norms and values because of their mixed subject areas and curricular differences. They questioned whether they would be able to come together to improve instruction and raise student achievement.

The supportive environment of the team, however, allowed these teachers to express their concerns over differing curricular areas and instructional techniques. “Because our team was made up of teachers from different disciplines and differing levels of experience,” one team member wrote, “we got varied perspectives.” “When exchanges are most fruitful, colleagues air differences in a context of trust and respect for each other’s professional skills and contributions to the school community,” (Louis, Kruse, & Marks, 1996, p.187), thereby increasing shared norms and values.

As the team from Amity progressed through the instructional learning team process, the use of the intellectual quality principles helped focus and strengthen the shared values and norms across disciplinary boundaries. The art teacher commented, “I had always limited my writing assignments to short journal responses to art images. Yet through the use of the planning guides and other helpful materials, as well as strategies seen at work in other classrooms, such as peer review and the effective use of rubrics, I

developed a longer term writing unit.” Another teacher wrote, “Our experience attests to the fact that teachers, working together for a common goal, create a synergy that yields results often surpassing an individual’s results.”

#### Washington

Visual evidence of shared norms and values was evident in Washington. Each hallway was carefully decorated with posters showing different values such as “Trust” and “Honesty.” Teachers purposefully modeled and reinforced these values and expected both students and other adults to do the same. All teachers in Washington also participated in a district-wide continuous school improvement model, and accompanying guidebooks were usually open and in use on teachers’ desks. Although these instructional learning teams began with a more common curriculum and grade level than that of Amity, they also grew closer in shared values and norms as they made use of authentic pedagogy. A fifth-grade teacher wrote, “By the time we put our lessons together, we were beginning to think with the rubrics in mind.”

#### Collective Focus on Student Learning

#### Amity

As they progressed through the instructional learning team process and became familiar with authentic pedagogy, the focus on student learning increased and became more collective in Amity. While they first concentrated on the instruction rubrics, they soon saw the value of scoring student work and aligning it with instructional change. A language arts teacher wrote, “I marvel at the growth of student performance throughout the revision process as evidenced by our ILT outcomes.” The team leader added, “Although we taught different subjects, the ultimate goal was the same, we wanted to

help our students become better writers. Examination of the student work samples of three of our members offer us hope that by May, student writing improved. In each of their classes we found evidence of student growth in voice, elaboration, organization and conventions. We can link their improvements to student tasks that showed high levels of value beyond school, construction of knowledge, and higher order thinking skills.” The school CEO commented, “My involvement in the ILT program has allowed me to gain knowledge of leadership strategies that support a school culture of high expectations, continuous improvement, and learning communities that advance student achievement.”

Washington

Washington had similar experiences as they progressed through the instructional learning team process, although they did not use the rubrics as much to score student work as the Amity team. A fifth-grade teacher commented, “There is more focus on your desired result.”

### Reflective Dialogue

Amity

Each meeting of the instructional learning team at Amity contained significant amounts of reflective dialogue. Predictably, even more useful and focused reflection occurred as team members became more comfortable with each other, with authentic pedagogy, and with the use of the rubrics. The meetings had no time limit and took place after school, yet, one teacher commented “Our afternoon meetings might appear to be a sacrifice; however, I found them energizing and stimulating. After each session, I left with a renewed vigor to apply new insights in my classes.”

The reading teacher wrote, “We bring lessons to be scrutinized by our colleagues without the fear of being ridiculed. I felt I was being mentored in the truest sense of the word. As we spent time together, we learned to value each other’s opinions.” The history teacher added, “We learned to stick to the language of the rubric and offer ways to increase the quality of each person’s instruction. We had a powerful, thoughtful, and helpful team. This personal interaction has been priceless to me.” Even more powerful were comments from the team leader, who wrote “These...individuals took the group’s reflections, critique, and comments to the heart of their instructional practice, made deep revisions in their work, and saw growth in student skill as a result.”

#### Washington

Critiquing lessons, applying rubrics, and viewing videotaped lessons created a venue for reflective dialogue. Rich discussion led to a deeper understanding of authentic pedagogy and student learning. By revisiting the lesson and discussing it, the teacher’s honed the instruction until they knew what part of the instruction was responsible for advancing learning, and what part was not effective. The ILT teachers discussed changes they would make next time and then modified the lesson. Reflection such as this is what Zeichner and Liston (1996) call social efficiency focused. A focus on social efficiency shapes reflection towards the desire to compare and contrast personal practice against a stated “best practice” or acknowledged outcome.

As a result of this reflective dialogue regarding collecting and scoring student work teachers became aware that students had trouble communicating mathematics. This led to an interesting discussion of the gaps in math education. Explaining the process of solving problems, their application to real life and connections to previous concepts is not

traditionally expected of students. Ideas to resolve these issues and interventions to help remove these gaps were discussed.

### Deprivatization of Practice

#### Amity

As stated previously, “by sharing uncertainties about practice, teachers learn new ways to talk about what they do...the typical norm of individual autonomy is diminished, and teachers become committed to practicing their craft in public ways” (Louis, Kruse, & Marks, 1996, p.183). The team members from Amity were initially nervous at the thought of being videotaped and critiqued by other team members. As team members became more comfortable with this process and the use of rubrics to comment upon and change instruction, they indeed began to practice their craft in a more public way. The compelling element of the group, the team leader wrote, “is the manner in which they came together to critique and support each other to improve their classroom practice.”

#### Washington

Team members at Washington were even more reluctant to videotape themselves during classroom instruction. A second-grade teacher only consented to have an observer take field notes during her reading lesson. Instructional practices were not as public in Washington as they were in Amity due again to the lack of time for deep and focused reflective dialogue. This lack of reflective dialogue also limited the amount of experimentation team members were able to partake in during their lessons.

## SUMMARY

All the ILT teachers stated the structure of the Lesson Plan Cycle, the process of scoring rubrics, and the collaboration among peers changed the way they wrote, taught and evaluated lessons. Things that the teachers identified as contributing to this success included starting small, establishing a level of trust among team members, establishing and honoring time to collaborate, learning about the ILT model, planning for the logistics of videotaping instruction, keeping track of the data, and supportive administrators.

Analysis of these two schools and the interaction of their instructional learning teams process, use of intellectual quality, and the elements common to professional learning communities yields mixed results. While both teams had some elements of professional learning communities at their inception, they actually acquired more of these common elements as they progressed through the instructional learning team process and used the standards of intellectual quality to change instructional practices. Although further study is necessary, these teams may not have acquired these elements had they not used the rubrics.

Because of the length of their meetings and the ability to have deep and focused reflective dialogue, it also appeared that the instructional learning team from Amity more deeply internalized the elements of the professional learning community and the elements of authentic pedagogy. This internalization and resulting change of instructional practice did indeed have a positive impact on student achievement. They also deprivatized their practice to a greater extent, consistently focused on student learning, and more effectively collaborated as a team. In fact, the team at Amity was so successful, the entire school has recently begun participation in this process.

While there were other elements missing, such as active participation by administrators, all team members from both schools believed that their teams were successful and, although to varying extents, felt their practices and beliefs were changed. DuFour and Eaker (1998) stated, “becoming a learning community is less like getting in shape than staying in shape—it is not a fad diet, but never-ending commitment to an essential, vital way of life” (p.28). A teacher from Amity echoed this very statement, commenting, “The instructional team philosophy is not just another fad or strategy to tryout in the classroom; rather, it has the potential to bring about a virtual revolution in teacher practices that can in turn have a powerful impact on student learning!” Teachers empowered by the ILT process become more discerning consumers of educational research. More importantly they become generators of research.

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