TITLE   A Profile of Early 21st Century Teachers in Northwest Ohio: The
Relationship between Teachers' Technology Integration and Leadership
Practices

RESEARCHER   Carrie Rathsack
Department of Education
Bowling Green State University
Unpublished doctoral dissertation: May 2012

OBJECTIVE   The purpose of this study was to examine the relationship between
teachers' leadership practices and their classroom technology integration.

METHODOLODY

Teachers from six northwest Ohio suburban school districts (N=1,655), serving about 23,000
students, were invited to participate in the online survey and 361 agreed (22% response rate) by
completing the 21st Century Technology Integration and Teacher Leadership (21-TITL)
inventory, made up primarily of the Overall Technology Integration Scale (OTIS) and a modified
version of the Leadership Practices Inventory (Teacher Leadership Practices Inventory), which
used a six-point Likert scale and added a sixth practice ("Refine the Craft") which related to a
teacher's level of professional development and reflection. The majority of teacher participants
(27%) consisted of elementary teachers, teaching three or more subjects, followed by
English/language arts and special education (both at 14%). The highest percentage of
respondents were from the most experienced group of teachers at 25+ years (24%), followed by
teachers with 5-9 and 10-14 years (both at 20%). Most respondents (80%) were 30-59 years old,
with at least a master's degree, and 78 percent were female.

KEY FINDINGS

The most frequently engaged in leadership practice was Enable, followed by Model, Refine the
Craft, Encourage, Inspire, and Challenge. Overall Technology Integration, along with Stage of
Technology Adoption, and their Technology Efficacy, and Reflection were significantly
correlated with the overall Teacher Leadership Practices Inventory measure. The strongest
correlations were generally for Challenge, and weakest for Encourage. Regression analysis
showed that Overall Technology Integration scores were best predicted by Challenge.

The responses from females on the T-LPI were significantly higher than those from their male
counterparts. No differences were found in the leadership practices on the basis of educational
level, years of teaching experience. Low and high T-LPI groups were different from one another
on the basis of Technology Efficacy. Results indicated that teachers who attend more voluntary
professional development activities report significantly greater frequency of leadership practices;

this was also true for those teachers who are more reflective about their teaching, and those who hold more than one leadership position.

The author concludes:

> This research study has uncovered several connections between teachers' technology integration and teacher leadership practices. While most teacher preparation programs are committed to developing technology using teachers by implementing the TPACK framework, a key ingredient is missing in this framework—that of leadership. Because of these findings, the first recommendation from this research is the addition of leadership to the TPACK framework of teacher knowledge, creating either TPACK+L or the reorganized acronym, "CPTaLK" (Content, Pedagogy, Technology, and Leadership Knowledge). In this revised framework, content and pedagogy become the primary focus, but leadership also becomes a critical component of essential teaching practice … The leadership aspect comes into play outside of classroom teaching when working with other teachers, sharing best practices, observing, challenging, and encouraging others to try new ideas. But the fundamental relationship is that without the distributed expertise of teacher leadership in schools today, transformative change will not (cannot) occur" (p. 155).

TABLE 1.

LPI Practice Type	LPI Questions/Statements Included in T-LPI	LPI Questions/Statements NOT Included in T-LPI
Model the Way	I set a personal example of what I expect of others.	I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.
	I follow through on the promises and commitments that I make.	I build consensus around a common set of values for running our organization.
	I ask for feedback on how my actions affect other people's performance.	I am clear about my philosophy of leadership.
Model the Way	I talk about future trends that will influence how our work gets done.	I describe a compelling image of what our future could be like.
	I show others how their long term interests can be realized by enlisting in a common vision.	I appeal to others to share an exciting dream of the future.
	I paint the "big picture" of what we aspire to accomplish.	I speak with genuine conviction about the higher meaning and purpose of our work.
Challenge the Process	I seek out challenging opportunities that test my own skills and abilities.	I search outside the formal boundaries of my organization for innovative ways to improve what we do.
	I challenge people to try out new and innovative ways to do their work.	I ask "What can we learn?" when things don't go as expected.
	I experiment and take risks, even when there is a chance of failure.	I make certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.
Enable Others to Act	I develop cooperative relationships among the people I work with.	I treat others with dignity and respect.
	I actively listen to diverse points of view.	I give people a great deal of freedom and choice in deciding how to do their work.
	I give people a great deal of freedom and choice in deciding how to do their work.	I ensure that people grow in their jobs by learning new skills and developing themselves.
Encourage the Heart	I praise people for a job well done.	I make sure that people are creatively rewarded for their contributions to the success of our projects.
	I make it a point to let people know about my confidences in their abilities.	I publicly recognized people who exemplify commitment to shared values.
	I find ways to celebrate accomplishments.	I give the members of the team lots of appreciation and support for their contributions.