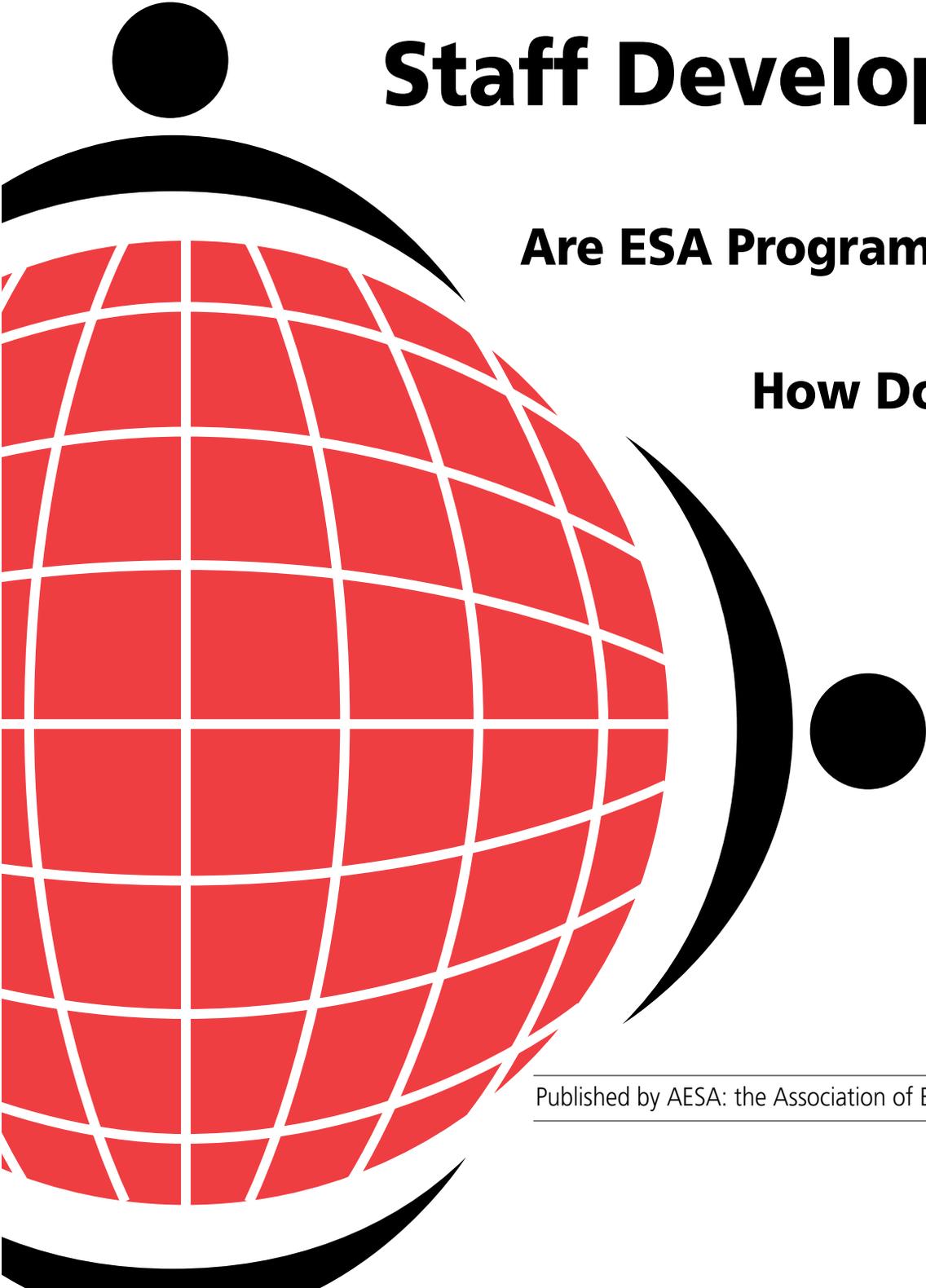


Volume 13, Fall 2007

Perspectives

A Journal of Research and Opinion About Educational Service Agencies



Staff Development:

Are ESA Programs Effective?

How Do We Know?

Published by AESA: the Association of Educational Service Agencies

Perspectives Credits

Editorial Board

Bill Keane, Editor

Oakland University
475 C School of Education and Human Services
Rochester, Michigan

Wayne Bell, Administrator

Education Service Unit 10
P.O. Box 850
Kearney, Nebraska

Rita Cook, Executive Director

Smoky Hills, ESC
Salina, Kansas

Edward Frye, Retired

Capital Area Intermediate Unit
Summerdale, Pennsylvania

J. Gary Hayden, Retired

Area Education Agency 4
Sioux Center, Iowa

E. Robert Stephens, Director

Institute for Regional and Rural Studies
Coralville, Iowa

Colleen B. Wilcox, Superintendent

Santa Clara County Office of Education
San Jose, California

AESA extends special thanks to the staff of the Oakland Schools Intermediate School District in Waterford, Michigan, for their invaluable assistance in producing this thirteenth issue of Perspectives!

Table of Contents

Preface i

Introduction iii

Staff Development at ESAs

Professional Development in Mathematics:
Evaluation Studies of the Institute Approach 1
By Frederica Frost

Meeting the Needs of Our Membership:
An Evaluation of Professional Development Offerings.....21
By Carrie Cate-Clements, Charles Costa and Karen J. Venditti

Who Should We Help?
Prioritizing Limited RESA Resources for School Improvement29
By Gloria J. Gabriel

Reorganization of Service Delivery

The Role of ESCs in Ohio’s New Regional Educational Service System35
By Craig E. Burford

Data Warehousing

Using Data in Decision Making Starts With Quality Training:
The Minnesota Story41
By Jan Brunell

Linn Benton Lincoln Delivers Early Functionality With
Data Warehousing and Analysis System45
By Sue Adelman

Education Panorama: Perspectives from ESA Leaders

Seeing the Full Perspective of American Education:
A Journey of Discovery and Leadership.....49
By Donna Durno

The World is Bumpy:
A Brief but Turbulent History of Standards-Based Education55
By Thomas G. Reed

High Schools of the Future: Effective Schools Will Embrace Change61
By Rocky Wallace



Preface

by
Brian L. Talbott
Executive Director, AESA

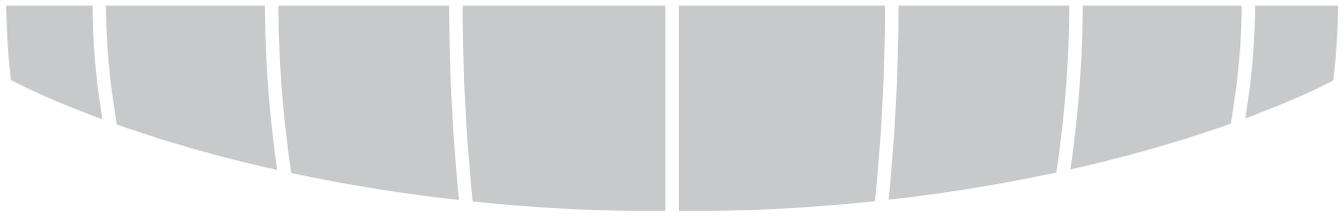
After reviewing this year's research articles, I quickly realized how far AESA has come over the last 13 years in building a solid research foundation on Educational Service Agencies (ESAs). It also occurred to me that I have not properly thanked all of the contributors to this strong and growing research base.

I want to begin by recognizing the work of Dr. E. Robert "Bob" Stephens as the "Father of Research on Educational Service Agencies." No one has contributed more quality research and encouraged others to do ESA research over a longer period of time.

Of course there are many others who have contributed to the growing research on ESAs. We wouldn't even know about a significant part of the research that is being done on ESAs but for *Perspectives: A Journal of Research and Opinion about Educational Service Agencies*. Therefore, a special thank you goes to the founder and editor, Bill Keane, and our outstanding editorial board for the quality job they have done over the last 13 years.

Last, I would certainly be remiss if I didn't share my gratitude to everyone who has contributed to *Perspectives* and added to our national research both this year and in the past. This year we have outstanding contributions from Georgia, Indiana, Kentucky, Michigan, Minnesota, Ohio, Oregon, and Pennsylvania.

An indicator of the importance that AESA attaches to the ESA research found in this journal can be seen by the fact that AESA publishes 7,000 copies of this journal every year. Readers include not only ESA staff but also State Departments of Education personnel, numerous universities, other education associations, and our business members and partners. We encourage individuals who are doing research on ESAs to contribute articles to future editions so as to assure the broadest dissemination of their work and to continue to build the body of knowledge about the diverse and exemplary programs ESAs across the county have developed to help improve student learning.



Introduction

This 13th edition of *Perspectives* differs from previous versions of the journal in several ways.

Since its beginning *Perspectives* has described itself as “a journal of research and opinion.” However, to a significant extent the research reported in this publication has been more informal in its methodology than critics of much education research would prefer. We make no excuse for that. Even studies that are conducted over a short period of time with one-dimensional data collection point the way toward the truth and encourage more ambitious investigations.

We begin this issue with an comprehensive research report about a program reflecting one of the core functions of educational service agencies; namely, staff development. It represents educational research at its best. It takes a longitudinal look at a program over two years. It uses quantitative and qualitative research methodologies. It summarizes findings through multiple data sets.

However, we present this study with some misgivings. Will our readers find it too technical for their level of expertise in research methodology and statistics? Does it tell more than readers want to know about one staff development initiative, even one sponsored by two service agencies. Even some members of our editorial board raised some of these issues, not in a condescending manner but with a genuine desire to see that the journal brought content to the bulk of our readers that they would find meaningful and useful.

In this case I, as editor, felt that it was worth the risk to share the type of research that all education institutions ought to be doing, whether themselves or under contract with others, research that might represent a standard toward which we in the education service agency business might aspire. Conducting sound research over time about the real results of our training programs on teachers AND students is certainly a challenging task. But such research may be the ultimate weapon ESAs may have in proving that the work we do has a real and significant impact on learning in the classroom.

Readers not drawn to the specifics of this research study can jump to the “Discussions and Implications” part of the study to find out why the study is valuable to us all. Two other well-designed studies round out the feature section on staff development.

Other articles look at reorganization of Ohio’s service agency system (C. Burford) and two feature work being done in the area of data warehousing (J. Brunell and S. Adelman).

The three “opinion” pieces in the last section of the journal are also a little more personal than those that usually appear here. That is their strength. We need to hear more from the thousands of well-read, highly

intelligent, broadly experienced staff members of ESAs about important topics in future issues. Even a "letter to the editor," whether friendly or aggravated, would be appreciated and published. This year we received one offer to do a book review in this issue. We need to investigate further whether readers would like such a feature and what kind of books might most appropriately appear in a publication with our readership.

We are especially pleased by the geographical diversity from which these articles emanate. Now let's hear from the other 37 states about service agency work in your areas.

Bill Keane, editor
(248) 370-4204
keane@oakland.edu



Professional Development in Mathematics: Evaluation Studies of the Institute Approach

by
Frederica Frost

Abstract

An issue in teacher professional development involves whether training offered outside the university setting can be as effective as traditional university classes. Offered in collaboration with the University of Michigan-Dearborn, two 2004-2006 Mathematics-Science Partnership projects at the Washtenaw Intermediate School District and the Wayne Regional Educational Service Agency presented Mathematics Institutes for elementary and middle school teachers. The Institutes included sustained, collaborative, and job-embedded professional development designed to increase teachers' knowledge of mathematics as a content area and best practice in mathematics instruction. Institute courses were developed by the University of Michigan-Dearborn Center for Mathematics Education. Results included significant growth by participating teachers in knowledge of mathematical content and pedagogy, as well as improvement in external observer ratings of classroom instruction. A longitudinal study of first year Institute middle school teachers indicated continued improvement in classroom instruction following training. Those teachers who participated in lesson study the year following the Institute showed growth in content knowledge as well. Qualitative data included focus groups in which teachers emphasized the role of professional collaboration as an essential component of Institute design. It was concluded that the Institute model represents an effective approach to teacher professional development.

Introduction

Issues regarding alternatives to traditional on-campus university courses for continuing teacher development focus on their relative academic rigor and quality (Breslow 2005; Miller and Pilcher 2000; Snell and Mekies 1999). Off-campus courses examined here represent an Institute approach by two Michigan regional educational service agencies to train teachers in mathematics content and pedagogy. As defined in this context the Institutes comprised sustained, collaborative, and job-embedded professional

development focused on student learning and designed to increase teachers' knowledge of mathematics as a content area and best practices in mathematics instruction. Specifically sustained training means long-term with sessions spread over a multi-year period; collaboration takes place at all levels from a partnership with an institution of higher education to the formation of collegial communities among teachers. Job embedded indicates that mathematical content and pedagogy are aligned with the curriculum and that teachers are empowered to apply their new learning with the necessary equipment and materials. The integration of reformed curriculum, effective instructional strategies, deep content knowledge and collaborative reflection about classroom practice represents the recommendations of the National Commission on Mathematics and Science Teaching for the 21st century, a response to the results of the Third International Mathematics and Science Study (TIMSS) finding that American students are not performing in mathematics at levels comparable to other countries. The criteria for Institute effectiveness included growth in mathematics content and pedagogical knowledge in contrast to a comparison group, as well as change in classroom instructional practice.

“In describing the Institute strategies they were currently using, teachers reported using less lecturing with more questioning, more guided discussion, and more visuals. These teachers reported that their teaching had changed in the following ways: More student involvement, more hands-on and discovery-based learning, attention to wrong answers, attention to “why,” and greater self-confidence.”

This paper reports results from a series of evaluation research studies conducted from 2004-2006 for federally funded Mathematics-Science Partnership projects (MSPs) by the Washtenaw Intermediate School District (Washtenaw) and the Wayne County Regional Educational Service Agency (Wayne RESA). Mathematics Institutes in both projects included courses developed by the University of Michigan-Dearborn's Center for Mathematics Education (UM-D) and designed to include investigative, real-world applications in mathematics that emphasized effective questioning and understanding of student thinking in mathematics. Partnerships of postsecondary institutions with local educational institutions have been found to result in higher quality professional development (Desimone, Garet, Birman, Porter, & Yoons, 2003).

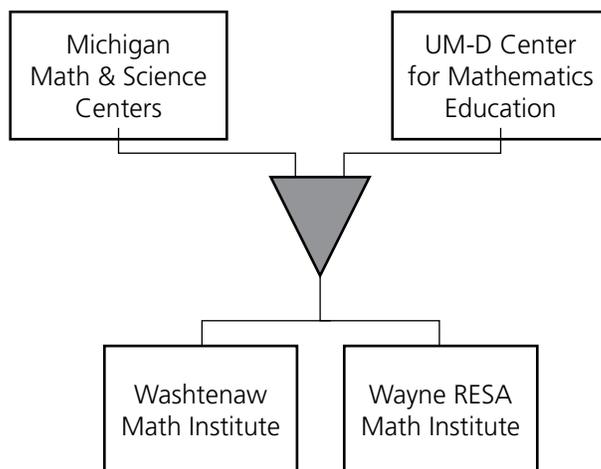
Need for Effective Professional Development

Calls for effective professional development abound, including the No Child Left Behind (NCLB) Act of 2001 and “Teaching at Risk: A Call to Action” by The Teaching Commission (2004). Despite the expenditure of millions (billions?) of dollars at state, national and local levels, too often teacher training is filled with intellectually superficial content and fails to address general principles of adult learning (Boyko 2004; Desimone, Smith, and Ueno 2006). Programs are often one day events (“workshops”) with no follow-up (Garet, Porter, Desimone, Birman, & Yoon, 2001; Killion 2002). In addition there is often no consideration of the context of the learning (Scribner 1999), no assessment of the continuing effects of training programs either in teacher performance or student achievement (Killion, 2002; Guskey, 2000), and a lack of opportunities for teachers to practice their learning in a guided environment (Killion). Sykes (as cited in Boyko, 2004) called the state of professional development “the most serious unsolved problem for policy and practice in American education today” (p. 3).

Development of the Institutes

The design of the Institute began as a collaborative effort between the four Michigan educational service agencies funded for the first round of the Michigan Mathematics Science Partnership (MSP) grants. Their similar beliefs regarding what constitutes effective professional development grew from 19 years of collaboration among the 33 Michigan Math and Science (M&S) Centers, which are all based at educational service agencies. The M&S directors hold regular quarterly meetings that involve mutual sharing, action research on strategies that work, and consortium projects. Because of the alignment among M&S Center programs, the four directors designed their MSP programs as a consortium with parallel structures in program and operations as well as in assessment. Two of the programs partnered with the UM-D Center for Mathematics Education. Following funding, the Michigan Department of Education facilitated further development of this collaboration by bringing evaluators for the four programs together for a day of sharing and planning. The evaluators continued their association, working together throughout the course of the projects by using common assessments and sharing the costs of a comparison group. The Washtenaw MSP Institute was among these four initially funded projects. The Wayne RESA project, which was funded in the second round, grew from a partnership with UM-D's Center for Mathematics Education and an alignment with the general belief system of the Michigan Math and Science Center Directors. This process is illustrated in Figure 1.

Figure 1. Genesis of Collaboration for the Mathematic Institutes



The Institutes were designed by the UM-D Center for Mathematics Education as 30 contact hour professional development activities in mathematics that participants could elect for two hours of graduate credit or three SB-CEU credits. Courses were designed in response to many school districts' needs to meet NCLB legislation requirements that middle school teachers be "highly qualified." The law specified 90 contact hours of professional development in content-based work as a minimum. The Center designed Institute courses focusing on middle school mathematics as defined by the Michigan Curriculum Framework and more recently Michigan's Grade Level Content Expectations (GLCEs). The beginning Institute courses focused on the content topics of number, operations and proportionality; patterns and algebraic thinking; geometric reasoning; and data analysis and probability. Subsequent courses focused on pedagogy. The approach engaged teachers in activities found in standards-based curricula resources in a learning environment that coincided with expectations found in these materials. Each course included the use of technology. The Center now works with elementary and high school teachers in similar Institute courses. Each Institute consisted of the courses listed in Table 1.

Table 1. University of Michigan-Dearborn Courses Offered by Each Institute

Project	Course
Washtenaw Middle School Institute (2004-2005 Longitudinal Study)	Structure of Number Systems, Operations and Proportional Reasoning Patterns and Algebraic Thinking Geometry and Measurement
Washtenaw Elementary Institute (2005-2006 Continuation Grant)	Number and Operations
Wayne RESA Grades 4-8 Institute	Number, Operations and Proportional Reasoning Geometric Reasoning Proportional and Algebraic Reasoning Conceptualizing and Teaching Linear Functions Implementing Standards-Based Mathematics Lessons Data Analysis and Statistical Reasoning*
*Offered following final data collection	

Each course focused on one of the mathematics strands in the Michigan GLCEs and was designed to deepen the participants' knowledge of the mathematics they teach. A constructivist approach provided teachers with the experience Ball and Bass (2002) recommend for evaluating various solutions to problem situations, as well as an opportunity to deepen their content knowledge in each area. Courses were offered during the school day and in week-long sessions during the summer.

Collaboration among the various levels of the project provided advantages that included cost savings through sharing costs of collecting and developing comparison group data. Components differentiating the two projects included Lesson Study in the Washtenaw Institute and classroom coaching with grade level meetings for the Wayne RESA project.

The purpose of this report is to summarize evaluation findings from the Washtenaw (Study 1) and Wayne RESA Institutes (Study 2) and to draw conclusions regarding the effectiveness of the Institute approach. **The reader is invited to review the evaluation design and instrumentation and to examine the data in detail or, if a lighter perusal is desired, to go directly to the Discussion and Implications section at the end of the paper.**

Method

In Washtenaw 12 middle school teachers participated in the 2004-2005 Institute and 12 grades 1-6 teachers in the 2005-2006 Institute. The Wayne Institute enrolled 66 teachers in 2004 who participated during the two-year project. The projects were continually evaluated with formative assessments and a summative evaluation in May 2006. The approach represents a quasi-experimental pre-post comparison group design.

Comparison group data were shared between the projects and were drawn from two sources during the two years of the projects. In 2005, 50 teachers and in 2006 48 teachers were assessed with pre-post tests. In addition they kept a log of their professional development activities during the project period. They were

matched with Institute teachers on the following criteria: percent disadvantaged, gender, ethnicity, and formal preparation in mathematics. All comparison teachers represented districts outside project counties. One limitation in study design for the Wayne project was that Institute teachers were first assessed in the fall of 2004, while comparison teachers were administered pre-tests in fall of 2005. Post-test administration to both groups occurred in spring 2006 with the effect that difference scores for each group represent dissimilar time periods.

“The intention was for each of the grade level teams to develop into a learning community.”

Instrumentation

This section contains a description of instruments and measurement strategies used in the project. Table 2 on the following page contains the measures administered to each project group.

Measures of mathematics content knowledge and pedagogy

Two instruments were used to evaluate the progress of teachers in acquiring the knowledge and skills necessary to teach mathematics. The first instrument consisted of study items from the Michigan Test for Teacher Certification (MTTC) and focused on knowledge of mathematical content. Subscale results reported here include algebra, statistics and probability, and geometry. Reliability for the overall scale (Cronbach’s alpha) was estimated at .70 based on 2005 data from the Washtenaw Longitudinal Sample of middle school teachers. The second instrument, the Learning for Mathematics Teaching Scale (Ball and Bass, 2002), is a measure of teachers’ understanding of mathematical pedagogy and students’ reasoning in solving mathematics problems. Reliability of the LMT measures has been extensively researched (Hill, Schilling & Ball, 2004).

Measures of program implementation

Two instruments were used to assess classroom implementation of instructional strategies. First, the Survey of Enacted Curriculum: Mathematics (SEC) was developed by a consortium of 17 states in partnership with the Council of Chief State School Officers, Learning Point Associates, the Wisconsin Center for Education Research, and the Technical Education Research Center with the purpose of providing schools with detailed information to facilitate curriculum planning. Results include maps of enacted (taught) curricula aligned to state standards (the intended, assessed and learned curricula).

The second approach to the measure of classroom instruction was through the Science and Math Program Improvement protocol (SAMPI: Western Michigan University, which contains three areas: Content of the Lesson, Implementation of the Lesson, and Classroom Culture). This measure was originally developed for the evaluation of Michigan’s Mathematics and Science Centers and has been validated on a continuous basis throughout the state for approximately the last 11 years.

Training for external observers in use of the SAMPI protocol required participants to review the instrument and then complete it using videotapes of classroom instruction until the criterion of 80 percent agreement in ratings was achieved.

Table 2. Measures Administered to Project Groups

Instrument	Administered to:		
	Washtenaw	Wayne RESA	Comparison GP
Learning for Mathematics Teaching (LMT) Elementary	X Cont	X	X
Learning for Mathematics Teaching (LMT) Middle School	X Long		X
Study Items from Michigan Test for Teacher Certification – Mathematics	X Cont X Long	X	X
Survey of Enacted Curriculum (SEC)	X Long X Cont	X	X
Classroom observations (SAMPI)	X Long X Cont	X	
Focus Groups	X Cont	X	
Fennema-Sherman Mathematics Attitudes Scales	X Cont X Long	X	
Michigan Educational Assessment Program	X Long X Cont	X	X

Note from the Washtenaw Institutes: “ Long” indicates middle school teachers from the Longitudinal Study and “Cont” refers to grades 1-6 teachers in the 2006 Continuation Grant Institute.

Student Attitudes Toward Mathematics

An adapted 36-item version of the Fennema-Sherman Mathematics Attitudes Scales was administered to students in Fall 2005 and again in Spring 2006. The Scales included Motivation to Learn Mathematics, Usefulness of Mathematics, and Confidence as a Learner of Mathematics.

Focus Groups

Focus groups were conducted periodically in both projects to examine participants’ perceived progress and to estimate their progress during the Institute.

Standardized Tests in Mathematics

All project students participated in the Michigan Educational Assessment Program (MEAP), providing impact data for all grades except one first grade class in the Washtenaw Continuation Institute.

Project 1: Washtenaw

Description of the Study

The original Washtenaw Math Science Partnership grant provided funds for a 2004-2005 Mathematics Institute for 12 sixth through eighth grade teachers from a Washtenaw County middle school. Two of the

teachers taught special education classes. This group is referred to throughout this report as Longitudinal Group teachers. Their progress continued to be monitored through the 2005-2006 school year to determine whether their performance would continue to improve. This research focus was based on the work of Elizabeth Fennema and her colleagues, who found that Cognitively Guided Instruction (CGI) resulted in teachers' continuing improvement even after their formal professional training had ended (Carpenter et al. 2000). This report examines results of the Longitudinal Study rather than their first year of Institute participation.

Seven teachers in the Longitudinal Sample participated in Lesson Study during the 2005-2006 school year, including researching and writing, teaching and observing, debriefing and revising. The lesson was on the topic of discounts, entitled "More or Less." It applied benchmark percentages to estimate the value of an item which is discounted by a certain percentage. Facilitated by the University of Michigan-Dearborn Director of the Center for Mathematics Education in the roles of Facilitator and Knowledgeable Other, the sessions took teachers through a systematic examination of their practice. Lesson Study represents a professional collaborative research and reflection process in which teachers first choose a lesson topic, research and plan the lesson, teach and observe the lesson with a focus on student response, reflect on and evaluate the lesson, revise the lesson, teach the revised lesson, reflect again and evaluate the lesson, then finally share their results.

The second group consisted of 12 teachers from grades one through six from the same middle school and two elementary schools in the same district. One of the teachers taught special education classes. This group participated in the 2005-2006 Institute and is designated the Continuation Grant group.

Study 1 Results

Continuation Grant (Grades 1-6)

Continuation Grant teachers enrolled in the Number and Operations course and were pre-post tested on the LMT-Elementary for mathematics pedagogy and the SAMPI for program implementation. Results from pre-/post- administration of the LMT, shown in Table 3, indicate improved performance and statistically significant results ($p = .014$). An effect size of .79 for the LMT represents a large difference (Cohen 1988).

Table 3. Continuation Grant Teachers

*Descriptive Statistics and Effect Size Indices on the LMT-Elementary:
Pretest (Spring 2005) – Posttest (Spring 2006)*

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect Size Estimate
LMT Total Score				0.79	0.76	0.42
Pretest	12	78.2	12.4			
Posttest	12	84.5	12.5			

Examination of LMT pretest scores showed no significant difference between Continuation Grant and comparison teachers, indicating equivalence between the two groups. A contrast between the groups on pre- and post-test scores indicated that comparison group teachers actually showed a slight decrement in their performance (an average of less than one item), while the Continuation Grant group improved by an average of 1.3 items. However, the groups were not significantly different in their change scores on a t-test at $p \leq .05$.

Using the SAMPI protocol, Continuation Grant teachers were observed teaching a mathematics lesson at the beginning of the Institute in Fall 2005 and again at the end of the Institute in June 2006. Results in Table 4 indicate large effect sizes and statistically significant growth from pre- to post-program observations at $p \leq .05$ on all measures: Total Scale, Culture, Content, and Implementation.

Table 4. Continuation Grant

Descriptive Statistics and Difference Effect Size Indices for the Science and Math Program Improvement Scale (SAMPI) Classroom Observations – Fall 2005 - Spring 2006

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect Size Estimate	Effect Size Confidence Interval lower upper	Effect Size Based on Pretest SD
SAMPI Total								
Pre	11	4.7	1.4	1.01	0.97	0.45	0.08 1.85	0.86
Post	11	5.9	0.9					
Culture Subscale								
Pre	11	5.0	1.0	0.69	0.66	0.44	-0.20 1.52	0.56
Post	11	5.9	0.9					
Implementation Subscale								
Pre	11	4.7	2.0	0.75	0.72	0.44	-0.14 1.59	0.60
Post	11	5.9	1.0					
Content Subscale								
Pre	11	4.5	0.8	1.33	1.28	0.47	0.36 2.19	1.07
Post	11	6.0	1.5					

Longitudinal Study (Grades 6-8)

This section focuses on the Longitudinal Study, which tracked teachers in the original Mathematics Institute of 2004-2005. Six teachers participated in Lesson Study during 2004-2005; seven participated during 2005-2006. Lesson Study represented the only professional development in mathematics offered to them during the 2005-2006 school year. One in the group was reassigned and did not teach mathematics during 2005-2006.

This aspect of the project's evaluation research was based on the work of Elizabeth Fennema and her colleagues, who found that Cognitively Guided Instruction (CGI) resulted in teachers' continuing improvement even after their formal professional training had ended (Carpenter et al., 2000). These teachers

were followed for an additional year after their original Math Institute participation to determine whether the findings of Fennema’s group would be replicated.

Results are presented first for the entire group of 12 teachers, followed by an examination of those teachers who participated in Lesson Study and those who did not. Consideration of Lesson Study comparison results should take into account the self-selection aspect of the two groups as well as the small samples.

Entire Group of Longitudinal Study Teachers

The entire group of 12 Longitudinal Study teachers was examined one year following the Institute on the MTTC, LMT-Middle School, and SAMPI classroom observations.

Three subscales were created from the 26 study items of the MTTC: Algebra, Geometry, and Statistics and Probability. Results for all teachers in number correct appear in Table 5 for test administrations in June 2005 immediately following the end of the Institute, and again one year later in June 2006. Results suggest that teachers tended to grow slightly or to maintain their performance levels on this measure of mathematics content. While the trends are clear, the only change from 2005 to 2006 that reached statistical significance pertains to the Algebra subtest ($p = .005$). This is consistent with a medium effect size for Algebra of 0.39. Remaining subtest effect sizes are small or zero.

Table 5. Descriptive Statistics and Effect Size Indices on Study Items From the Michigan Test for Teacher Certification (MTTC) in Number Correct:

End of Institute (June 2005) and One Year Later (June 2006)

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect
MTTC Total Score (26 items)				0.16	0.15	0.41
End of Institute	12	18.3	4.0			
One Year Later	12	19.0	4.1			
MTTC Algebra Subscale (12 items)				0.39	0.37	0.41
End of Institute	12	7.9	2.6			
One Year Later	12	8.8	2.0			
MTTC Geometry Subscale (6 items)				0.00	0.00	0.00
End of Institute	12	4.8	1.5			
One Year Later	12	4.8	1.3			
MTTC Prob. And Statistics Subscale (8 items)				0.07	0.07	0.41
End of Institute	12	5.4	1.6			
One Year Later	12	5.5	1.2			

NOTE: The MTTC Numbers and Operations Subscale contained only two items and is not reported.

Table 6 contains an analysis of LMT scores for the entire Longitudinal Group and reflects a consistent loss of performance from the end of the Institute in May 2005 to a year later in May 2006. All effect sizes fall in the medium range.

Table 6. Descriptive Statistics and Effect Size Indices on the Learning for Mathematics Teaching Scale (LMT):

End of Institute (Spring 2005) and One Year Later (Spring 2006)

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect
LMT Total Score (68 items)				0.40	-0.39	0.41
End of Institute	12	51.8	7.6			
One Year Later	12	47.9	11.4			
LMT Geometry (15 items)				-0.23	-0.22	0.41
End of Institute	12	12.4	2.0			
One Year Later	12	11.9	2.3			
LMT Algebra (29 items)				0.41	-0.40	0.41
End of Institute	12	23.6	4.6			
One Year Later	12	21.2	6.8			
LMT Number and Operation (26 items)				-0.27	-0.26	0.41
End of Institute	12	16.9	2.6			
One Year Later	12	16.0	4.0			

NOTE: Two items were classified in two categories.

Longitudinal Group teachers were observed using the SAMPI protocol at the end of their Institute in May 2005 and again in Spring 2006. Table 7 contains effect size data for the end of Institute and one year later ratings.

Table 7. Descriptive Statistics and Effect Size Indices for the Science and Math Program Improvement Protocol (SAMPI):

End of Institute (Spring 2005) and One Year Later (Spring 2006)

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect
SAMPI Overall Rating				1.09	1.05	0.45
End of Institute	12	4.6	1.4			
One Year Later	12	5.9	0.09			
Implementation of the Lesson				0.79	0.76	0.44
End of Institute	12	4.7	1.9			
One Year Later	12	5.9	1.0			
Content of the Lesson				1.49	1.43	0.48
End of Institute	12	4.3	1.4			
One Year Later	12	6.0	0.8			
Classroom Culture				0.76	0.73	0.44
End of Institute	12	4.9	1.6			
One Year Later	12	5.9	0.9			

Scale: Ratings from 1 (low) to 7 (high)

It appears evident from the table that teacher improvement on each SAMPI subscale as well as the Overall Rating was generally consistent from May 2005 to May 2006 with large effect sizes. Further, t-tests on changes from 2005 to 2006 represent statistically significant improvement in classroom instruction for the Overall Rating ($p = .003$), Content ($p=.013$), and Culture ($p=.046$). Implementation resulted in $p = .065$.

Indications of the impact on student mathematics performance appear by school in Table 8. Note that not all teachers in each school participated in the Institutes. Elementary students grew at both schools at grade 3, at School A at grade 4, and at School B at grade 5. At Lincoln Middle School, growth was evident at grades 6 and 7.

Table 8. Student Performance on MEAP Mathematics: Percent Students Meeting or Exceeding Standards – Fall 2005 - Fall 2006

	Grade											
	3		4		5		6		7		8	
School	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
School A	77	85	68	72	67	58						
School B	82	84	77	73	66	74						
Middle School							52	60	48	51	56	56

The entire group of Longitudinal Study teachers participated in a focus group in March 2006, almost a year following the Math Institute. In describing the Institute strategies they were currently using, teachers reported using less lecturing with more questioning, more guided discussion, and more visuals. These teachers reported that their teaching had changed in the following ways: More student involvement, more hands-on and discovery-based learning, attention to wrong answers, attention to “why,” and greater self-confidence. Only one mentioned that she was unable to make changes in her practice due to time constraints.

When asked what they considered the most valuable of their Institute experiences, the most frequent response was the opportunity to work closely with their colleagues, followed by questioning techniques. They reported that they continue to collaborate with colleagues.

One teacher expressed her feelings, “I see that my teaching has improved as a result of the Institutes. It shows me that no matter how long I teach, there is always a better way of doing instruction.”

Lesson Study

The performance of Lesson Study teachers was compared to their non-Lesson Study colleagues on the MTTC, LMT-Middle School, and SAMPI. The analyses were limited by the self-selection inherent in Lesson Study participation and the small sample sizes. Lesson Study teachers represented a subset of the Longitudinal Group.

A comparison of growth in MTTC scores for the seven teachers who participated in Lesson Study during 2005-2006 and the five who did not appears in Table 9. As indicated, Lesson Study teachers continued to improve their performance while their colleagues tended to lose ground on the Total Scale, Geometry, and Probability and Statistics. Both groups improved in Algebra.

T-tests for independent means on these differences between the Lesson Study and No Lesson Study groups resulted in significant results for the MTTC Total Scale ($p = .002$), Statistics and Probability ($p = .016$), and Geometry ($p = .005$). The comparative difference in growth in Algebra was not significant ($p = .688$). Large effect sizes for the Total Score, Geometry and Probability/Statistics Subscales corroborate these results.

No significant differences were found in the total LMT scores of those who participated in Lesson Study during 2005-2006 and those who did not.

Table 9. Comparison of Lesson Study Teachers With Colleagues on MTTC Growth Scores From End of Institute (May 2005) to One Year Later (May 2006):

Descriptive Statistics and Effect Size Indices in Number Correct

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect
MTTC Total Score (26 items)				2.28	2.26	0.75
Lesson Study	7	2.0	1.7			
No Lesson Study	5	-3.0	1.0			
MTTC Algebra Subscale (12 items)				0.25	0.23	0.59
Lesson Study	7	1.0	1.2			
No Lesson Study	5	0.8	0.5			
MTTC Geometry Subscale (6 items)				2.45	2.26	0.75
Lesson Study	7	0.7	1.0			
No Lesson Study	5	-1.3	0.5			
MTTC Prob. and Statistics Subscale (8 items)				1.53	1.41	0.65
Lesson Study	7	0.7	1.0			
No Lesson Study	5	-0.8	1.0			
NOTE: The MTTC Numbers and Operations Subscale contained only two items and is not reported.						

Did teachers participating in Lesson Study make greater progress on the SAMPI classroom observation scale over the year following the Institute? A t-test for independent means on the SAMPI subscales and overall ratings showed no significant differences ($p \leq .05$).

A survey completed by the seven teachers participating in Lesson Study suggested the following:

- Teachers saw two primary benefits to Lesson Study with regard to their teaching. They emphasized greater understanding in how students think, and they strengthened their relationships with colleagues.
- The main benefit for student learning mentioned was that if the teacher is better, the student will learn better. One teacher wrote that the benefit was “having a teacher think like they do.”
- All but one participant reported the major drawback of Lesson Study was the time required, the amount of time needed to prepare the lesson, the amount of time outside of school.

The majority of respondents saw the primary purpose of Lesson Study as teacher collaboration to “allow professional teachers the opportunity to collaborate and use best practices to produce an outstanding lesson.”

Project 2: Wayne RESA

Project Description.

The Wayne RESA project included 66 grades 4-8 teachers from two districts who participated in the Institute from Fall 2004 through June 2006.

The coaching component of this program involved a guided dialogue of practitioners in the examination of teaching and learning. Two strategies provided teachers with opportunities for practice-based learning:

1. Examining student data and case discussions. These provided “the opportunity to grapple with and solve authentic classroom issues” (Hawley & Valli, 2000; Mumme & Seago, 2002).
2. Quarterly grade-level meetings allowed teachers to meet regularly over a sustained period of time to address issues of importance to the group. Issues addressed included curriculum alignment and pacing guides, examining student work, writing common assessments, examining common assessment results, MEAP analysis, challenges posed by district circumstances, and work on specific mathematics topics. The intention was for each of the grade-level teams to develop into a learning community.

Project 2 Results

Math Institute teachers were administered the MTTC and the LMT-Elementary as pre-post measures, and classroom observations using the SAMPI protocol were conducted at the beginning and end of the project. End-of-session surveys and focus groups conducted at regular intervals provided qualitative feedback.

Table 10 on the following page contains MTTC results for Institute teachers from test administrations in Fall 2004 prior to the Mathematics Institute, and again in June 2006. The data indicates significant improvement on the total score ($p \leq .05$, effect size = .75). However, eight items in the scale contained statistics and probability items, and that course was not offered until Summer 2006, after the post-test was administered.

To examine the question of whether course attendance was related to MTTC performance, the number of courses taken by each teacher was regressed on MTTC total scores. However, because 82 percent of teachers with pre-post MTTC scores took all six courses and attended regularly, the result was a non-significant amount of variance.

Analysis of MTTC comparison group performance to that of the Institute teachers involved first an examination of initial comparability of the two groups. Differences were represented by effect sizes all in the small range, i.e., less than .20. Based on this evidence, it was concluded that the Institute and Comparison teachers were initially no different.

Institute teachers improved their total performance by an average of 1.5 items on the 26-item test in contrast to less than one item for the comparison group. An effect size of .60 was obtained on the difference between total scores for the two groups in favor of Institute teachers. T-tests for differences between paired means on the comparison group’s MTTC pre- and posttest scores were all statistically non-significant at $p \leq .05$.

Table 10. Institute Teachers: Descriptive Statistics and Effect Size Indices on the MTTC in Number Correct Pretest (Fall 2004) - Posttest (Spring 2006)

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect Size Estimate
MTTC Total Score				0.75	0.74	0.26
Pretest	31	11.9	4.7			
Posttest	31	13.4	4.2			
Geometry Subscale (6 items)				0.13	0.13	0.25
Pretest	31	3.4	1.4			
Posttest	31	3.6	1.6			
Statistics and Probability (8 items)				0.00	0.00	0.25
Pretest	31	3.7	1.8			
Posttest	31	3.7	1.5			
Algebra Subscale (12 items)				0.32	0.32	0.33
Pretest	31	4.9	2.1			
Posttest	31	5.6	2.4			

LMT analysis indicated higher initial performance for comparison group teachers. A t-test for independent means with Institute teachers' pre-test scores indicated that this difference was significant at $p = .046$. Table 11 contains descriptive statistics and effect sizes on pre- and post-measures for the two groups and indicates a large effect size for growth by Institute teachers, who improved 10.5 percent from pre- to post-test, a difference significant at $p = .000$ on a t-test for paired samples. Comparison group teachers obtained the same score at both measurement points.

Table 11. Institute and Comparison Group Teachers: Descriptive Statistics and Effect Size Indices on the LMT Total Score in Number Correct Pretest (Fall 2004) – Posttest (Spring 2006)

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect Size Estimate
Institute Teachers				0.75	0.74	0.26
Pretest	31	11.9	4.7			
Posttest	31	13.4	4.2			
Comparison Teachers				0.13	0.13	0.25
Pretest	31	3.4	1.4			
Posttest	31	3.6	1.6			

Analysis of covariance was performed to remove the initial differences in examining LMT post-test performance. Results in Table 12 indicate a significant difference between post-test scores for the Institute and comparison groups when pre-test performance is taken into account ($p \leq .05$).

Table 12. Performance on LMT Post-Test: Contrast of PM3 and Comparison Group Using Analysis of Covariance on Pre-Test Scores

Scale	F Change	F Sig.	R Square	Standardized Beta Coeff
LMT Pre-Test Score	19.60	.000	.450	.784
Group ¹ Effects	4.68	.041	.503	.325
¹ Math Institute and Comparison Group				

SAMPI data shown in Table 13 for Institute teachers indicate substantive gains in the Overall Rating and all subscale means on the pre- and post-program observations. Gains made on all three subscales and the total rating reached statistical significance by t-tests for paired means at $p = .000$. A difference effect size analysis indicated very large indices for the Overall Rating (1.79), Implementation (1.62), and Content (1.95) scales while that for Culture is large (0.80; Cohen 1988).

The validity of SAMPI ratings was corroborated by the collection of observation ratings from a randomly selected sample of 10 Institute teachers in Spring 2005, halfway through the Institute. Results indicated a decrement in performance, which contraindicates a positive bias on the part of external observers. The data itself, however, is consistent with Fullan (2001), who notes that performance may initially decline as teachers regroup and redesign their practices.

Evidence of Institute effectiveness relative to student impact comes from two sources: 1) Student ratings on the Fennema-Sherman Attitudes Toward Mathematics Scales and 2) Michigan Educational Assessment Program (MEAP) test results.

Table 13. Institute Teachers: Descriptive Statistics and Effect Size Indices on the SAMPI Pretest (Fall 2004) – Posttest (Spring 2006)

Assessment	n	M	SD	Effect Size	Bias Corrected (Hedges)	Std. Error Effect Size Estimate
SAMPI Total Score				1.79	1.76	0.31
Pre-Program	28	3.5	1.3			
Post-Program	28	5.5	0.9			
Implementation of the Lesson				1.62	1.59	.032
Pre-Program	26	4.0	1.1			
Post-Program	26	5.5	0.7			
Content of the Lesson				1.95	1.92	0.33
Pre-Program	27	3.7	1.1			
Post-Program	27	5.5	0.7			
Classroom Culture				0.80	0.79	0.28
Pre-Program	27	4.2	1.3			
Post-Program	27	5.8	0.7			
Scale: 1 (low) to 7 (high)						

Fennema-Sherman Mathematics Attitudes Scales administered to students of participating teachers during Fall 2005 and Spring 2006 resulted in slight increases in Usefulness and Confidence Scales, but essentially no change in the Motivation Scale occurred over this period. Effect sizes for these data range from -0.01 for Motivation to .07 for Confidence as a Learner of Mathematics, and .18 for perceptions of Usefulness of Mathematics.

In order to examine more closely the relationships between student perceptions of mathematics and the classroom, teacher growth on the MTTC was regressed on the Fennema-Sherman Motivation Scale. Results of this analysis suggest that Motivation to Learn Mathematics was significantly related to teacher growth in content knowledge. Given that an R squared of .10 may be considered significant (Kline 2005), the obtained 0.82 may be highly noteworthy.

Difficulties in changing student attitudes beginning about fourth grade are well-documented (Williams, La Rose & Frost, 1981). It is possible that only one school year was not a realistic timeframe for improving student attitudes toward mathematics. Further, longitudinal assessment of this issue may be an appropriate response to these results.

Student performance on the MEAP was examined for the two participating districts in their entirety. This seemed valid as a significant core of teachers enrolled in the Institute. Table 14 illustrates all grade levels, although the Institute only addressed content and instruction in grades 4 through 8.

Table 14. Student Performance on MEAP Mathematics: Percent Students Meeting or Exceeding Standards

Fall 2005 – Fall 2006

	Grade											
	3		4		5		6		7		8	
School	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
District A	66	70	64	66	40	51	38	46	32	45	26	40
District B	65	60	58	53	31	44	21	21	12	19	18	29

District A shows improved student performance in mathematics at all grade levels from Fall 2005 to Fall 2006. District B students improved their MEAP performance at grades 5, 7 and 8. Note that because students in fourth grade were tested in the fall, they wouldn't have had the benefit of an Institute teacher's instruction. Further, many students in sixth grade did not receive consistent instruction in mathematics, having a long-term substitute during the entire term.

Discussion and Implications

These results contain several implications for the design of professional development. First, they substantiate what is known about effective professional development in mathematics. Institute design included a close partnership with the University of Michigan-Dearborn and elements consistent with practices common in the 33 Michigan Mathematics and Science Institutes. Other ingredients across the Institutes represented sustained, collaborative professional development framed with content and pedagogy courses designed to address state standards and coupled with opportunities for collegial interaction and

sharing. Three core elements of teacher training from Garet et al. (2001) underlay the design of the Institutes, including: 1) a focus on academic subject matter, 2) active learning, and 3) integration of content into the daily life of the school.

Overall, the Institutes resulted in substantive improvement in mathematics content, pedagogy, and instructional practice. The Washtenaw Continuation Grant and Wayne RESA's Institute produced the results reported in this paper. Although not examined here, Washtenaw's 2004-2005 middle school project saw similar improvement in teachers' knowledge and practice.

Teacher Responses to the Program

Teachers' responses regarding their collegial interaction may have implications for the Institute approach. When asked what they considered the most valuable among their Institute experiences, the most frequent response among Washtenaw's Longitudinal Group was the opportunity to work closely with their colleagues. Further, they reported that this interaction continued following the end of the Institute, and those in Lesson Study emphasized that their relationships were further strengthened through this process.

Similarly, evidence suggests that effective learning communities were fostered in both districts of the Wayne RESA project. Similar to comments from the Washtenaw participants, Wayne RESA teachers emphasized the advantages of working together with their own

“Overall, the Institutes resulted in substantive improvement in mathematics content, pedagogy, and instructional practice.”

district colleagues, but also described the advantages of hearing different perspectives from their colleagues in the other district. They recognized that the other district presented different challenges and priorities, but found their neighbors' contributions highly worthwhile.

The other major benefit that all Institute teachers mentioned was that of learning to take their students' perspectives through challenging problems they themselves had to struggle to solve, thereby learning to “think like my students.” Through this process, they also learned the value of effective questioning and taking the role of guide rather than lecturer in their classrooms.

Organization of Groups

During the first year of the Wayne RESA Institute, elementary and secondary teachers were grouped together. The second year, elementary and secondary groups were grouped separately, which allowed greater specificity of content and pedagogy. The second year of participation appears to have made a great difference in changing teachers' perceptions of the Institute, their classroom practice, their students' learning, content knowledge, and collaboration with their colleagues. These changes reflect their consistent growth from a one-dimensional view of teaching mathematics to a multi-faceted, evolving perspective.

Learning Sequences

Other lessons were learned as the Institutes progressed. First, teachers emphasized that alignment of instruction with their districts' mathematics series facilitated their own learning and made it easier to

translate it into classroom practice. Similarly, when Institute material matched their grade level instructional sequence, they could apply their learning immediately rather than waiting until the appropriate time. For example, if fractions are taught at the end of the year, it was less useful for teachers if the Institute included them as part of a Fall course.

Results also extend the knowledge of effective or “best practice” professional development in a number of areas. Particularly notable is the replication of the Fennema group’s finding that teachers continued to improve instructional practice, and to some extent, their content understanding following the Institute experience (Carpenter et al., 2000). Although the sample was small, results appear encouraging in spite of the slight decrement in retention of pedagogical knowledge. Further, teachers in this group who participated in Lesson Study showed evidence of retaining content knowledge better than their Non-Lesson study colleagues.

Importance of Content Instruction

Results also reinforce the difficulties in changing student attitudes beginning at about fourth grade (Williams, La Rose, & Frost 1981) in the slight improvement over a year’s time in students’ reported confidence as learners of mathematics, the slight improvement in their perceptions of the usefulness of mathematics, and the lack of change in their motivation to learn mathematics. It was originally considered by project personnel that only one school year was not a realistic time frame for improving attitudes toward mathematics, and that longitudinal assessment of this issue may be a more appropriate response to this issue. However, the finding that 82 percent of the variance in student ratings was accounted for by teacher growth in content knowledge lends greater credence to the “best practice” in mathematics professional development of including heavy doses of content instruction. The improvement in student attitudes that occurred in concert with an increase in teacher content knowledge represents an encouraging indication that student attitudes may be highly related to what teachers project, even over a relatively short time frame.

Strengths of the Study

These studies have several strengths which lend credibility to results. The first is the combination of quantitative and qualitative data in concert with both teacher self-report and classroom observations by external observers. These multiple measures corroborate and support the evidence, particularly in the areas of pedagogical knowledge and classroom practice. A second strength is the consistency across the three samples. Although the Washtenaw groups were limited in sample size, results are similar for the Wayne teachers. Further, the Washtenaw and Wayne districts represent disparate types of environments; Wayne teachers often work in difficult situations with the continuing turmoil, uncertainty, and disruptions that come with very low socioeconomic conditions. The Washtenaw teachers, conversely, work in more stable communities with greater support and resources. In spite of these differences, both Institutes resulted in improvement in content and pedagogical knowledge as well as in classroom practice.

Limitations of the Study

Limitations of the studies included the small numbers in the Washtenaw groups. In addition, Washtenaw teachers in the Longitudinal Group volunteered for participation in Lesson Study, and it may be that these

teachers were in general more motivated to improve their practice. Finally, as mentioned above, the Wayne RESA data represented two years of training while comparison group teachers were pre- and post-tested over a one-year period, with a resulting time period discrepancy between the two.

“Results of this analysis suggest that Motivation to Learn Mathematics was significantly related to teacher growth in content knowledge.”

Conclusion

The greatest challenge facing those in charge of professional development is providing the type of high-quality training represented by the Institutes to large numbers of teachers. This issue of breadth versus depth means that in all probability difficult choices have to be made. In making these difficult decisions, consideration should be given to the substantial effects of approaches such as the Mathematics Institutes in impacting classroom practice.

References

- Ball, D., & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: Knowing and using mathematics. In J. Boaler (Ed.) *Multiple perspectives on the teaching and learning of mathematics* (pp. 83-104). Westport, CT: Ablex.
- Boyko, H. (November 2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3-15.
- Carpenter, T.P., Fennema, E., Franke, M.L., Levi, L., & Empson, S.B. (Sept. 2000) Cognitively guided Instruction: A research based teacher professional development program for elementary school mathematics. National Center for Improving Student Learning and Achievement in Mathematics and Science. University of Madison-Wisconsin. Report No. 003.
- Chumbley, B., and Knaack, C. (2004). Surveys of the enacted curriculum. Learning Point Associates.
- Cohen, J. (1988). *Statistical power for the behavioral sciences* (2nd ed.). New York: Academic Press.
- Desimone, L., Smith, T., & Ueno, K. (2006). Are teachers who need sustained, content-focused professional development getting it? An administrator's dilemma. *Educational Administration Quarterly*, 42, 179-215.
- Desimone, L., Garet, M., Birman, B., Porter, A., & Yoon, K.S. (2003). Improving teachers' in-service professional development in mathematics and science: The role of postsecondary institutions. *Educational Policy Analysis*, 17, 613-649.
- Fullan, M. (2001). *Leading in a culture of change*. San Francisco, CA: Jossey-Bass.

- Garet, M., Porter, A., Desimone, L., Birman, B., & Yoon, K. (Winter, 2001). What makes professional development effective? *American Educational Research Journal*, 38(4), 915-945.
- Hawley, W. D. & Valli, L. (2000). The essentials of effective professional development: A new consensus. *Educational Administration Abstracts*, 35(4), 127-150.
- Hill, H., Schilling, S., & Ball, D. (2004). Developing measures of teachers' mathematics knowledge for teaching. *The Elementary School Journal*, 105(1).
- Kirkpatrick, D. (1994). *Evaluating training programs: The four levels*. San Francisco, CA: Berrett-Koehler Publishers.
- Kline, R. (2004). *Beyond significance testing: Reforming data analysis methods in behavioral research*. Washington, DC: American Psychological Association.
- Mumme, J., & Seago, N. (2002, April). Issues and challenges in facilitating video cases for mathematics professional development. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Scribner, J. (1999). Professional development: Untangling the influence of work context on teacher learning. *Educational Administration Quarterly*, 35, 238-266.
- Shulman, L.S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.
- Shulman, L.S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57, 1-22.
- Sykes, G. (1996). Reform of and as professional development. *Phi Delta Kappan*, 77, 465-467.
- The Teaching Commission (2004). *Teaching at risk: A call to action*. New York: Author (The CUNY Graduate Center).
- Williams, F., LaRose, R., & Frost, F. (1981). *Children, television, and sex-role stereotyping*. Westport, CT: Praeger Publishers.
- Wilson, S. M., Shulman, L.S., & Richert, A. (1987). 150 different ways of knowing: Representations of knowledge in teaching. In J. Calderhead (Ed.), *Exploring teacher thinking* (pp. 104-124). Sussex: Holt, Rinehart and Winston.

Frederica Frost, Ph.D. and M.B.A., is Research and Evaluation Consultant at the Wayne County Regional Educational Service Agency in Wayne, Michigan. She can be reached by phone at (734) 334-1574, by fax at (734) 334-1411, and by e-mail at frostf@resa.net.



Meeting the Needs of Our Membership: An Evaluation of Professional Development Offerings

by
Carrie Cate-Clements
Charles Costa
Karen J. Venditti

This research study evaluated a series of professional development workshops that were hosted by the Northwest Indiana Education Service Center (NWIESC) in Highland, Indiana, in an effort to improve program service and quality. Three evaluative objectives were identified during the creation of the survey instrument. The objectives included: 1) to determine the perceived value of the workshop; 2) to determine potential trends about the intrinsic interest of each workshop topic irrespective of the quality of the presenters; and 3) to identify the best method of recruitment and incentives necessary to increase workshop participation. At the close of each workshop, participants were asked to provide feedback by completing a survey questionnaire that utilized Likert-scale methodology as well as open-ended qualitative responses. In order to determine how workshops impacted the participant, frequency tables, cross tabulations, and thematic analyses were used.

Methodology

During the time period from August-December 2006, the researchers utilized a survey questionnaire in an effort to gather data regarding participants' learning experiences and workshop preferences. This questionnaire sought feedback regarding each workshop's overall effectiveness, length of the workshop, value of information obtained from the workshop, and recommendations for repeats of the workshop; feedback about the presenter's methodology, expertise, organization, and attention to the audience; workshop strengths, weaknesses, and comments; suggestions for future workshops; food recommendations; and graduate level credit recommendations. Over the course of the fall semester, 42 workshops were scheduled; six of those workshops were cancelled due to insufficient enrollment.

The researchers used the same format as Vanessa Dennen (Amoco Fabric and Fibers in North Carolina, 1997) to include an attitude questionnaire consisting of 17 close-ended statements and seven open-ended questions. The close-ended statements used the five-point Likert scale, where each degree was assigned a numerical value from one to five for analysis. Data analysis was performed through the use of the Statistical Package for the Social Sciences (SPSS).

Description of Workshop Participants

The subjects in this study consisted of 1,074 workshop participants. Of the 1,074 workshop participants, 63% (n=674) of the subjects returned their completed survey questionnaire for analysis.

Dataset Demographics: Career/Employment Information

The current employment positions of the workshop participants are provided in Table 1, below. Categories used in this study include Classroom Teacher, Building Level Administrator, and a separate category titled “Other” (to include: building coordinators, technology coordinators, paraprofessionals, tutors, etc.). Classroom teachers were the largest group represented at 80% (n=533), followed by the “Other” category at 16% (n=103). The smallest group represented is the Building Level Administrators, represented by 38 subjects, or 4% of the sample population.

Table 1.

Question: Please identify the type of employment that best describes you.

n=674	Frequency	Valid Percent
Classroom Teacher	533	80%
Building Level Administrator	38	4%
Other	103	16%
Total	674	100%

Dataset Demographics: School Setting/School Level

The school settings/school levels of the workshop participants are listed in Table 2, below. Categories used in this study include: elementary, middle school/junior high school, high school, central administration, university, and other (to include: members of the Indiana Department of Education and community organizations/membership). Subjects employed at the elementary setting were the largest group represented at 56% (n=388), followed by subjects employed at the high school level at 20% (n=117), and middle school/junior high employees at 19% (n=115). Central administration members represented 3% (n=20) of the workshop participants. The smallest group represented was from the university setting at .5% (n=3). Seven individuals specified “other” as the school setting/level that they represented (1%). It is important to mention that the data were adjusted to exclude 74 missing cases.

Table 2*Question: Please identify your school level/school setting.*

n=674	Frequency	Valid Percent
Elementary	338	56%
Middle School/Junior High School	115	19%
High School	117	20%
Other	7	1%
Central Administration	20	3%
University	3	1%
Total	600	100%
Missing Cases in the System	74	
Total	674	

Recruitment of Workshop Participation

Subjects were invited to participate in the professional development workshops through recruitment methods, including: NWIESC website, flyers in the participants' schools, principal or administrator recommendation, and "other" (not defined but could include e-mail correspondence, fax to the school building, word of mouth, etc.). The most effective form of professional development recruitment appears to be the category of "other" where 42% (n=243) subjects marked this category as the means of learning about the professional development workshop in which they participated. Immediately following this category, 36% of the participants learned about the workshop through a flyer posted in their respective buildings. Eighteen percent (n=104) used the NWIESC website to learn about workshop availability and 4% (n=24) were informed about the workshops through communication with a principal or administrator (see Table 3). It is important to note that there are 91 missing cases for this question on the survey questionnaire.

The website has since been revised to provide a gamut of resources in a visually appealing format. The website now uses a "counter" to track the number of individuals who visited the site each month.

Table 3*Question: How did you learn about today's professional development workshop?*

n=674	Frequency	Valid Percent
NWIESC Website	104	18%
Flyer in Your School	212	36%
Other	243	42%
Principal or Administrator	24	4%
Total	583	100%
Missing Cases in the System	91	
Total	674	100%

Workshop Effectiveness

Two statements taken from the Likert scale were used to determine the overall effectiveness of the workshops. The two statements were:

Statement #11: Overall, the workshop was successful.

Statement #12: The NWIESC should offer this workshop again.

Data from these statements are listed below in Tables 4 and 5. It is important to note that there are nine missing cases in this system for Statement #11 and 16 missing cases for Statement #12.

It is pleasing to know that participants, for the most part, valued their involvement in the professional development workshops. However, the data from this question lead to an opportunity for future revision of the survey questionnaire. Overall, the participants recommended that workshops were effective, but the question failed to probe how the workshops impacted their teaching and P-12 student learning.

Table 4

Statement #11: Overall, the workshop was successful.

n=674	Frequency	Valid Percent
Strongly Agree	270	41%
Agree	313	46%
Neither Agree/Disagree	53	8%
Disagree	25	4%
Strongly Disagree	4	1%
Total	665	100%
Missing Cases in the System	9	
Total	674	

Table 5

Statement #12: The NWIESC should offer this workshop again.

n=674	Frequency	Valid Percent
Strongly Agree	324	49%
Agree	245	37%
Neither Agree/Disagree	59	9%
Disagree	20	3%
Strongly Disagree	10	2%
Total	658	100%
Missing Cases in the System	16	
Total	674	

Food as an Incentive

A question was included to determine if workshop participation would increase if the NWIESC provided food at workshops. Of those individuals who answered this question, 48.7% (n=271) stated they would be more likely to attend the workshop if food were served. This data can be found below in Table 6. It is important to note that 118 subjects did not respond to this question, and this appears as missing cases in the table below. Based on this information, it is very important to offer some form of sustenance to workshop participants.

Table 6

Question: Are you more likely to attend a workshop if food is provided?

n=674	Frequency	Valid Percent
Yes	271	49%
No	285	51%
Total	556	100%
Missing Cases in the System	118	
Total	674	

Graduate Level Credit for Workshop Participation

A question regarding the awarding of graduate level credit was included in the survey questionnaire to determine if such credit would attract more workshop participants.

Of those who responded to this question (n=554), 66% (n=365) of the participants indicated that they would be more inclined to participate in workshops at the NWIESC if graduate level credit was provided for their involvement. It is important to note that 120 participants who returned the survey did not answer this question. In Indiana teachers, administrators, and school services personnel staff are required to renew their teacher's licenses every five years with six hours of approved collegiate course work (defined under Rules 46-47, Indiana Division of Professional Standards). This obligation becomes very important as it is the impetus for many participants to register for workshops when graduate level credit is offered as an incentive. This data can be found in Table 7 listed below.

Table 7

Question: Are you more likely to participate in a workshop if graduate credit was offered?

n=674	Frequency	Valid Percent
Yes	365	66%
No	188	34%
Total	554	100%
Missing Cases in the System	120	
Total	674	

Open-Ended Survey Analysis

The survey questionnaire examined the subjects' perspectives relative to their participation in NWIESC professional development offerings. The answers to Likert-scale and open-ended questions were analyzed based on frequencies, then compiled into emerging themes. The open-ended section included questions specific to workshop strengths, weaknesses, comments, and recommendations for future workshop topics. Boyatzis (1998) states, "It is the task of the researcher to interpret the meaning after obtaining the findings and to construct a theory after the discovery of the results" (p. 30). The purpose of the open-ended feedback was to take this study one step further by providing additional data in the form of short-answer questions. Qualitative data from these open-ended questions were aggregated into categories and used as part of the final analysis of this study. Themes included: presenter strengths, organization of the handouts and materials by the presentation, and a "wish list" of "hot topics" to be implemented in the form of future professional development offerings by the NWIESC. The most frequent topics are listed below (1=most requested):

1. Classroom Management
2. Differentiation
3. 6+1 Traits of Writing
4. Brain-Based Math
5. The Writing Process
6. Motivation
7. Dealing with Difficult Students
8. Portfolios/Mentoring
9. Science Topics/Inquiry
10. Curriculum Mapping
11. Reading Comprehension
12. Grant Writing

Based on the list provided above, this information will be used to help to generate the 2007-2008 professional development menu at the NWIESC. This list will be used in conjunction with data from a needs analysis conducted in the fall of 2006 at a meeting with area school administrators and curriculum directors. This data is a very important list since it is based on the intrinsic needs of P-12 teachers, administrators, and school services personnel. It is human nature to be drawn to programs or offerings that generate personal emotion and meaning. It will be interesting to learn if workshop enrollment increases based on offerings defined by the population for which the workshops serve.

Data Analysis

There were three objectives for this study. The first objective was to determine if the workshops presented by the NWIESC provided value to the workshop participants. The second objective was to determine potential trends about the intrinsic interest of each workshop topic irrespective of the quality of the presenters. The third objective was to identify the best method of recruitment for workshop participation, the types of incentives participants would like to have extended to them, and recommendations for future workshops. This section describes the findings of this study on the basis of the above objectives.

An analysis of the survey questionnaire results shows that, overall, participants felt as though their participation in their respective workshop(s) was worthwhile, and the NWIESC should continue to offer several of the workshops, such as: Mentor Training, Peggy Sharp, and Bullying and Recess Behaviors. Individual analyses were conducted on each of the workshops to determine effectiveness of the presenter and perceived value to the participant. Tables 4 and 5 provide rich data in that those responses were indicative of a positive professional development experience at the NWIESC. This data will be used to make future hiring decisions and decisions regarding the inclusion of the workshop topic for the following year. In some instances, evaluation data were shared with the presenters upon their request or provided voluntarily by the researcher to the presenter in an effort to offer feedback and to encourage self-reflection. In reference to presenter evaluation data, there is evidence that several workshop topics should be repeated next year; however, changes in personnel (consultants) are necessary to improve the effectiveness of those workshops. The participants provided valuable information, important insights, and recommendations that were greater than the researcher had imagined.

Recommendations

The following recommendations are included to improve the effectiveness of the NWIESC professional development workshops.

While the return rate of the evaluations is to be applauded (63%), it is recommended that a standardized system be put in place to ensure that program evaluations are conducted upon completion of each workshop. Perhaps an appropriate method to increase the survey return rate is to require a member of the NWIESC staff to distribute and collect the completed surveys towards the end of the workshop.

A second recommendation is to alter the survey questionnaire itself to maximize completion of responses. As indicated in the data above, many missing cases throughout the system might have been eliminated if the survey questionnaire was limited to a single side of paper or provided instructions to turn the paper over to continue with the survey on page two. Currently, the survey questionnaire utilizes two sides of a single sheet of paper.

“During the 2007-2008 academic year, the NWIESC will take this study a step further to determine two major factors: 1) to assess whether teachers have changed their method of teaching as a result of this training; and 2) whether student learning has improved as a result of teacher participation in the workshops.”

There are no instructions to make the participant aware that further questions exist on the back side (page two) of the instrument. Formatting is an issue and needs to be adjusted to decrease missing case values.

A third recommendation is to include additional categories on the survey questionnaire in the section pertaining to recruitment/communication of the workshops. Nearly 42% of the participants indicated that they learned about the workshop in a category labeled “other.” It would be beneficial to the NWIESC and educational stakeholders to better promote the functions of the website. The NWIESC Technology Coordinator is creating a new website that is more streamlined than the current site. The new website will be introduced to the public in the spring of 2007. It will behoove the researchers to continue to monitor survey questionnaire data to determine if the new website is being accessed more frequently to attract workshop participants.

And the final recommendation based on the open-ended feedback on the survey questionnaire is specific to the breakfast and lunch offerings. It would behoove the researcher to seek out feedback from workshop participants to determine the types of food they would prefer to have offered. Many public schools and charter schools in northwest Indiana have aligned with a health and wellness plan in their respective districts. The NWIESC should also strive to align its mission and objectives to provide a healthy option for its workshop participants when food is provided. Further investigation is necessary.

Summary

As school budgets continue to be challenged, it is important to examine the types and quality of professional development offerings to justify an educator's absence from his/her classroom or building for the day. This study is evidence that program evaluations are critical to improving the offerings and availability of workshops. In an editorial written by Marge Scherer, Editor-in-Chief for ASCD's journal, *Educational Leadership* (March, 2006), she stated, "Experienced teachers interested in career growth [are leaving] the profession, as [are] beginners who never received the help that they needed to become successful" (pg. 7). The NWIESC will continue to help those experienced teachers to acquire the knowledge, skills, and support that they need to grow in their current roles while providing new teachers with the mentoring and crucial support to survive in the early years of their chosen career. During the 2007-2008 academic year, the NWIESC will take this study a step further to determine two major factors: 1) to assess whether teachers have changed their method of teaching as a result of this training; and 2) whether student learning has improved as a result of teacher participation in the workshops. It is the mission of the NWIESC to be the leader in professional development opportunities grounded by best practices, innovative curriculum and instructional methodologies. The NWIESC will continue to improve its in-service offerings by incorporating higher levels of evaluation to monitor their impact on P-12 student achievement.

References

Boyatzis, R.E. (1998). *Transforming qualitative research*. Thousand Oaks, CA: Sage.

Dennen, V. (1997, December). *PLATO Learning evaluation series: Amoco Fabric and Fibers*.
Bloomington, MN: Author.

Scherer, M. (2006, March). What teachers want. *Educational Leadership*, 63(6), p. 7.

Carrie Cate-Clements, Ed.D., is the Professional Development Coordinator at the Northwest Indiana Education Service Center in Highland, Indiana. She may be reached by phone at (219) 922-0900, by fax at (219) 924-1246, and by e-mail at ccc@nwiesc.k12.in.us.

Charles Costa, Ed.D., is the Executive Director of the Northwest Indiana Education Service Center in Highland, Indiana 46322. He can be reached by phone at (219) 922-0900, by fax at (219) 924-1246, and by e-mail at ccosta@nwiesc.k12.in.us.

Karen J. Venditti, Ph.D., is an educational consultant and an assistant professor at St. Joseph's College in Rensselaer, IN 47978. She may be reached by phone at (219) 662-8932.



Who Should We Help? Prioritizing Limited RESA Resources for School Improvement

by
Gloria J. Gabriel

No Child Left Behind (NCLB) has created a new sense of urgency in many schools and school systems. The mandate that *all* children achieve at grade level by 2014 has caused teachers and administrators to rethink how they teach and how students learn. This new emphasis on student learning has created an unprecedented need for quality teachers and quality staff development, and the services of Educational Service Agencies (ESAs) are in more demand than ever. Because time, personnel, and funding are limited, many ESAs are now seeking ways to prioritize services so that those with the greatest need will receive the most help.

In Georgia, public school membership in an area ESA is mandated by law. Each Regional Education Service Agency, known as RESA, is charged to provide services to member systems under the direction of a Board of Control whose members include superintendents of the member systems, area college presidents, and the regional director of the public library. As the governing body, the Board of Control of each regional RESA makes decisions regarding the types of services offered.

Central Savannah River Area Regional Education Service Agency (CSRA RESA) is a relatively small agency in east central Georgia. The agency has nine educational consultants who serve 12 school systems comprised of 157 schools with a total student population of approximately 78,000 pupils. Services to these school systems include technical services, teachers for students with disabilities in hearing and vision, and professional learning opportunities that include content courses, pedagogy courses, endorsement programs, and leadership development.

Within the CSRA RESA region, there are many schools that are “high achieving” as defined by the state’s Adequate Yearly Progress (AYP) criteria and others that have not made AYP for many years. Annual AYP is based on three factors in Georgia. First, all groups and subgroups tested must meet the Annual Measurable Objectives (AMO) set by the state in the areas of language arts/reading and math. Second, at least 95% of all groups and subgroups must be tested using the state Criterion Referenced Competency

Test (CRCT) in grades 1-8 and the Georgia High School Graduation Test (GHS GT) at grade 11. The third criterion is chosen by elementary and middle schools. These schools usually choose attendance and strive to meet the requirement that no more than 15% of students may be absent more than 15 days per year. High schools must use the state's defined graduation rate (60% or greater) as their third criterion. Georgia's plan for meeting the NCLB mandate that all students achieve at grade level by 2014 includes incremental steps toward that goal. For example, 58.3% of students must currently meet AMO in math. The AMO standard will increase to 66.7% in 2008, 75.0% in 2010, etc. until the final goal of 100% is reached in 2014.

In its plan for communicating information to the public, the Georgia Department of Education issues annual reports regarding the AYP status of each school. In this report, schools that have not met the AYP requirements for only one year are not noted to be schools that need improvement. In other words, the first year of not making AYP is a grace period for the school. If improvement is not made by the second year, however, the school is reported to be in year one of needing improvement and is assigned a status of NI-1. Each additional year of not making AYP is reported through the listing of the school and its status as NI-2, NI-3, etc. The goal for all Georgia educators, of course, is to keep their school off the dreaded "list."

CSRA RESA's Professional Learning Department bases services on the assumption that increasing the knowledge and skills of educational personnel will result in increasing student achievement. Our agency has limited personnel, time, and funding. We have, therefore, developed a plan through collaboration with professional learning coordinators in

our member systems. This plan prioritizes services based on need. The final plan for prioritized services has received approval of our Board of Control and, therefore, guides our actions for FY08. In addition, we have disseminated this information to all schools in our member systems to inform them of what we can do, time and resource allocations, and why we have made those allocations.

"Only by using a systematic plan for prioritizing services can we continue to deliver professional learning in a fair and equitable manner to our systems."

Prioritizing Processes

In developing this plan, two options were considered. The first option is appealing in its simplicity because it is based on AYP status with all schools assigned a status of "Meets AMO" or "Does Not Meet AMO." This means of prioritizing was discarded, however, because the factors used in determining AYP can indicate many areas of need. For example, a school that has not met the attendance requirement for AYP during the past three years would be assigned an AYP status of NI-2. Another school that has not met the annual measurable objective for math for the past three years is also assigned an AYP status of NI-2. Since both schools are in NI-2, a prioritized plan that uses only AYP status would assign the same level of services to both schools although the schools vary greatly in their needs. While the first school may need a facilitator to assist in planning to improve attendance, the need for outside assistance will be limited. The second school, however, may need prolonged, intensive professional learning with coaching and monitoring to improve its ability to help students achieve in math.

The second prioritization option is to use the same data which determines AYP (that is, CRCT, GHS GT, attendance, and graduation data) and prioritize services based on the area of need rather than the AYP status. This plan, adopted for use in determining services to our systems, is described below.

1. Decisions regarding priorities for service are made based on need as reflected in the state’s CRCT or GHS GT in the areas of math, science, social studies, and English/language arts, which includes reading. In addition, attendance and graduation rates are also considered in this plan. Although AYP status also includes test participation rate, it was decided that CSRA RESA will not base services on this information because this is not an area where professional learning will benefit.
2. Based on data, schools can be placed into one of three categories.
 - Category A is at “No Risk” because all areas meet the AMO for adequate yearly progress and are at a level that will meet the next incremental step for AYP.
 - Category B is in “Jeopardy” because, although the score meets the state AMO requirements at this time, it does not meet the next incremental step for AYP as the requirement progresses toward 100% meeting AMO by 2014.
 - Category C is in “Danger” because data show that scores are currently below the state’s AMO.
3. Time allocations for assistance in the school are based on the priority level as defined below.
 - Level 1 – school is in Danger in any group or subgroup in math, ELA, or both.
 - Level 2 – school is in Jeopardy in any group or subgroup in ELA, math, or both.
 - Level 3 – school is in Danger in attendance or graduation rate.
 - Level 4 – school is in Jeopardy in attendance or graduation rate.
 - Level 5 – school is in Danger in science, social studies, or both.
 - Level 6 – school is in Jeopardy in science, social studies, or both.
 - Level 7 – school is at No Risk.
4. Once school status is determined, CSRA RESA can determine the amount of time available to each school. It was decided to allot time to schools based on the following annual plan. Adjustments to these allotments are made each year as schools vary in their levels of need and the number of RESA staff increases or decreases.
 - Level 1 schools – 24 days
 - Level 2 schools – 20 days
 - Level 3 schools – 16 days
 - Level 4 schools – 12 days
 - Level 5 schools – 8 days
 - Level 6 schools – 4 days
 - Level 7 schools – 0 days

5. An example of time allotments based on this plan follows:

6 schools at Level 1 (24 days each)	=	144 days
20 schools at Level 2 (20 days each)	=	400 days
21 schools at Level 3 (16 days each)	=	336 days
15 schools at Level 4 (12 days each)	=	180 days
25 schools at Level 5 (8 days each)	=	200 days
30 schools at Level 6 (4 days each)	=	120 days

RESA consultants are on a 210-day contract (42 weeks). With an average of one day per week for planning and office tasks, each of the nine consultants can deliver professional learning for 168 days per year for a total of 1,512 professional learning days per year. With 1,380 days committed to schools in level 1-6, there are 132 days remaining for professional learning to schools that are in level seven (No Risk). These are scheduled upon request of school and system personnel.

After the prioritized plan for services is complete, schools and systems are contacted to plan for service delivery. During this conference, RESA consultants discuss the findings based on school data and inform school and system administration of professional learning services that will assist in addressing the areas of need.

Serving Schools

Services to schools are two-fold. While targeted, content-driven interventions are required for improvement of student achievement, systemic improvement of school processes and policies are also required for long-term success. Therefore, significant, job-embedded, team-oriented leadership training is a critical element of services offered to all schools.

Services offered to all schools include the following:

I. Seminars, workshops, and/or courses related to curriculum, instruction, and assessment, such as

- Curriculum prioritizing, mapping, and monitoring;
- Instructional monitoring feedback;
- Use of formal and informal assessments;
- Standards-based unit design;
- Differentiated learning;
- Teaching strategies that increase student achievement;
- Content courses;
- Endorsement programs for Teacher Support Specialist, Gifted, and Reading;
- Leadership training in evaluation of personnel;
- Instructional technology workshops and seminars; and
- Job-alike meetings for area school personnel.

II. Seminars, workshops, and/or courses related to the school improvement process, such as

- Developing professional learning communities;
- School improvement planning process, including assistance with data analysis;
- School improvement plan implementation; and
- Accreditation assistance.

III. Seminars, workshops and/or courses related to development of effective schools, such as

- Discipline;
- Safety training and Crisis Prevention training;
- Legislative updates to systems and schools;
- Training for substitutes, paraprofessionals, bus drivers, and health specialists; and
- Assistance with special programs including Science Fair.

Levels one through six are offered additional assistance, including:

- On-site review of curriculum and instructional programs in the area of need, including curriculum, assessment, materials, and scheduling with recommendations for intervention;
- On-site leadership team facilitation;
- Seminars and coaching sessions on effective leader behaviors;
- School improvement planning, assistance with data analysis, and facilitation of meetings to plan for intervention strategies.

In addition, on-going, job-embedded professional development is offered in specific areas according to level.

- At levels one and two, professional learning is offered in reading/ELA and mathematics.
- At levels three and four, professional learning is offered in strategies to improve attendance and/or lower the dropout rate.
- Finally, at levels five and six, professional learning is offered in science and social studies.

At the school, consultants work with school and system leaders to plan improvement initiatives. For example, a middle school in the CSRA RESA region has an AYP status of NI-4 because it has not made adequate progress in the area of math in the subgroup of Special Education. Using the criteria in our plan for prioritizing services, we have placed this school at Level 1 (not making AYP in the area of Math). According to our plan, we can allot 24 days to this school for a consultant to work with teachers in improving math achievement of special education students. CSRA RESA's consultant whose area of expertise is special education is working with the school and system leaders to plan and implement a program of improvement for teachers. The plan includes professional learning, monitoring, coaching, and peer observations to improve math instruction to special education students.

As we move toward the public school's goal of helping all children to perform on grade level by 2014, teachers and administrators will continue to seek strategies and solutions for increasing student achievement. Therefore, there will be more and more demand for the services of educational service agencies. Unfortunately, requests for services will continue to exceed our capacity to deliver. Only by using a systematic plan for prioritizing services can we continue to deliver professional learning in a fair and equitable manner to our systems.

Gloria J. Gabriel, Ed.D., is Professional Learning Coordinator at CSRA RESA in Dearing, Georgia. She may be reached by phone at (706) 556-6225, by fax at (706) 556-8891, and by e-mail at ggabriel@csraresa.org.



The Role of ESCs in Ohio's New Regional Educational Service System

by
Craig E. Burford

Introduction

Amended Substitute House Bill 115 (126th General Assembly) was recently enacted to coordinate Ohio's complex system of regional educational service delivery that included more than 140 regional service providers organized as follows:

- 59 Educational Service Centers (ESCs)
- 23 Information Technology Centers (ITCs)
- 16 Special Education Regional Resource Centers (SERRCs)
- 23 Area Media Centers (AMCs)
- 8 Education Technology Corporations (Ed Techs)
- 12 Regional School Improvement Teams (RSIT).

The concept of regionalization of the state's educational service delivery systems is one that has been discussed through various forums over the course of the past 10 years, including, but not limited to the Ohio Schools Technology Implementation Task Force, The Center for Educational Leadership and Technology's (CELT) Independent Study and Review, the Governor's Commission on Student Success, the Governor's Commission on Teaching Success, The Blue Ribbon Task Force on Funding Student Success, and the Ohio School's Technology Implementation Task Force II.

Ultimately, these various task forces, and the resulting reports and recommendations, revealed that the state's system of regional service delivery was inefficient and underutilized by the state in the rollout of both new and existing services to school districts, and the service providers were organized in more than 140 separate and uncoordinated regions, which often resulted in redundancy and duplication of services.

The Educational Regional Service System (ERSS) enacted by the General Assembly seeks to address this problem by creating a system to support state and regional school improvement initiatives and promote a simplified approach to regional service delivery that is more coordinated than the previous system. Am. Sub. H.B. 115 was signed into law by Governor Bob Taft on June 23, 2006, and became effective 90 days later on September 22, 2006. Several provisions contained within the measure were subsequently amended in Am. Sub. H.B. 79 (126th General Assembly). The new system became operational July 1, 2007.

The Educational Regional Service System

The purpose of the new system is spelled out clearly in “intent” language that was included in the statutory text, stating its purpose to support state and regional education initiatives and efforts to improve school effectiveness and student achievement. Services, including special education and related services, are to be provided under the system to school districts, community schools established under chapter 3314 of the revised code, and chartered non-publics. Further, the bill states, “It is the intent of the General Assembly that the educational regional service system reduce the unnecessary duplication of programs and services and provide for a more streamlined and efficient delivery of educational services without reducing the availability of the services needed by school districts and schools.”¹

Composition of the ERSS

The bill clearly defines the components of the new system, the roles and responsibilities of each component, and how the varying entities inter-relate with one another in an effort to achieve the outlined goals and expectations as dictated in the legislative intent language. The new educational regional service system is organized into 16 regions. School districts are assigned to regions based on the county in which the district resides. However, districts do have the option to transfer regions within the first two years of the system’s operation. Under the law, the state board of education is mandated to adopt rules in consultation with school districts and regional service providers to establish a process whereby a school district may elect to transfer to another region; the ability to transfer sunsets after June 30, 2009.²

The system consists of five primary components: 1.) the state regional alliance advisory board, 2.) the regional advisory councils, 3.) the specialized subcommittees of the regional advisory councils, 4.) the fiscal agent of each region, and 5.) the regional service providers such as Educational Service Centers, ITCs, and others.³ Each of these components is explored in greater detail below.

“...the educational regional service system will facilitate the flow of more dollars for school improvement and related services to schools at the closest point of delivery utilizing the vast resources and expertise of Ohio’s existing regional service providers including educational service centers, the service providers with the greatest capacity”

State Regional Alliance Advisory Board

The State Regional Alliance Advisory Board (SRAAB) created under the bill is a 34-member state-level entity created to address issues affecting the operation of ERSS and statewide education initiatives. Twenty-

nine members of the SRAAB are voting members, five are ex-officio, non-voting members. The SRAAB is not a policy-making body. Rather, its responsibilities are to promote communication and coordination among the State Board of Education, the Department of Education, fiscal agents, advisory councils, and users of ERSS. The SRAAB also must identify issues regarding ERSS that may require action by the State Board or the Department, and must recommend quality standards for the delivery of services to school districts and schools through ERSS. The SRAAB must provide copies of its recommendations to the Department of Education and the regional advisory councils.⁴

Membership of the State Regional Alliance Advisory Board is comprised of one member of each regional advisory council, appointed by the council (see below), one member of the State Board of Education, one representative *each* of both two-year and four-year institutions of higher education, one representative of the Department of Education, one representative of the governor, one teacher, one parent, one representative of business, one school administrator, and one representative from *each* of the state professional associations representing superintendents, educational service centers, boards of education and school business officials.⁵

The Superintendent of Public Instruction is an ex officio member of the board and the designated chairperson. The additional ex officio members include the chairpersons and ranking minority members of the education committees of the Ohio Senate and the Ohio House of Representatives, or their designees. For two years after its initial meeting, the Board must meet at least four times each year. After that time, all meetings are at the call of the chairperson or upon the request of at least one-third of the Board's members.

Regional Advisory Councils

Each region of the system must have an advisory council consisting of a specified number of superintendents, regional service agency representatives, representatives of both two-year and four-year colleges and universities, school board members, at least one business representative, and at least one classroom teacher. However, any advisory council may, and should where appropriate to ensure coordination and cooperation, increase its membership beyond the required members by adopting a resolution specifying the number of additional members, their manner of appointment, and any eligibility criteria for appointment.⁶

Under the law, regional advisory councils are directed to identify regional needs and priorities for educational services to inform the Department of Education in the development of the performance contracts entered into by the fiscal agent of the region under section 3312.08 of the Revised Code. This represents a significant policy shift in which school district and education stakeholder feedback is required in the development of state-funded school improvement and related services.

The councils are also responsible for developing policies to coordinate the delivery of services to school districts, community schools, and chartered non-public schools in a manner that responds to regional needs and priorities. However, these policies cannot supersede any requirement of a performance contract entered into by the fiscal agent of the region.

The regional councils are also responsible for making recommendations to the fiscal agent for the region regarding the expenditure of funds available to the region for implementation of state and regional education initiatives and school improvement efforts.

Several accountability functions are also built into the new system. The regional councils are directed under the law to monitor implementation of state and regional education initiatives and school improvement efforts by ESCs, ITCs, and other regional service providers to ensure that the terms of the performance contracts entered into by the fiscal agent for the region are being met. This provides an important accountability mechanism for customers of regional education initiatives that has been absent until now. Finally, each region must establish an accountability system to evaluate the advisory council on its performance of the duties described above.⁷ Additionally, as outlined above, the state-level regional alliance board is charged with the development of quality regional delivery standards.

Regional Advisory Council Subcommittees.

Each advisory council of each region of the educational regional service system is also responsible for establishing specialized subcommittees of the council in the areas of school improvement, education technology, professional development, special education, and Information Technology Centers (ITCs).⁸ Each advisory council subcommittee has certain required members as specified in statute. Individuals appointed to serve on the regional subcommittees are required to reside or practice their occupations in the regions; if no such person is available, the council must appoint a similarly situated person from an adjacent region. Additional subcommittees may be established as needed to address topics of interest to the council and must include individuals with expertise in the topic addressed by the subcommittee. Any member of an advisory council may participate in the deliberations of any subcommittee established by the council.

Each advisory council subcommittee makes recommendations to the advisory council regarding the implementation of state and regional education initiatives and school improvement efforts in the subcommittee's area of specialization. The recommendations may include strategies to tailor state education initiatives to regional needs and priorities or to maximize funds available to the region for the provision of services in the subcommittee's area of specialization.⁹ The ability to make these recommendations demonstrates the new focus on the consumer under the new system.

Fiscal Agents

Under Am. Sub. H.B. 115, the Ohio Department of Education was directed to select, no later than January 31, 2007, a school district or ESC in each of the 16 regions to be fiscal agent for the region.¹⁰ This move reduces the number of fiscal agents contracting with the Department from more than 40 a few years ago to 16. The Department of Education must then enter into performance agreements with the selected fiscal agents for the provision of statewide school improvement and related activities.

The Ohio Department of Education is required to consider the following when entering into performance contracts with the fiscal agent of each region of the educational regional service system and when allocating funds for the implementation of statewide education initiatives by regional service providers:

- the unique needs and circumstances of the region;
- the regional needs and priorities for educational services identified by the advisory council for the region; and
- any services that will be provided to school districts and schools within the region pursuant to division (A) of Section 3302.04 of the Revised Code.¹¹

Each performance contract entered into by the Department of Education and the fiscal agent of a region for implementation of a state or regional education initiative or school improvement effort must include an explanation of how the regional needs and priorities for educational services have been identified by the advisory council of the region, the advisory council's subcommittees, and the Department of Education.¹² This is an important aspect of the legislation as it provides for a clear feedback role for districts and the other components of the regional delivery system in informing and developing statewide school improvement initiatives through the Department of Education.

Regional Service Providers

The Educational Regional Service System maintains the existing, independent regional service providers such as Educational Service Centers (ESCs), and Information Technology Centers (ITCs). However, the measure did provide further clarity to the roles and responsibilities of these entities under the new system. For instance, ESCs are required to provide the services that they are specifically mandated to provide by the Revised Code; however, they may also enter into agreements pursuant to Sections 3313.843, 3313.844, or 3313.845 of the Revised Code for the provision of other services, which may include any of the following:

- assistance in improving student performance;
- services to enable a school district or school to operate more efficiently or economically;
- professional development for teachers or administrators;
- assistance in the recruitment and retention of teachers and administrators; and
- any other educational, administrative, or operational services.

In addition to implementing state and regional education initiatives and school improvement efforts under the educational regional service system, educational service centers must, under the new law, also implement state or federally funded initiatives assigned to the service centers by the General Assembly or the Department of Education.¹³

Implementation

The Ohio Education Regional Service System became operational July 1, 2007, subject to appropriations of the Ohio General Assembly; the Ohio General Assembly appropriated \$13.7 million in state funds for school improvement. Additional funds for services related to children with disabilities, literacy and early childhood education will also be appropriated through the regional structure. The work of the regional advisory councils will revolve around two distinct areas: 1) defined – state and federally funded school improvement and related education initiatives as previously outlined, and 2) undefined – regional collaborative efforts utilizing the existing resources and expertise of each region to deliver services in a more coordinated, cost effective and efficient manner. It is the currently undefined work that presents perhaps the greatest opportunity for collaboration and the creation of new and innovative programs and services based on regional needs and priorities.

State-funded school improvement services will be provided under the system to districts or schools based on needs. General guidelines for determination of priority for state-funded school improvement services are:

- **Priority 1:** All Ohio public school districts. Various programs and tools will be made available statewide. These districts are not identified for specific technical assistance.
- **Priority 2:** The districts are deemed to be medium risk based primarily on Adequate Yearly Progress status or Special Education compliance issues.
- **Priority 3:** Highest risk category based on the numbers or percentages of students not proficient, the districts being in Corrective Action status, multiple buildings not making AYP, or other qualifiers.

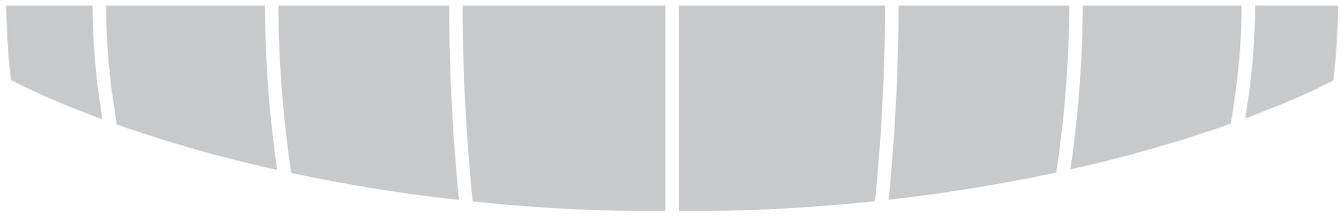
ESCs will be trained to use diagnostic and other statewide school improvement tools so ESCs are positioned to assist all districts who request additional help. This effort could assure consistency across the state and a more focused effort.

Conclusion

The focus of the system is clearly on more defined roles for the Department of Education and educational service providers as well as increased consumer choice and accountability in the delivery of statewide school improvement and related education initiatives. Further, by reducing the number of fiscal agents from over 40 to 16, capping administrative fees, and addressing duplicative services, the educational regional service system will facilitate the flow of more dollars for school improvement and related services to schools at the closest point of delivery utilizing the vast resources and expertise of Ohio’s existing regional service providers including educational service centers, the service providers with the greatest capacity.

Craig E. Burford is Executive Director of the Ohio ESC Association. He may be reached by phone at (614) 846-4080, by fax at (614) 846-4081, and by e-mail at info@oesca.org.

¹ R.C. 3312.01(A)
² R.C. 3312.02(A)
³ R.C. 3312.01(B)
⁴ R.C. 3312.12
⁵ R.C. 3312.11
⁶ R.C. 3312.03
⁷ R.C. 3312.04
⁸ R.C. 3312.05
⁹ R.C. 3312.06
¹⁰ R.C. 3312.07
¹¹ R.C. 3312.13 (A), 3312.13 (B), 3312.13 (C)
¹² R.C. 3312.09 (A)(1)
¹³ R.C. Section 3312.01 (C)



Using Data in Decision Making Starts With Quality Training: The Minnesota Story

by
Jan Brunell

The first step in achieving student growth is using the data at hand to assure that all students are progressing down an appropriate learning path. Helping educators use data to create these learning paths can be a daunting task. Educators often do not have the resources and time to view and think critically about student data.

The state of Minnesota set out to make this goal achievable by awarding the Central Minnesota Educational Research & Development Council (cmERDC) an E2T2 Grant to develop successful strategies for improved student achievement. As project coordinator for this grant, I oversee 18 participating school districts, both public and non-public, urban, suburban and rural from central Minnesota. Our largest participating district has over 40,000 students, and our smallest has less than 100 students.

The council chose to focus this initiative on middle and high school educators. We found that, in doing research, secondary school teachers tend to be much more compartmentalized than elementary educators and collaboration doesn't easily occur. Our task was to enhance group learning.

The pioneers of this program were the 125 educators who were trained in data-driven decision making (DDDM) strategies and especially the 15 people who had extensive training and became "certified trainers." These individuals organized and lead or co-lead professional learning communities (PLCs) in their districts. The PLCs are teams from schools that meet once or twice a month for up to an hour to work on focused goals tied to improved student achievement. In all we have approximately 600 teachers participating in the PLCs. The grant covers the expense of the staff development with much of it designated for stipends for the 600 participating teachers. Schools can use the stipends to hire substitutes if the teachers meet during school hours. We have found, however, that most teachers are meeting before or after school in which case the stipends go directly to the teachers who participate.

The cmERDC group felt professional learning communities were an imperative aspect of ensuring the program's success. The PLCs operate within their own district yet collaborate with all grant districts. It is

important to have points of contact at each participating district to handle the local implementation. Also, we have found that each district has different needs and perspectives but that they collaborate really well. The small and large, public and non-public districts have learned from each other.

To reach our destination, we want others to learn from the practices that this group of educators finds most effective. Our goal is to have the participating schools, as well as others, continue to use data to drive instruction and to make it enough of their culture that they choose to sustain the approach after the grant has expired.

Our Vehicle for Achievement

Each district has a grant facilitator who leads its project and PLCs. Participating educators share the knowledge they gained from the DDDM training to guide the definition and refinement of instructional strategies for improved learning. These grant leaders schedule and facilitate the PLC meetings, based on goals defined in their PLC Work Plan. PLC participants fill out a reflection sheet each time they meet, which is information that's shared with the grant group.

The groups are targeting the following steps:

1. **Define the problems and goals** (What are the learning problems we want to solve?)

For example, only 68% of the 6th grade males and 75% of the 6th females are proficient in reading. Another problem area is vocabulary. Our goal is an increase to 80% proficiency in reading and vocabulary for both groups.

2. **Develop hypotheses** (Why do we have these problems?)

For example, much of our curriculum focuses on reading materials that are generally not as interesting to boys as to girls. We spend too little time on vocabulary.

3. **Select and implement strategies** (How will we fix these problems?)

One approach is to modify the reading materials to include selections more interesting to boys. We will also focus more activities on vocabulary in all subject areas and include weekly vocabulary quizzes in all reading classes.

4. **Evaluate attainment of goals** (Did we achieve our learning goals?)

Participants review their goals and practices using data and then modify those activities that are not working. Each district either uses Viewpoint, a data warehouse and management tool developed by Savia, LLC and now owned by cmERDC, Microsoft Excel spreadsheets, or printed data. The most efficient and effective way to get a clear picture of the data is through a tool like Viewpoint. Viewpoint brings the data from multiple district systems, spreadsheets, or printed data into one, easily accessible place for teachers and administrators. Viewpoint identifies groups of students based on specific criteria or attributes, a process that allows teachers to deliver more targeted instruction. Also, teachers can see an individual student's data in the student cumulative report, which will help them individualize instruction.

The grant group uses a website, *Data Driven Success!: An On-line Learning Community for Data Driven Decision Making* (<http://e2t2.erd.c.k12.mn.us>), for collaborating and sharing best practices. The website also

provides multiple tools and resources for the grant facilitators, other grant participants, and the outside world (“Guests-Non Members”) in order for all to benefit from our findings. Areas of the site include:

Forums – Collaboration forums for teachers, grant coordinators and others. Individuals can ask questions or share information and results.

Best Practices – This area includes details of the best practices as determined by each PLC.

Data Driven Decision Making Training Tools – These include training documents - PowerPoint presentations, facilitators’ documents, etc.

Data Driven Decision Making Documents – This area of the site provides supporting DDDM documents for K-12 educators.

Articles of Interest – Articles that address data driven decision making, including success stories.

Links of Interest – Links that provide more information and research on data driven decision making.

Survey Results – This is a mini-data warehouse of results of all surveys to date, including pre-training and post-training results.

Potholes Along the Way

The largest “pothole” to our smooth travel was the turnover in the original 125 teachers trained. Several teachers either left the districts that were participating or their roles within the district changed and did not leave them time to manage the program. To deal with this issue, we created mini-training sessions. These allow us to train smaller groups of people in less time.

Outcomes

Through our surveys we see that the PLCs have begun to make progress in many areas:

- They understand data and its value for teaching students.
- They understand the assessment terminology and measurements.
- They understand the importance of differentiated instruction for students.

Grant participants shared best practices at a recent User Exchange. A tremendous amount was learned as members shared both their successes and failures. Some tips included the following:

- Goldilocks and the Three Bears were right about data . . . there’s too much, too little and then there’s JUST RIGHT . . . try to find that “just right” point!
- When analyzing achievement results we often focus our attentions on deficits, which can get discouraging for staff and students. Instead be sure to look at what you do well and relate how you can use those strengths to address your areas of weakness.
- Smaller-sized professional learning communities (PLCs) are more effective and beneficial than larger groups.

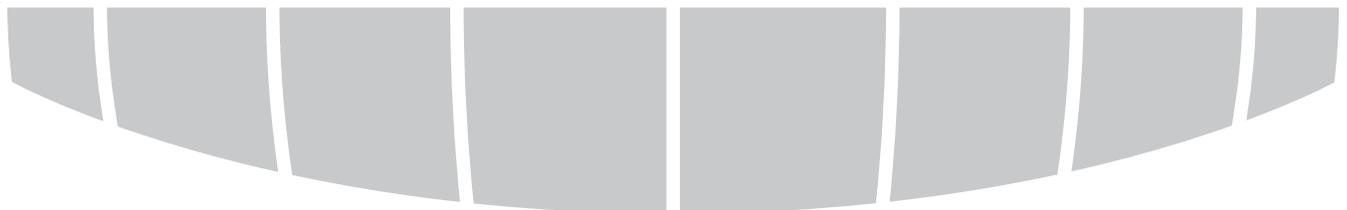
- It's important in the PLCs to engage teachers outside the core subject areas, such as Family and Consumer Science, Physical Education, etc. This helps build a stronger culture where every staff member is engaged.
- Data driven decision making (DDDM) is not a fad; it's here to stay. It's the best practice for the students, even without AYP or NCLB.

For a complete list of tips visit the project website noted above (<http://e2t2.erd.c.k12.mn.us>). Under Best Practices, see the "Mid-Project User Exchange: Best Practice Tips & Tricks" document.

Future Objectives

The PLCs will continue their work through November 2007. Educators are invited to continually visit the grant project website to follow our progress.

Jan Brunell is Data Warehouse Product Manager at the Central Minnesota Educational Research and Development Council (cmERDC) in Shoreview, Minnesota. She may be reached by phone at (651) 286-8952, and by e-mail at jbrunell@erd.c.k12.mn.us



Linn Benton Lincoln Delivers Early Functionality With Data Warehousing and Analysis System

by
Sue Adelman

(Data warehousing is a growing trend in education, a trend that is often led by the ESA. The following article describes a newly installed data warehousing system, so new that claims for its value are not yet possible. However, the organization described to make the system work seems highly functional; therefore, the article can be of interest to ESAs embarking on the data warehousing function. Ed.)

Linn Benton Lincoln Education Service District (LBL), headquartered in Albany, Oregon, has taken an important first step in data-driven decision making by providing a functioning data warehouse to its members. The warehouse is a single location that combines and integrates diverse district data – everything from test scores to attendance records. And while still a work in progress, the first steps have been encouraging. “Data warehouses are popping up all over Oregon, but we’re the first one to have something functional,” said Tom Luba, Director of Learning Options for LBL ESD.

LBL, which provides educational support programs and services to 12 component school districts, 87 schools and approximately 33,000 students in Linn, Benton and Lincoln counties, plus another 30,000 students in districts outside its region, recently implemented what it calls its Decision EdVantage system with the goal of giving teachers and administrators the information they need to make the best possible educational decisions for students.

“Our 12-district Superintendents’ organization came to us and said they wanted an easier way to get at data about the kids in their districts,” Luba recalled. “They particularly wanted to be able to do longitudinal analysis to track the performance of student cohorts as they moved from grade to grade – something that was nearly impossible just using our existing student information system,” Luba said.

Although many ESAs might have assigned the task of implementing a data warehouse to its IT staff, LBL saw the process as integral to instruction, and put the project in the Learning Options Department, which facilitates school improvement, e-learning, alternative education, home school and other specialized instruction support programs.

After investigating a number of data warehousing options, in 2006 LBL opted to partner with TetraData, a division of Follett Software Company. “TetraData was the only solution that we felt was created specifically for education,” said Luba. “TetraData has done a great job of creating tools that make sense to our educators.” In addition, TetraData’s recommendation for a multi-level professional development program allowed districts to access the information most important to each of them for improving instruction, Luba explained.

The LBL System

LBL’s system includes a number of integrated components:

- A data warehouse designed to match the data model already in use in LBL’s student information system.
- A data portal – a single website that provides users with access to the data in the warehouse. The portal was equipped with a graphic user interface called a “dashboard,” which allows users to easily monitor test scores, absentee rates, disciplinary incidents, and other pertinent data so they can quickly see how schools, classes, teachers and students are performing at any time without having to sift through and interpret mountains of data.
- A web-delivered analysis application that lets remote users quickly create queries, or sets of instructions for building reports which relate any data in the warehouse, with an easy-to-use, drag-and-drop interface.
- A dynamic reporting tool that allows users to generate detailed, pre-formatted reports from various warehouse data sources and deliver them in user-friendly formats like PDF.

Luba and his team identified different analytical missions that were of high interest to each member, and the tools quickly found their way into the hands of educators. By supporting a variety of different uses and launch goals the initiative returned information that was specifically valuable to each unique member from the first stages of roll-out.

“The second we had it up and had trained district staff, they were using it,” he recalled. “They had something that was really functional and were able to see value right away. However, one of the big challenges we had, especially at the start, was getting users away from thinking about data in terms of state or federal compliance reporting and moving them toward data driven instructional decision making. For many educators, that’s a real paradigm shift,” Luba said.

Components of the System

LBL’s data warehouse includes data such as attendance, behavior, grades, special education status, state test performance, formative assessments, and basic demographic information like ethnicity, primary language, etc. This data exists all the way back to the 2002-2003 school year and is available for longitudinal analysis, in which the performance of a single group of students can be tracked over a series of years. “Previously, if someone wanted to look at a kid’s performance or growth, or a group of kids’ performance or growth, before and after a set of interventions were implemented, and in combination with other data points that might have an effect on performance, it was nearly impossible to do longitudinally,” Luba said. “Having

the data warehouse and the analysis tools that come with the TetraData warehouse enables all levels of staff to conduct this sort of analysis with relative ease.”

Professional Development

The key to sustained success was providing professional development to make sure educators and administrators get the most value from the system. “At the outset most of our users didn’t really know in depth what they would be able to accomplish with these tools,” he said. “They knew they’d get better access to state testing data, but they didn’t understand how they could layer that with other data and make data more useful over time.”

Working with TetraData, LBL launched a professional development campaign designed to reach all stakeholders in the warehouse. “We implemented a strategy that TetraData suggested, which was to start with a group called a Senior Leadership Team,” Luba said. The team comprised a wide assortment of staff from throughout the region: superintendents and assistant superintendents, curriculum and instructional leaders and technical staff. “That group continues to meet and make decisions about directions for professional development, and has input on the further development of the warehouse itself,” Luba said.

The second step was to implement a train-the-trainer program. “We worked with TetraData to train 15 people from the districts, and they went back to their districts and trained others on how to use the tools.” A third part of the plan called for the development of data teams – groups of educators and administrators in a district who provide leadership regarding how to use data to improve instruction. In addition to encouraging districts to build data teams, LBL is beginning to involve Positive Behavior Support (PBS) teams already

“The bottom line is, the more standardization in your data, and the better the shared understanding of common data definitions, the higher the integrity of the data of your warehouse and its value for comparative purposes.”

in place at many schools to use data to further their mission of creating positive school environments.

The data is also being explored by school Response to Intervention (RTI) teams, which are designed to more accurately identify individual student learning problems and address those problems at the source.

The use of online tools has also been an important component in LBL’s professional development tools. “We used an open-source course management system called Moodle to create an online professional development community, letting our users exchange all sorts of information,” Luba said. “For example, users have been sharing their queries; when they develop a useful query they can post the query file on the system so others can download and rerun it on their own data. It’s a nice way to keep the communication going.” A typical query might consist of a request to view a certain school’s reading assessment scores sorted by the sex of the student, or by attendance days, or both. Being able to use a pre-tested query file saves time in generating reports and helps spread knowledge among members as they learn to look at the data and explore and share what’s working.

Advantages of Data Warehousing

The ability to compare data from school to school and district to district brought a new recognition of the importance of data integrity, making certain that everybody defines data in the same way and follows the same procedures for capturing and entering it. “While expanded data access created new possibilities for users, it also uncovered some lurking problems,” Luba recalled. “The biggest surprise was that we pretty dramatically underestimated what it takes to insure integrity of data in the warehouse and to be able to help people understand what the data means before they go about building a query,” he said. “People would run queries and look at numbers and say ‘That can’t be right.’ On the one hand it’s the old problem of garbage in, garbage out; if the data is flawed, getting it into a warehouse doesn’t fix it. A lot of times the way users were entering data was inconsistent, or the way a data field in the student information system (SIS) was related to a corresponding field in the warehouse was flawed. Vetting of data took most of our time with the implementation over the last year.”

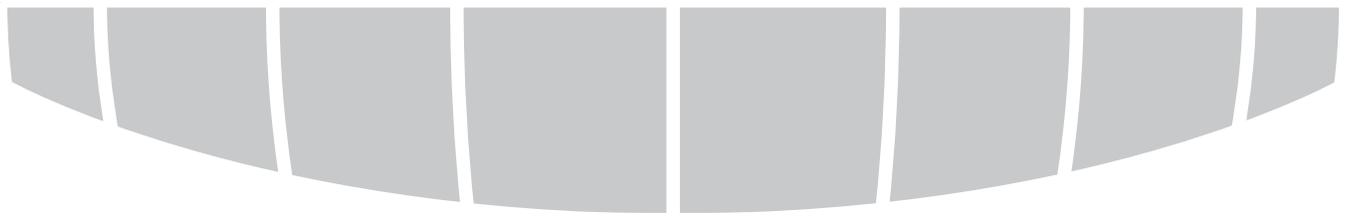
“The thing we came to appreciate is that what a piece of data means to one person is different from what it means to someone else,” Luba continued. “For instance, if someone wants to pull attendance as an attribute in a report, they have to understand what the data are that are behind the term ‘attendance.’ What does ‘Tardy’ mean? When we implemented our SIS, we allowed a wide amount of flexibility in how people identified things, so frequently attendance terms didn’t tie to any standard. We discovered we needed to create a list of standardized codes to define the reasons for an absence, and every absence has to be tied to a specific code, so the data is consistent.” he said.

In response, LBL has been building a data dictionary, containing a standard definition of every attribute and object in the warehouse. “The bottom line is, the more standardization in your data, and the better the shared understanding of common data definitions, the higher the integrity of the data of your warehouse and its value for comparative purposes,” Luba said.

While it’s still too early in the implementation for the new data warehouse to have had much of an impact on student achievement, Luba sees some hopeful signs. “Educators are getting a better sense of what the whole concept of data-driven decision making really means,” Luba said.

“In the past there’s been a strong tendency to look at data strictly from a compliance standpoint. People are now beginning to move off of that idea and to use data to identify weak areas of instruction, and look at socioeconomic conditions, behavior, attendance and other factors that might influence student performance,” Luba said. “In the end, you want a teacher or administrator who’s not just concerned with seeing how her kids did on the state test, but to see what else is going on that affects student performance. Educators need to think about data in a different way and to use that data driven thinking to actually translate into meaningful reforms. That’s what we’re working to achieve,” Luba said.

Sue Adelman is project manager for the Follett Software Company. For an educator’s perspective about the software it is recommended that contacts be made with Tom Luba, who is quoted frequently in the article. He is Director of Learning Options for the Linn Benton Lincoln Education Service District in Albany, Oregon. He can be contacted by phone at (541) 812-2602, by fax at (541) 926-6047, and by e-mail at tom.luba@lblessd.k12.or.us.



Seeing the Full Spectrum of American Education: A Journey of Discovery and Leadership

by
Donna Durno

What contributes to effective leadership of an ESA? The answer to this question is as varied as life itself.

ESAs are unique organizations. Straddling the government and non-profit sectors, our agencies must provide numerous resources to different groups of people, all of whom have different needs, desires, and goals. We must be all things to all people, while maintaining our focus on our mission. This, to say the least, is a complex task.

I bring a varied background to my ESA leadership role: school superintendent, state education leader, state organization president, university professor, non-profit director, and business leader. Which of these roles have contributed to our success and my own joy in the role of ESA leader? All of them.

The Allegheny Intermediate Unit

Our ESA, the Allegheny Intermediate Unit (AIU), was formed in 1970 when 67 county offices of education in Pennsylvania were consolidated into 29 service-oriented Intermediate Units. We assist 42 suburban school districts in Allegheny County that surround the city of Pittsburgh.

Since its creation 37 years ago, the AIU has weathered many changes in state education politics and policies. About 17 years ago the state redirected special education services to the school districts, a shift that caused a significant decline in staff and revenues. A few years later, the state reduced its operational financial support to Intermediate Units by a draconian 50 percent. But challenges often present opportunities, and, as a result, the AIU has developed its creativity and an entrepreneurial bent in order to survive.

AIU employees have always embraced a culture of quality and service. Although we are driven by strategic goals developed through our planning process, none of them reflect a stated desire for growth. Yet in the last eight years our annual revenue has grown from \$100 million to \$169 million. Reflecting on this surprised me, and caused me to realize that quality and service are, indeed, a driving force.

In addition to the revenue growth, there have been several changes at the AIU. A new building was built along Pittsburgh's Monongahela River in a large commercial development. The shift from renting our central office to owning it resulted in the savings of \$12.6 million dollars over the life of the mortgage, more positive visibility in the community, more effective operations, and an increase in morale. We have focused on professional development by creating programs such as the Reading Achievement Center, funded by local foundations and fee-based services, and the Math and Science Partnership, funded by the National Science Foundation. To increase the efficiency of operations, a restructuring of the organization grouped all programs into two equal-sized divisions: the first focusing on K-12 education and the second on those programs outside of the regular K-12 focus, such as early childhood, alternative, and adult education and workforce development programs. In addition, our joint purchasing program, which acquires energy and supplies on a wholesale level, has saved our customers \$10.6 million in the 2005-06 school year alone.

The AIU is unique even among Pennsylvania's Intermediate Units. In order to properly use the organization's diverse resources, it is important that its leaders understand every aspect of the American education system.

Different Roles In Education

I began my career in education in 1971 at Westmoreland County's Norwin School District as a Home Economics teacher; later, I became a vocational advisor and then the Director of Federal Programs. Moving to the South Western School District, I enjoyed the role of Assistant Superintendent for Instruction and Pupil Services. I then became the superintendent of Mars Area School District in Butler County, and held that same position later at Harrisburg's Susquehanna Township School District. All four districts were distinctly different in nature, but nevertheless were solid performers and provided me with many opportunities to express my passion for education.

In the late 1980s, I was appointed Commissioner of Basic Education for the Commonwealth of Pennsylvania, in which position I reported directly to the Secretary of Education. It was my responsibility to oversee all public and private elementary and secondary schools in the state. To this end, I coordinated the activities of six bureaus such as the Curriculum Services, Special Education, and Instructional Support Services Bureaus. It was an exciting opportunity to learn how public education was, and still is, influenced and controlled by the state legislature, state professional education organizations, the courts, and the media. It was also an opportunity to learn about the "local control" culture of Pennsylvania and the new state effort to control educational outcomes.

My state role came at the time when governors saw re-election possibilities if schools improved. For years, many states and the federal government had relinquished responsibility for education to local school boards whose members are elected by the district's electorate. Unlike many states, Pennsylvania allows its districts to make independent decisions regarding curriculum, textbook purchases, and other achievement initiatives. In addition, local school boards also have more authority to levy taxes on property owners. Currently, the state government provides only approximately 36 percent of a typical district's budget; in contrast, many Southern states provide as much as 85 percent of a district's total finances. While I served as

commissioner, the activities of state department staff were always questioned by local educators and school board members who, while having the best interests of their districts at heart, viewed most state-initiated activities as interference.

During my tenure as commissioner I attempted to provide leadership for school administrators in many areas. Policy makers, myself included, had urged schools to adopt new, research-based practices, but too many people seemed to think that innovative changes could only be carried out in schools other than their own. I would hear, “That might be a good idea, but it can’t happen here with the board we have,” or “Sounds good, but our teachers wouldn’t be interested, so it wouldn’t work here,” or “Our superintendent would never permit that.”

In spite of what we accomplished, after two years I resigned my state post, feeling especially discouraged about the perception of schools held by those who had never worked in them. I had spent two years making policy with a large group of people who had never been educators and who had no concept of what it takes to run a successful school. I had had very positive experiences in four different districts and was tired of defending schools and my profession. I began to lose my own faith about being an educator. Even worse, I had almost lost my faith in the American education system.

Coming Full Circle

In an effort to regain that lost faith, I decided to visit schools across the country and see for myself what made them special. I found that even people who want change often stop supporting it when they are challenged themselves to change, or if there’s too much pressure from others not to change. Nevertheless, I had seen wonderful things happen in some schools. What did they have that made it work? I needed to relearn the lessons of the classroom, and I wanted to know what good schools did well. So I sold my house, put my furniture in storage, bought a red Honda Prelude, and set out to rediscover public education. Maybe I was wrong. Maybe public education was not as abysmal as my colleagues at the state capital had reported. I wanted to see for myself.

So I spent the 1989-90 school year traveling around America, teaching and learning in 46 schools in 19 states. In some of these schools I was a substitute teacher or a classroom aid. In others I was a tutor. I offered my services and experience in exchange for the opportunity to learn how the schools were operated. I wanted to see what the staff and faculty offered that made these schools so successful. Indeed, I had gone full circle, from teacher to state education leader to teacher. I drove 20,000 miles during those months and taught in a variety of schools: large and small, homogeneous and diverse, elementary and secondary, rich and poor. It was a very profound experience concluding with the recapture of hope for American education.

If there was one place that truly embodied that hope it was Mather Elementary School, located in Boston’s Dorchester neighborhood.

The first public school in the nation, Mather had celebrated its 350th anniversary just one day before my visit. The excitement of the event still lingered in the air as I spent the day learning about the school. Just a few years before, the school had been in a state of disrepair; with its leaking roof and cracked windows, it had become a symbol of poor, urban education. But an enthusiastic principal, Kim Marshall, managed to turn much of the school around by convincing his staff and the community to unite around the 350th anniversary celebration. Morale was raised, and so was funding. Within two years the school had raised a million and a half dollars from 88 individuals and institutions. As a result of good leadership, the physical

facilities, support services, teacher morale, and student behavior had all improved. It was obvious that the descendants of Dorchester, who came to North America on the good ship William and Mary, still believed in public education.

Quality leadership was also evident at Fabens Independent School District, located in southern Texas, three miles from the Mexican border and 18 miles southeast of El Paso. Enrolling over 2,000 students, 96 percent of whom were Latino, Fabens was the eighth poorest school district of over 1,000 districts in Texas. In addition, 83 percent of the student body was in the federal free or reduced-price lunch program. Despite this dismal economic picture, Fabens boasted a student attendance rate of over 97 percent, dramatically improved student test scores, and an annual drop-out rate of less than four percent. I was impressed by the calm, pleasant demeanor of the students and the respect they showed to each other and to me. After talking with the superintendent, Eli Casey, I realized that he deserved much of the credit for the successful school program. He was a leader who cared about students and their families, as well as the community in which he lived. Attendance was Eli Casey's top priority because he knew that the first step to a good education is for students to be in school. He also kept the lines of communication open by personally distributing the district's newsletter to the town's businesses, and by having an interpreter present at every board meeting so that business could be conducted in both Spanish and English.

“During my career in education, as a teacher, administrator, superintendent, state commissioner, university professor, non-profit director, American sojourner, and seeker of truth, I have learned multiple lessons about leadership and what is necessary to run good schools.”

These and many other eye-opening experiences of my trip sparked a new level of excitement for my mission and renewed hope for public education. Poverty and cultural differences were not the blocks to learning that many educators believed them to be. During my journey, it became clear that the best schools were and are led by administrators who know instruction and whose priority is to assure effective learning opportunities for all students.

I kept these, and other leadership lessons, in my mind as I ended my trip and returned to “the real world.” My faith in public education restored, I was ready to move on and see yet another aspect of education. After a brief respite, I was again lured to the West by a friend who needed a roommate for her beautiful San Francisco apartment, which had a large bay window and spectacular view. I couldn't resist.

After moving to California I spent time as the head of a non-profit educational organization, a university professor, and a senior vice-president of a chain of 17 accredited junior colleges. The group of colleges was organized as a non-profit organization but was run like a business. I was attracted to the job by the opportunity to experience education as a business. My executive colleagues were all businessmen from whom I learned about the business environment, and in the four years I was there, we doubled our enrollment. I learned about competition, satisfying customers, the importance of quality and service, and the need to manage with a close eye to both revenues and expenses.

I was also reminded that it is imperative for educational leaders to take risks. Taking risks requires courage and the results are not always what are hoped for. But due to our changing society, educators must have the courage to make the changes necessary in schools.

Pulling It All Together

How does all of this relate to effectively leading an ESA? Being able to draw on my experiences from teaching and administration, state leadership, experiencing the diversity of schools around America, and running a business have made this job easier. It's easier to make decisions when you've "been there, done that."

An educational service agency is a unique organization. We work closely with educators so it's important to have walked in their shoes. We must run like a business because, in most instances, we don't have a tax base like schools do. We are increasingly interacting more with state departments of education so understanding the reality of the executive and legislative branches of government makes the job easier.

So what do we do with all of this information? We work hard to understand our customers and satisfy their needs. We collaborate with them, communicate with them, and enjoy them.

We strategically plan for the operation of our business. We establish clear visions and missions. We set clear goals in conjunction with our employees, colleagues, and customers. We honor our culture and yet plan for and lead during the transitions that are necessary to stay current and relevant in this rapidly changing world. We empower our managers and support them as we guide them.

We learn to enjoy our unusual place as public agencies that must function as businesses. The demand to raise money to meet the needs of our customers is ever present. We stay on the leading edge of education so we can be ready to provide the service when a customer presents the need.

We work hard to understand the needs of our various funders. Whether it is the state, the federal government, foundations, businesses or others, it is their money, and ours, that is used to achieve their goals. We work to blend the needs of our customers with the demands of those who provide the resources. One key aspect of our service is bringing them together successfully for the advancement of learning.

We recognize that the state and federal governments rely on us to deliver their policy and programs effectively. We do this by forming a close relationship with our customers, be they schools, school districts, adult education providers, human service agencies, or others.

Yet Another New Venture

These relationships with our customers, our funders, governments, and the public have never been so important, or so tested, as they have been since May 2007. It was at this time that the state's Secretary of Education approached me and asked for the AIU's assistance in turning around the Duquesne City School District, a district that had been in trouble for years. With a steadily declining tax base and shrinking population, the troubled school district could no longer offer the classes and activities that constitute a quality education. Frustrated with low student achievement in spite of receiving millions of dollars in state aid, the Secretary took a risk, and decided that something had to be done. In June the district's board agreed to close their high school and send almost 200 9th, 10th, 11th, and 12th graders to neighboring school districts. In July, the AIU began to assist with this transition.

Just as importantly, the AIU contracted with the state to oversee all operations of the district's remaining K-8 program. I have once again become a superintendent of record and our ESA's staff continues to absorb

their new responsibilities of directing all Duquesne's City's systems, including its fiscal, human resource, public relations, technology, curriculum, professional development, and security operations. In addition, in the vacant high school, we are establishing a Community Center that will house many outreach efforts including early childhood classrooms, alternative education, adult education, mental health services, and academic tutoring. As I write this article, the first day of school is just weeks away, and this huge project is tapping every resource that the AIU has to offer. The entire staff has been affected as we work to help students in what has essentially become our lab school. For the state of Pennsylvania, and perhaps for any ESA, this is a historic moment.

Still Growing and Learning

It is while in uncharted territories that leaders must draw from their life experiences for guidance. During my career in education, as a teacher, administrator, superintendent, state commissioner, university professor, non-profit director, American sojourner, and seeker of truth, I have learned multiple lessons about leadership and what is necessary to run good schools. And as yet another new school year approaches, I relish the opportunity to use my leadership talents to give back to an education system that has given me so much.

Donna Durno, Ph.D., is executive director of the Allegheny Intermediate Unit 3 in Homestead, Pennsylvania. She can be reached by phone at (412) 394-5705, by fax at (412) 394-5706, and by e-mail at donna.curno@aiu3.net



The World is Bumpy: A Brief but Turbulent History of Standards-Based Education

by
Thomas G. Reed

Introduction

Standards-based education (SBE) as public policy is little more than 20 years old (National Commission on Excellence in Education, 1983). However, sometimes forgetting its relative youth, educators, policy makers, researchers and even parents are often disappointed that achievement gaps in reading and math have yet to close among sub-groups of students. Many are bewildered to find school districts still grappling to respond to state and federal mandates for academic content standards and accountability. Despite Tom Friedman's (2006) assurances that "The World is Flat," we must recognize the world of standards-based education is bumpy, its landscape marked with unpredictable pitfalls, chasms and undulations, its travels painstakingly slow, turbulent and frustrating. This examination of the brief history of standards-based education in the United States attempts to explain SBE's slower-than-expected progress and to articulate strategies identified through the work of the Central Ohio Regional School Improvement Team and the Educational Service Center of Franklin County that yield sustained, purposeful improvement in teaching and learning and genuinely promote high expectations and equal access and opportunity for all students.

The Purposes of Public Education

Public education has historically served two competing imperatives: a moral imperative and an achievement imperative. The moral imperative demands that public education tirelessly advocate for full rights and equitable opportunities for all. Concurrently, the achievement imperative unceasingly enlists public education to drive scientific exploration and economic expansion. The confluence of these two imperatives in the early 1980s created a third, the imperative of standards and accountability in public schools.

Since the release of “A Nation at Risk: The Imperative for School Reform” (National Commission on Excellence in Education, 1983) more than 6,000 articles related to educational reform have been published, calling for a ratcheting up of standards and expectations for results on behalf of broad, and often influential, constituencies (Uline, 2001). In response, states such as Ohio, Tennessee, and Virginia had mandated graduation tests aligned to standards-based curricula as early as 1989. Today about half of the states now require such tests as criteria for a high school diploma, and many have or are considering increasing course requirements for graduation (Gayler, Chudowsky, Hamilton, Kober, & Yeager, 2004). Recent legislation in Ohio, for example, increases math requirements from three to four years, including Algebra II or its equivalent, and increases science requirements from two to three years with inquiry-based laboratory experience and advanced study in a specified science discipline. Twelve other states have already moved to implement a rigorous core curriculum including Texas, Arkansas, Michigan, and a total of 26 states are aggressively pursuing more rigorous curriculum requirements (Ohio Partnership for Continued Learning website). On a federal level, when No Child Left Behind legislation (2002) replaced the Elementary and Secondary Education Act of 1965, standards-based education was firmly entrenched in the public policy debate. Designed to provide all children with a fair and equal opportunity to obtain a high-quality education, NCLB provides both prescriptive and guiding language for the adoption, implementation, and accountability of standards-based education nationwide, and its message to local school districts is clear: *“You will be held accountable for increasing achievement of ALL students.”*

Many school districts’ initial response to the early standards movement was to initiate changes in curricula by aligning resources to academic content standards and benchmarks. Embracing the work of notable consultants such as Heidi Hayes Jacobs (Curriculum Mapping), Larry Ainsworth (Power Standards), Larry Lezotte (Effective Schools), and leaning heavily on leadership from the National Council of Teachers of Mathematics (NCTM) and National Council of Teachers of English (NCTE), educators systematically examined local curriculum to identify what current curriculum aligned to standards and what did not. In the end, many districts developed standards-based guides of what is to be taught (scope), when (sequence and pacing), how (instructional strategy), and with what materials.

Throughout this curriculum alignment process, teachers debated the merits of giving up tried and true instructional objectives and replacing them with others less familiar. Some teachers mourned the loss of a favorite lesson like “Johnny Appleseed” replete with engaging role playing, period costumes, art projects, and bulletin boards but misaligned to content standards or grade level indicators. Some teachers complained that new content standards and grade level indicators were too hard, not age-appropriate, or too ambiguous for engaging classroom instruction. “How do I cover all of this in one school year?” they asked. “How do I assess THAT standard? What does that look like?” Many boldly predicted the standards-based education movement would amount to little more than a trendy educational experiment that would soon collapse under the burden of its own complexity.

Meanwhile, other educators, convinced that SBE not only would but should endure, turned their attention from curriculum to assessment alignment in an attempt to meet or exceed state accountability indicators for proficiency test scores. Districts targeted “bubble kids,” those within a few points of “proficient” or “passing” scores, and implored teachers to assist students in test-taking strategies, design classroom assessments based on standardized achievement tests, and introduce students to commonly used testing vocabulary. Later, some districts began supplementing annual achievement testing with diagnostic short-cycle assessments to help teachers identify and implement targeted intervention strategies throughout the school year.

Arguably the last element of standards-based education to be widely adopted has been aligning classroom instruction to academic content standards. Altering teacher practice means fundamentally altering

teacher beliefs about the structure of classrooms, daily lessons, and grading. Maintaining rigorous standards for all students requires teachers to teach, evaluate, and plan differently. Instead of teaching to the middle, the standards-based teacher is expected to balance high expectations for all with individual needs, to be diagnosticians who differentiate instruction and content in order to move every student toward achieving the standards.

Additionally, perhaps few beliefs are more difficult to alter than those that rationalized “separate but equal” as good enough for minority children and forbade most disabled students from attending most traditional public schools just decades ago. While those injustices seemingly were “remedied” through litigation and legislation, historical perspective reveals that federal mandates alone such as “Brown v. Topeka” or Public Law 94-142, “The Education of All Handicapped Children Act,” failed to substantively alter institutionalized beliefs. Instead, gross inequities of opportunity, quality of instruction, resources, and facilities between affluent, white “typical” students compared to poor, minority and/or disabled children persist. To its credit, No Child Left Behind and its foundational standards-based accountability system strives to prohibit schools from exempting or excusing specific sub-populations of students from the daily rigors of academic achievement. NCLB’s intent is to judge all students, regardless of race, ethnicity, socioeconomic status, or ability, against the same standards while holding school districts accountable for ensuring that all students achieve at grade level, a wide departure from past practice.

Pushing back, teachers lament that standards-based education strips them of their creativity and places unreasonable hardships on the practice of teaching. Parents contend that teachers are simply “teaching to the test.” District officials assert that new mandates are straining already limited resources. Clearly, many in the educational community have not fully embraced the standards-based education movement.

Resistance to standards may be more than just an unwillingness to change; it may reflect a lack of efficacy in educators. Many teachers lack the confidence to attempt a standards-based instructional model that supports the diverse needs of all students, and many principals lack the expertise to effectively lead and monitor standards-based practice. Albert Bandura (1997) theorized that a strong sense of efficacy develops from mastery experiences, verbal persuasion, and psychological and cognitive states. Mastery experience is the most powerful in developing a strong sense of efficacy as it is the most authentic evidence of one’s ability to succeed. Teachers rarely have the opportunity to experience the authentic standards-based instruction necessary to build their ability to differentiate content and instruction for an entire classroom of diverse learners. Further, teachers may be hindered by missing vicarious experiences that enhance one’s sense of efficacy by comparing competencies with the attainment of others. If few teachers are successfully implementing standards-based instructional practices, there exist equally scarce exemplars to model standards-based practice.

Strategies for Success

How do educators strengthen their sense of efficacy to successfully implement standards-based instruction? Here are five strategies recognized and utilized by school improvement facilitators and consultants within the Central Ohio Regional School Improvement Team (RSIT) and the Educational Service Center of Franklin County (ESFC) that support development of standards-based practice:

1. **Focus** – Public schools have a clearly-defined cycle of starts and stops. In most places, schools open for students in late August or early September and close in late May and early June. Too frequently, this same student cycle also governs district school improvement planning and implementation. As

a result, the return to school in late summer often signals to staff the launch of a “promising” new school improvement initiative without regard for and reflection on the status of the previous year’s initiative leading to, over time, a piling on of programs and initiatives that compete for the attention, spirit and resources of district personnel. Technical assistance offered by the school improvement facilitators of the Central Ohio RSIT and the ESC of Franklin County begins with helping district leaders REDUCE the number of school improvement initiatives in the district. Through careful data collection and examination and the use of root cause analysis processes, facilitators help leadership teams focus on a few high-return, standards-based improvement goals and strategies, rather than a long list of new initiatives, programs, and additional needed resources. By doing so, district leaders minimize initiative fatigue of the teaching staff, maximize resources and afford teachers and principals the opportunity to do a few things really well and enhance their mastery experience.

2. **Reflection** – Building upon a clearly focused plan, the next critical step in strengthening a sense of efficacy is taking time to purposefully and accurately assess the current state of standards-based curriculum, instruction and assessment by identifying what is working and sharing those successes. Embracing the leading and learning research of Doug Reeves (2006), the facilitators and consultants of the Central Ohio RSIT and the ESC of Franklin County recognize that all districts and schools, regardless of their achievement scores, have exemplars. Illuminating the work of these expert practitioners and pinpointing their successes not only helps solidify understanding of the most effective practices but also offers models and benchmarks that enhance vicarious experiences of others.
3. **Monitoring** – Just as a school year has a clearly-defined cycle, the school day does as well. Typically there is an opening bell signaling the start of classes and a dismissal bell that ends the day. However, swirling just beneath the veneer of a seemingly orderly daily schedule is, in reality for principals, a chaotic cacophony of constituents and crises all demanding time and attention and all threatening to interfere with well-intentioned strategic monitoring practices such as classroom walkthroughs, guided discussion, timely and content-specific feedback, and facilitated forums for reviewing the progress of students and school improvement action steps. However, acknowledging the stressors of day-to-day administration does not minimize the importance of strategically monitoring classroom instruction for evidence of standards-based practices and providing timely, content-specific feedback to enhance a teacher’s sense of efficacy through verbal persuasion. Therefore, facilitators for the Central Ohio RSIT and the ESC of Franklin County encourage district and building leaders to post a monitoring schedule and adhere to it.
4. **Measuring** – In Ohio, it could be said that many school districts are data rich but knowledge poor because much of the achievement and performance-related data available to districts through the state’s data system are collected and reported annually and are of little use when considering the results from a formative perspective. Rather, standards-based practices require teachers to collect standards-based student data multiple times throughout the school year and strategically use these data to guide decisions about instruction, programming, resources, and structures. Consultants from the Central Ohio RSIT and the ESC of Franklin County work closely with instructional leaders to strengthen teachers’ cognitive states, enhancing their sense of efficacy by generating and providing timely, easy-to-understand student data that are tightly coupled to academic content standards, benchmarks, and grade-level indicators.
5. **Modeling** – Educational Service Agencies have historically filled the role of professional development provider. Title IX, Section 9101 (34) of federal No Child Left Behind Act (NCLB) defines High Quality Professional Development as that which is aligned with goals of school district’s continuous improvement plan, is sustained and ongoing, and is focused on higher student

achievement levels. The on-going challenge for the Central Ohio RSIT and the ESC of Franklin County is facilitating on-going, job-embedded professional development for up to 49 distinct school districts of varying sizes, demographics, economic development, capacity, and levels of student achievement. Clearly, one-size does not fit all, and no one consultant or service agency holds a single key for universal school improvement. Instead, our facilitators and consultants promote a culture of professional development that provides multiple opportunities for teachers to try new instructional strategies within an open climate where the principal is receptive to teacher ideas, offers genuine and frequent praise, and respects the competence of faculty. In addition to providing mastery and vicarious experiences for teachers, fostering an open climate promotes a stronger sense of efficacy by enhancing teachers' psychological states.

Conclusion

A historical scan of standards-based education in public policy reveals that the reform movement is little more than 20 years old, a comparatively brief span of time in the overall history of education in the United States. Though turbulent at times, the effort to move public schools toward a universally rigorous standards-based system of teaching and learning has been far from futile. Resources such as curriculum maps, pacing guides, and instructional materials are more closely aligned to academic content standards than ever before, and an increasing number of districts are using locally-developed formative assessments as diagnostic supplements to annual achievement tests. Much of this alignment work, unfortunately, will take time to realize sustained gains in student achievement.

The most difficult and arguably most important work still to be done is widespread alignment of classroom instruction to standards-based practices. Doing so will not only ask educators to alter existing beliefs about teaching and learning but will require them to strengthen their sense of efficacy to successfully implement standards-based instruction and assessment strategies through authentic mastery experiences, relevant vicarious experiences, verbal persuasion, and enhanced cognitive and psychological states.

The world of standards-based education is anything but flat because the challenges of change require profound archetypal shifts in how educators view themselves, their students, and their profession. Teachers, principals, and district leaders can begin by intently focusing on only a few school improvement initiatives and identifying and sharing what is working well. Further, educators must implement standards-based monitoring processes, deploy data-based decision making protocols and facilitate professional development that models exemplary standards-based instructional strategies. Focus, reflection, monitoring, measuring and modeling will build capacity and strengthen the efficacy of educators to use standards and accountability systems that positively impact teaching and learning and genuinely promote high expectations and equal access and opportunity for all students.

References

- Bandura, A. (1997). *Self efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. New York: Farrar, Straus, and Giroux.

Gayler, K., Chudowsky, N., Hamilton, M., Kober, N. & Yeager, M (2004). *State high school exit exams: A maturing reform*. Washington, DC: Center on Educational Policy.

National Commission on Excellence in Education (1983). *A nation at risk: The imperative for educational reform*. Washington DC: United States Department of Education.

Ohio Partnership for Continued Learning website (2007). *The Ohio CORE*. Visited March 24, 2007.
[Http://www.pcl.ohio.gov/jcore/pcl/HomeContent.jsp?node=C758F688-C8EE-45E2-BF09-AACCA8A15E06](http://www.pcl.ohio.gov/jcore/pcl/HomeContent.jsp?node=C758F688-C8EE-45E2-BF09-AACCA8A15E06).

Reeves, D. B. (2006). *The learning leader: How to focus school improvement for better results*. Alexandria, VA; Association of Supervision and Curriculum Development.

Uline, C.L. (2001). The imperative to change. *International Journal of Leadership in Education*, 4 (1), 13-28.

United States Department of Education Website (2004). *No Child Left Behind*. Visited, June 7, 2004. [Http://www.ed.gov/admins/lead/account/nclbreference/index.html](http://www.ed.gov/admins/lead/account/nclbreference/index.html).

Thomas Reed, Ph.D., is the project coordinator for the Central Ohio Regional School Improvement Team at the Educational Service Center of Franklin County and lecturer in the School of Educational Policy and Leadership at The Ohio State University in Columbus, Ohio. He can be reached by phone at (614) 542-4186, and by e-mail at tom.reed@fcesc.org.



High Schools of the Future: Effective Schools Will Embrace Change

by
Rocky Wallace

The new knowledge-based economy, with its emphasis on technology and use of intellectual resources, is calling for a reinvention of the American high school.

In this piece we take a closer look at the present state of affairs in education, and what secondary schools might be doing soon that will better prepare our youth for an ever-changing world. We also explore the concept of “futuring” and how it has huge implications for any organization willing to embrace paradigm shifts and change.

The Imperative for High School Reform

Willard Daggett, president of the International Center for Leadership in Education in Rexford, N.Y., warns that dramatic advances in technology and shifts in economics present “a perfect storm” that calls for schools to radically change how they prepare students for the future. He adds that the present paradigm in American schooling is to spend too much time training students at the basic level, which will doom the future health of the new knowledge-based society (Prichard Committee for Academic Excellence, 2005).

Daggett sees several changing trends on the horizon, including the fact that schools in Asia and Europe are outdistancing the United States in requiring more rigorous courses, and in producing more science and engineering majors. He emphasizes that American schools that have embraced the smaller learning community that does the following:

- Show an “unrelenting commitment” to high expectations;
- Take unusual steps to help struggling ninth graders succeed;
- Focus on making the senior year a time for meaningful learning;
- Tie extensive use of data to informed decision-making and direction;

- Use a curriculum that makes information relevant to students and requires them to do rigorous work;
- Emphasize relating knowledge and facts across subject areas and push students to engage in “reflective thought”;
- Focus teacher training on areas that will develop new skills and meet school goals; and
- Exhibit strong leadership from teachers (Prichard Committee for Academic Excellence, 2005).

To further support Daggett’s plea for an overhaul of the American secondary system, one notes that only 68% of all freshmen who start high schools across the United States, actually graduate. Of those that do, only 40% enter college. And only 27% are still enrolled after their sophomore year. Only 18% graduate from college (Kentucky Council on Post Secondary Education, 2004). These are shocking realities that indicate the traditional schooling system in the United States is not able to keep up with an increasingly sophisticated culture that needs an educated workforce.

Stirrings inside the education profession indicate that the present system is a pressure cooker that is about to explode if remedial action is not taken soon. Significant numbers of school principals are deciding to leave their positions (Johnson, 2005), and teacher attrition is a concern as well (Wayne, Young, & Fleischman, 2005).

Smaller Learning Communities

Several schools in Kentucky are addressing the need for high school restructuring via the U.S. Department of Education’s Smaller Learning Community (SLC) initiative. These competitive grants are designed to assist high schools with 1,000 students or more in personalizing the school culture for all students. Kevin Hub, Assistant Superintendent of Madison County Schools, praises the program and points to the successes Madison Central High School has experienced as a result of the SLC grant. “We knew we were going to adopt the smaller learning community philosophy even without the funding. We have created a separate ninth grade academy, a weekly advisor/advisee program, and have beefed up our focus on reading and math. Our professional development for principals and teachers is more focused and directly related to the needs of students. Our discipline problems are down, we have less absenteeism and dropouts, and student achievement results on the state assessment and CTBS have risen. We’d never go back to our former model, which was less personable and less focused on the needs of all our students.”

Foresight: Seeing the Future Now

A major paradigm shift that has the potential to make all the difference in how American schools reinvent themselves is the concept of **foresight**, or **futuring**. In *Future Perfect* (1987), Nasrettin Hoca comments, “A man was looking on the ground for his lost key. When his neighbor asked him where he lost it, he pointed to a different place. ‘Then, why aren’t you looking there?’ asked the neighbor. The man replied, ‘Because the light is better here’ ” (p. 192). Often, we know parts of the system are broken. Yet we forge ahead, finding solace in the fact that we are working hard—however glaring the gaps in our effectiveness might be. Foresight experts would simply ask American high schools, “What would your ideal school of the future look like? And, what would the students of the future leave your schools equipped with as they transition into adult life?” Then they would say: “It might surprise you, but you can do it. Envision it, plan for it to happen, be prepared for surprises and ongoing adjustment, then will it into reality.”

“It is imagination and not resources that is scarce,” writes Hamel (2003). “So we have to involve hundreds, if not thousands, of new voices in the strategy process if we want to increase the odds of seeing the future” (p. 25). Hamel cautions against the narrow focus of traditional strategy, reminding that strategy is not simple. And he stresses that organizations serious about meaningful change must identify and focus on their core competencies. Easum, in explaining **strategic mapping**, says it is “learning how to anticipate the random, changing needs of the next generation . . . by teams of people who know they are lost in a wilderness . . . It is the ability to understand the clues to the future and place ourselves at major intersections of the future instead of being stranded on some dead-end trail” (p. 1).

A key characteristic of forecasting, and increasing the odds of landing in the future prepared, is the exercise of creating **scenarios**. Hoyle (1995) explains that a scenario looks 10, 15, or 20 years ahead, and is developed by “studying all possible information about a problem and projecting a broad range of trends, their likelihood of occurrence, and the degree of impact on the organization under study if the trends did occur” (p. 48).

He adds that scenarios make us aware of pitfalls that may occur if adjustments aren’t made, allow us to think about our future successes as individuals and organizations, rally others to work in teams to analyze alternative plans and build programs, and spark imagination—bringing an awareness of broad trends and issues.

Calhoun and Jeffrey (2005) offer simple suggestions on how organizations can transition from the urgent to the important, and from the complex maize of activities to the key core values of purpose and serving others. They stress the establishment of **vision, mission, values, objectives, strategies**, and then the all important **execution of priorities**.

Getting Started

If a school is serious about reinventing itself, and embracing the future with all of its possibilities, then the next step is to simply get started—now. Clarke-Epstein (2002) offers some provoking questions that a school leader or leadership team can lay on the table as the futuring process is integrated into the collective mind set and culture of the school. A sampling of these questions includes:

Questions leaders need to ask customers:

- How and when have we made it hard for you to do business with us?
- What will you need from us in the future?
- If you were us, what’s one thing you would change about our organization?

Questions leaders need to ask employees:

- What brings you joy in your work?
- What gets in the way of you doing your job?
- If you could change one thing about our organization’s collective behavior, what would it be?

Questions leaders need to answer:

- What do you see happening in our organization over the next 12 months?
- What is the future of our industry?
- What gets you excited about the future?

What a High School Might Look Like in 10 Years

Schools that are on the cutting edge, or want to be there, will be reinventing themselves now to prepare for the future—and with a philosophy that embraces all the possibilities. Consider what could be on the horizon for the American secondary school:

- Much wider use of technology and distance learning (as many colleges and universities have already embraced).
- Radical rethinking of the traditional 8 AM to 3 PM school day. As online learning becomes routine, there will be no need for day-long classes for many students. Face-to-face sessions in the AM, and independent work at home in the PM will be explored by schools that do not need all the student body in the building all day. More clubs and other extra-curricular activities will be moved into the early afternoon time frame.
- Adding evening classes, and the offering of at least two “school day” shifts to maximize use of space and facilities.
- Increased stakeholder involvement—from parents to corporations. The closed-door era is over—the true “community” school.
- Increased high school alignment with ACT. State assessments that don’t align with college entrance needs and scholarship criteria will be revamped or abolished.
- Traditional transportation systems will be reinvented in some districts where the cost of school buses is weighed against the more critical needs of students.
- Traditional nutrition and food service programs will be reinvented, with more contracting out to food service providers.
- An increase in intramural programs and club sports will be offered in order to add options for students who desire to participate in individual and team sports, but not necessarily on traveling varsity teams. Parent volunteers will allow these services to be affordable to school districts.
- Increased partnerships with private schools and colleges.
- Legislative regulation of the minimal standards for home schooling, with parents who choose this option being required to have a college degree.
- Stronger teacher and principal induction programs, with quality coaching and mentoring models the norm.
- Rigorous professional development for teachers, with student achievement directly tied to growth plans and evaluations.
- More teachers opting out of retirement systems, so they can pursue other careers at an earlier age.

Thus, it will be common for young teachers to work five to 10 impactful years while at the top of their creative and energy levels, and then move on to other work.

- Less hierarchal barriers in order to survive. The former public education monopoly model is history. To find its niche in the American culture, the school of the future will be given the freedom to customize its services based on the needs of its particular students and community—with less bureaucracy.

Conclusion

The American high school of the 21st century will need to be radically different than the traditional model that has existed for decades. We are not producing students who have the skills needed to function satisfactorily in a society that is increasingly being driven by technology and the knowledge economy. As a solution, current research calls for schools, and all organizations, to take more serious the process of futuring. Those who do take the time to investigate future scenarios, and follow up with proactive strategies, have much better odds of being effective in a future that will be marked by vast change and uncertainty.

Educational service agencies can have a huge role in this transformation of the American secondary school. School leaders and communities will need assistance in breaking away from over-regulation and traditional paradigms that no longer effectively meet the needs of students. The support of the regional centers, with its vast array of resources and network of technical assistance providers, can be such a source of guidance for any school or district that has taken a peek into the future and accepted the reality that significant change will indeed happen and is urgently needed.

Service agency staff members have to ask themselves a key question: Are we doing enough to prepare our constituents for a new world while we help them traverse the rocky shoals of today's present challenges?

References

- Calhoon, J., & Jeffrey, B. (2005). *Prioritize!* Sevierville, TN: Insight Publishing.
- Clarke-Epstein, C. (2002). *Important questions every leader should ask and answer*. New York: Amacom.
- Davis, S.M. (1987). *Future perfect*. Reading, MA: Addison-Wesley.
- Easum, B. Strategic mapping and futuring. (Website resource: www.easumbandy.com).
- Hamel, G. (2003, February-March). Competing for the future. *UK Excellence*, 25.
- Hoyle, J.R. (1995). *Leadership and futuring: Making visions happen*. Thousand Oaks, CA: Corwin Press.
- Johnson, L.A. (2005, January-February). Why principals quit. *Principal*, 84 (3), 21-23.
- Prichard Committee for Academic Excellence. (2005, summer). Daggett warns of 'perfect storm.' *Perspectives*, 16 (2), pp. 1, 5.

Wayne, A.J., Youngs, P., & Fleischman, S. (2005, May). Improving teacher induction. *Educational Leadership*, 62 (8), 76-77.

Rocky Wallace is Director of Instructional Support for the Kentucky Educational Development Corporation in Ashland, Kentucky. He can be reached by phone at (606) 928-0205, by fax at (606) 928-3785, and by e-mail at rocky.wallace@kedc.org.

Perspectives Order Form

Additional copies of this or previous editions of *Perspectives* may be purchased for \$6 each plus \$3.50 for postage and handling per order. AESA accepts prepaid orders only, by check or money order. Please include number desired of each issue, name of recipient and shipping address.

Send your request to:

Association of Educational Services Agencies
801 North Quincy Street, Suite 750
Arlington, VA 22203-1730
(703) 875-0739 Phone
(703) 807-1849 Fax
btalbott@aesa.us

Invitation to Authors

Perspectives welcomes manuscripts from all those interested in the work of service agencies in America. The journal publishes articles of research as well as opinion. Interviews with public officials (legislators, chief state school officials, business leaders, etc.) regarding their positive views of the work of service agencies are also welcome since they can be helpful to colleagues in other states where the environment might not be so friendly.

For further information about how to prepare a manuscript, please contact the editor by e-mail at Keane@oakland.edu or by phone at (248) 370-4204. Deadline for submissions is April 1 of each year. Any necessary editorial assistance will be provided.

