

EDUCATION RENEWAL ZONES ANNUAL REPORT NARRATIVE

SPRING 2009 Southwest-B Education Renewal Zone

Strategic Plan Review of Implementation, Progress, & Future Directions

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EXECUTIVE SUMMARY

Southwest-B ERZ Annual Report

The Southwest – B Educational Renewal Zone is part of a statewide initiative by the State of Arkansas to dramatically improve overall school performance. To better understand the context of this state legislation, a brief review of the educational reform efforts would be beneficial.

In the early 1980's, *A Nation at Risk: The Imperative for Educational Reform* was released by the National Commission on Education detailing the need to reform education. Other panels examining the American educational system such as the Carnegie Task Force on Teaching and the National Commission on Teaching for America's Future also underscored the grave need to improve the outcomes of education by establishing various reforms efforts such as establishing teacher standards and more rigorous teacher preparation programs as well as an increasing number of professional development centers. By the time the federal legislation passed *No Child Left Behind (NCLB)* in 2001, the increased accountability toward schools and school districts clearly focused on the principle that every child should receive an adequate education not withstanding differences of socio-economic status, ethnicity, gender, or religious beliefs.

As a result of these educational reform efforts and in order to be compliant with federal legislation, the State of Arkansas took strong steps to resolve the gap between the academic performance of lower socio-economic students and more affluent ones. Recognizing that the overall performance of schools needed great improvement in order to meet increasing rigorous state standards and the adequate yearly progress (AYP) mandates of NCLB, the 84th General Assembly of the State of Arkansas established the Division of Education Renewal Zones within the Arkansas Department of Education to facilitate sustained collaboration with one another as well as with the regional educational service cooperatives, and with higher education institutions with teacher and school leadership preparation programs. The legislatures reasoned that because of the dispersed rural and often lower socio-economic profiles of a large percentage of schools across the state, inter-local agreements would be quite beneficial in facilitating collaboration to strengthen school performance and student academic achievement throughout the Arkansas public schools with this profile. One of the key components of the Education Renewal Zones (ERZ) is designing an effective strategic planning framework and capitalizing on financial resources to enlist universities and educational cooperative in professional development and school improvement initiatives of lower performing campuses and districts.

Through a model of inclusiveness and high performance, the Southwest – B Education Renewal Zone consortium actively sought synergistic advantages of collaboration and diversity. The consortium members readily achieved consensus on the use of the following model as a framework for the strategic planning process as noted on the next page:

The strategic planning process utilized by the group is reflective of a classic strategic plan model but modified by the Director of the Southwest - B ERZ to meet the unique needs of our individual school improvement plans and the common needs of the partnership schools.

ERZ Planners and Planning Process

As part of its mission to provide premium educational services to the state of Arkansas and various constituents, the leadership at Southern Arkansas University made the decision to accept the challenge delivered by the State of Arkansas and apply as an institute of higher education to lead a regional educational renewal zone in southwest Arkansas.

A series of meetings were held to begin the process of building collaboration among regional districts and schools bonded together with common needs. The first of these meetings was held on April 19, 2005, on the campus Southern Arkansas University in Magnolia, Arkansas. It was facilitated by Dr. Ruby Burgess, the Dean of the College of Education and included representatives from SAU including Dr. Corbet Lamkin, the Vice President for Academic Affairs, a number of professors, plus Ms. Estelle Matthis, the Director of the Education Renewal Zones from the Arkansas Department of Education as well as regional school district educators affected by the Educational Renewal Zone legislation. Ultimately, many participants in this large group joined the ERZ Advisory Council and ERZ Planning Team. Collectively, the organizations represented by key participants of this group formed the Southwest – B Educational Renewal Zone Consortium.

Since 2005, the Southwest – B Educational Renewal Zone has grown both in partnerships and scope to formally consist of the following partner representatives:

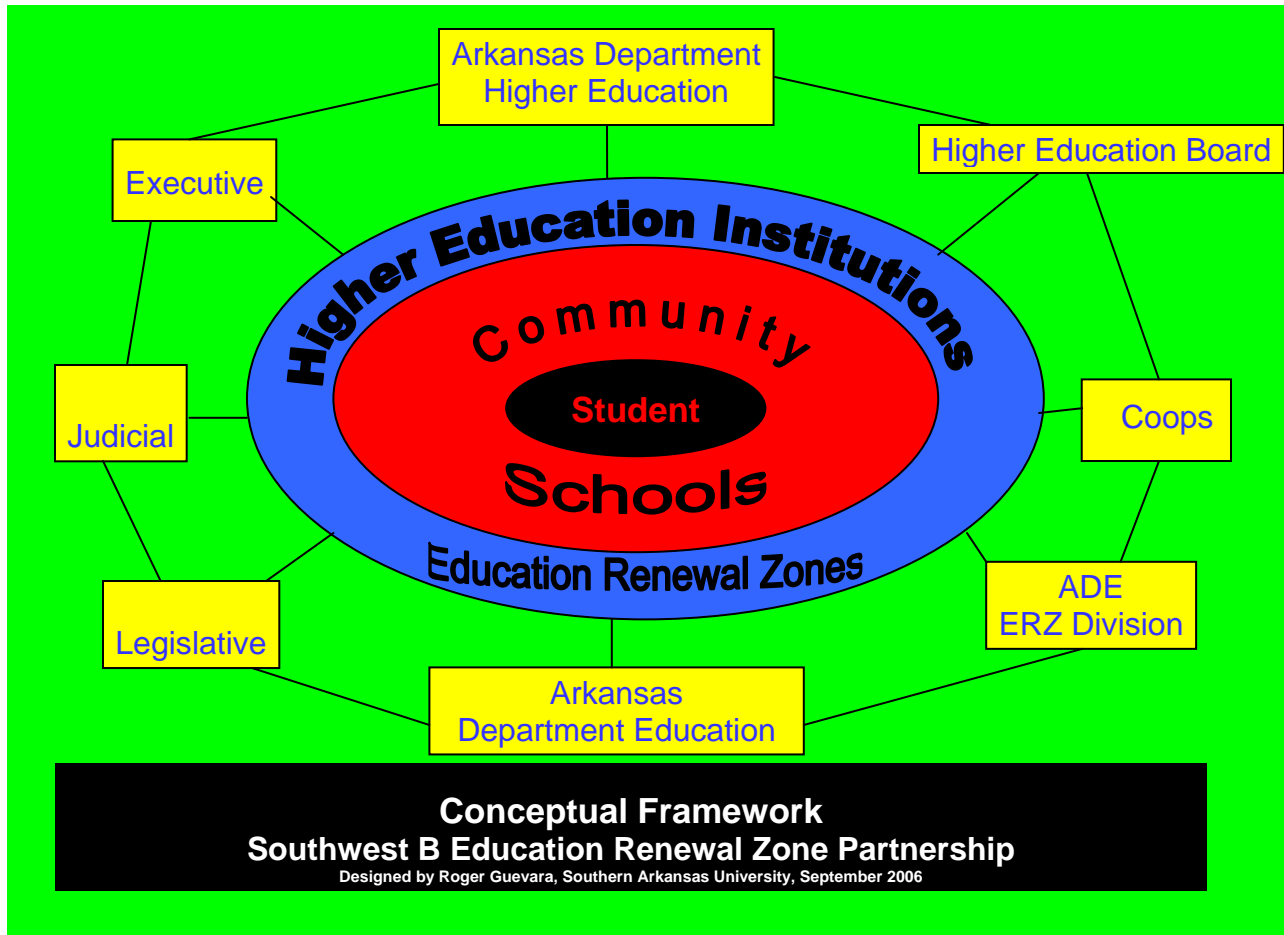
- Southern Arkansas University
- South Central Service Cooperative
- Students
- Parents
- Business Leaders
- Southwest Arkansas Education Service Cooperative
- Community Members
- Plus the following 31 regional schools:

Districts ERZ Name	District	School
Southwest-B	Ashdown	Margaret Daniels Primary
Southwest-B	Ashdown	C. D. Franks Elementary
Southwest-B	Ashdown	L. F. Henderson Intermediate
Southwest-B	Ashdown	Ashdown High
Southwest-B	Ashdown	Ashdown Junior
Southwest-B	Bradley	Bradley High
Southwest-B	Bradley	Bradley Elementary
Southwest-B	Dierks	JoAnn Walters Elementary
Southwest-B	Dierks	Dierks High
Southwest-B	Fouke	Fouke Elementary
Southwest-B	Fouke	Fouke High
Southwest-B	Fouke	Fouke Middle
Southwest-B	Genoa Central	Genoa Central Elementary
Southwest-B	Genoa Central	Gary E. Cobb Middle

Southwest-B	Genoa Central	Genoa Central High
Southwest-B	Hope	Yerger Middle
Southwest-B	Hope	Hope High
Southwest-B	Hope	Clinton Primary
Southwest-B	Hope	Beryl Henry Elementary
Southwest-B	Lafayette	Lafayette County High School
Southwest-B	Lafayette	Lafayette County Elementary School
Southwest-B	Mineral Springs	Mineral Springs High
Southwest-B	Mineral Springs	Saratoga Elementary
Southwest-B	Mineral Springs	Saratoga High
Southwest-B	Mineral Springs	Mineral Springs Elementary
Southwest-B	Nevada	Nevada High
Southwest-B	Nevada	Nevada Elementary
Southwest-B	Prescott	Prescott High
Southwest-B	Prescott	McRae Middle
Southwest-B	Stephens	Stephens High
Southwest-B	Stephens	Stephens Elementary

In addition, significant work with the Texarkana School district and the Magnolia School District was accomplished this year. In particular, the Southwest-B ERZ has mapped out a scope and sequence for delivering a systematic approach to Co-Teach Training for both the secondary and elementary schools in Texarkana over the next two years (more on this in the professional development section). The Magnolia School District is a key partner in the Arkansas Capacity Building Science Partnership Grant, Arkansas Capacity Building Math Partnership Grant, and the Best Practices for the Instructional Cycle Initiative.

The following model on the next page was used as the conceptual framework for identifying the various partners and dynamic forces impacting each of the ERZ's operating in Arkansas:



The state ERZ Logic Model provides the broad directions for the regional ERZ's to customize based on constituent need. The Southwest-B ERZ color correlated its 2008-09 Strategic Plan (see appendix) with the state ERZ Logic Model. Please note the current Education Renewal Zone Logic Model on the following page:

ERZ Legislative Requirements

The legislative requirements are the tangible products of the guiding principles and the legislative purposes. The following are brief summaries of each of the 9 legislative requirements that are more fully developed in the next section of this Southwest-B ERZ 2007-08 Annual Report.

Legislative Requirement #1

The focus of Legislative Requirement #1 is to develop meaningful collaboration among higher education institution partners, education service cooperatives, schools, and communities participating in the ERZ. The Southwest-B Education Renewal Zone is built on the premise that meaningful collaborations designed to maximize synergy will promote a wide variety of positive indicators directly related to overall school performance. The Director facilitates common purpose collaborations to mutually identify, analyze, and ultimately determine strategies for academic improvement in each of the ERZ schools.

The Director facilitates quarterly ERZ Advisory Council meetings as a means of exchanging information and determining common challenges and strengths. There is a process in place to initiate additional meetings, as necessary, to address emerging issues as they may impact partner schools. Moreover, to improve lines of communication, the Southwest-B ERZ sends out e-mails to consortium members for them to review and then to provide valuable feedback to the ERZ office on both immediate and longer-term issues.

The addition of nearly 20 partner ERZ schools late in the 2008-09 school year will also greatly enhance the dissemination of information throughout the southwest region of the state.

Legislative Requirement #2

The focus of Legislative Requirement #2 is to develop a comprehensive program of professional development. The Director provides a comprehensive series of strategies in professional development to address the needs of the Southwest-B ERZ constituents. The Director conducts



site visits to consortium schools to meet with administrators, teachers, and other stakeholders to facilitate a clear understanding of the results of a needs assessment in relation to the strategic plan. This systemic process allows regularly disseminated professional development opportunities, including emerging strategies or initiatives such as the High School Redesign or the Co-Teach Model – both of which the Southwest-B ERZ is providing leadership for partner schools to obtain. The data from the needs assessment are utilized to create

professional development tailored to the needs of the partner schools. New ERZ schools will also take part of the needs assessment to customize the professional development and overall direction of the partnership.

The Southwest-B ERZ's implementation model incorporates the notion that data needs to be identified, collected, organized, analyzed, implemented, and evaluated to determine the priorities and direction of the ERZ professional development emphasis and the overall direction of the ERZ Strategic Plan.

Legislative Requirement #3

The focus of Legislative Requirement #3 is to enhance and expand local school curricula offering through two-way interactive television. Each of the Southwest-B ERZ high school campuses of Ashdown, Bradley, Dierks, Fouke, Geneoa, Hope, Lafayette, Mineral Springs, Nevada, and Prescott take full advantage of distance learning technology via compressed interactive video. All campuses are filling in the circular gaps by enrolling students in hard-to-staff areas such as advanced math courses at the Arkansas Department of Education Distance Learning Center in Maumelle.



The SW-B ERZ in the past has coordinated the use of CIV for ERZ Advisory Council meeting with Arkansas Tech University, the University of Arkansas at Little Rock, and Northwest ERZ in a collaborative venture as an innovative means to share information and reflect on common statewide challenges.

Legislative Requirement #4

The focus of Legislative Requirement #4 is to develop a means of sharing of faculty for core courses offering when schools are unable to hire highly-qualified teachers in core subject areas. Three members of the Southwest-B Education Renewal Zone have shared faculty since the 2006-07 school year. Fouke and Bradley shared an advanced placement teacher in the 2006 fall semester while Fouke and Hope shared an advanced placement teacher for the 2007-08 school year. In addition, Southern Arkansas University science and math professors do K-12 campus visitations as part of the follow up to the 10-day Arkansas Capacity Building Science and Math Partnership Summer Institutes.

Legislative Requirement #5

The focus of Legislative Requirement #5 is to develop a strategy to recruit and retain highly-qualified teachers with particular focus on hard-to-staff schools. The Southwest-B ERZ places a high priority on the recruitment and retention of teachers and worked with the Southern Arkansas University's Employment Resource Center Director to keep the regional superintendents well informed of teacher certified graduates after fall, spring, and summer graduations. In April 2009 Southern Arkansas University also conducted a very successful Teacher Job Fair to connect the school districts with SAU graduates.



Partners in the Southwest-B ERZ continue to maximize resources available. For example, the Office of Teacher Recruitment and Retention at the Arkansas Department of Education has

assisted Bradley School District with brochures, staging artifacts, and other recruitment strategies.

The Southwest-B ERZ had partnered with each of the 10 other statewide ERZ's to finance a teacher recruitment video, "Teacher Teach Me" video to extend the recruitment message in a convenient 24-7 available web-based format that is still being used today.

Another approach to teacher recruitment is our "Two Plus Two Inclusive Early Childhood Education Program" where SAU/ERZ is partnering with the University of Arkansas Community College at Hope (UACCH) to recruit teacher candidates interested in teaching directly from the junior college level.

Part of the retention plan for the Southwest-B ERZ's teachers is to provide 24 stipends or SAU graduate hours as part of the Arkansas Capacity Building Science Partnership grant where 24 regional science teachers participated in the 2008 Science Summer Institute. The final year of the 3-year science research study concluded in June 2009, but plans area already underway to begin another 3-year cycle of professional development. Another key aspect of teacher retention plan for the Southwest-B is to provide stipends or SAU graduate hours as part of the Arkansas



Capacity Building Math Partnership grant where 43 regional math teachers participated in the 2008 and the 2009 Science Summer Institutes.

Through the Technology Essentials and Advanced Technology Essentials workshops provided by the Director in partnership

with the South Central Service Cooperative, many schools in Southwest Arkansas were able to sharpen their technology skills with specific training in search engines, Excel, Word, and PowerPoint among other technologically enhanced integration skills.

The Southwest-B ERZ office by working with the Employment Resource Center is also serving as an electronic hub for superintendents and principals in their efforts to fill vacancies .

Legislative Requirement #6

The focus of Legislative Requirement #6 is to develop a system for mentoring teachers with three or fewer years of professional service as well as career teachers whose performance indicates the need for such help. Discussions at Quarterly ERZ Advisory Council Meetings identified the need for a system to mentor teacher new to the profession or more experienced teachers who could benefit from such a mentoring program. Each ERZ school has an established Pathwise program where each beginning teacher who has less than 1 year of classroom experience is assigned a mentor. Many of the SAU higher education faculty have participated in assisting public education with the mentoring of the K-12 teachers.

In addition, after a needs assessment clearly showed the need for better Pathwise training during an Advisory Council meeting, the university and the college of education sought to insure that all higher education faculty members that are in the teacher preparation program university-wide would receive appropriate Pathwise training. This has resulted in the Pathwise vocabulary and methodologies being imbedded in the professors' syllabi for their teacher preparation courses.

Another aspect regarding mentoring centers on the mentoring done as follow up visits by the Arkansas Capacity Building Science Partnership. In addition to the 2008 10-day summer institute, each of the 23 participants received 3 follow up visits each fall and spring semesters which included 2 Science Invitationals where representatives from 12 regional school districts gathered to participate in additional professional development and function as a professional community of learners. SAU professors Mr. Tim Daniels and Dr. Tom Smith conducted classroom observations, model lessons, and act as a resource for the participating teachers. The Science Invitationals brought in educational experts like the Dr. Dennis Plyer of the Arkansas Department of Education, the industry experts like Albemarle Corporation, and science association president Jim Fullen to lead discussions on relating to challenges and best practices in science. This process which began in the the 2006-07 school year just completed its 3-year cycle during 2008-2009 school year.

A similar aspect regarding mentoring centers on the mentoring done as follow up visits by the Arkansas Capacity Building Math Partnership. In addition to the 2008 10-day summer institute, each of the 43 participants received 3 follow up visits each fall and spring semesters which included 2 Math Invitationals where representatives from regional school districts participated in additional professional development and formed a professional learning community. SAU professor Dr. Debe Kincaid, SAU Center of Teaching Excellence Math Specialist Dr. Lynne Neilson, and 2 nationally known experts in Cognitively Guided Instruction (CGI) Dr. Susan Epperson and Dr. Debbie Junk from the University of Texas at Austin provided rigorous



professional development for the participating teachers. Dr. Kincaid and Dr. Neilson also conducted classroom observations, model lessons, and act as mentors for the participating teachers. This process which began in the the 2008-09 school year will continue through 2010-2011 with nearly a half of a million dollar federal No Child Left Behind grant for a research study.

Legislative Requirements #7 & #8

The focus of Legislative Requirements #7 and #8 is to develop active participation of the community in the work of the school and parents in the academic work of the school. The Southwest-B Education Renewal Zone includes not only higher education and P-12 educators, but also parents, community members, and business leaders in the constitution of the Advisory Council who help provide the identification and solutions to key issues impacting stakeholder schools. The Advisory Council offers direction and prioritization of these challenges for the Director. The Advisory Council meets four times a year.

The Director has also engaged in multiple events to strengthen the ties of Southern Arkansas University with the local community. Other actions by the Director to facilitate the communications process include the following:

- 1) Southern Arkansas University NCATE accreditation committee member;
- 2) Southern Arkansas University NCATE assessment committee member;
- 3) Magnolia Arkansas Community of Excellence (ACE) Steering Committee;
- 4) Graduate of Leadership Magnolia sponsored by the Magnolia Chamber of Commerce and Task Force Committee Member for 2007-08 curriculum;
- 5) Member of the Columbia County Health Coalition;
- 6) Member of the state Science, Technology, Engineering, and Math (STEM) committee;
- 7) Member of the Youth Opportunities Unlimited (YOU) State Advisory Committee;
- 8) Member of the Praxis Pre-Professional Skills Test (PPST) National Advisory Committee
- 9) Member of the Arkansas State Teacher Retention and Recruitment Task Force

The Director has been active disseminating the message of the education renewal zones at various professional conferences presented on state, national, and international conferences on issues relevant to public education, technology integration, partnership building and during the past 24 months, including the following:

State

“Impact of Compressed Interactive Video Professional Development on Science Professional Development”, 2009 Annual Arkansas Association of Professors of Education Administration Conference, Donaghey Student Center, University of Arkansas at Little Rock; Little Rock, AR, May 5, 2009



“K-16 Partnerships for Life Science Investigations: Building a Powerful Professional Development Model”, Arkansas Curriculum Conference 2008, Peabody Convention Center, Little Rock, AR, November 14, 2008

“Engaged Learning Through Interdisciplinary Integrated Curricula”, facilitated by Dr. Roger Guevara and Dr. Bryan McCoy, Arkansas Association of Supervision and Curriculum Development Summer Conference, Hot Spring Convention Center in Hot Spring, Arkansas, on June 16, 2008

"Linking Universities, P-12 School Districts, and Education Service Centers Together in the Perfect Storm Partnership", facilitated by Dr. Roger Guevara, Dr. Bryan McCoy and Ms. Laura Wilson, Arkansas Association of Colleges for Teacher Education Conference, Russellville, Arkansas, April 6, 2007.

National

“Education Reform Through Professional Development: Results of a 3-Year Research Study”, 2009 National Council of Professors of Educational Administration National Conference, Marriott Riverwalk, San Antonio, Texas, August 8, 2009.

“Evaluation Design for Gauging Program Performance”, U.S. Dept. of Education NCLB Math Science Partnership Regional Meetings, John Hopkins Intercontinental Hotel; San Francisco, CA, April 28, 2009.

“21st Century Partnerships through Education Renewal Zones: A Research Study on the Impact of Professional Development in Science Via Compressed Interactive Video”, facilitated by Dr. Roger Guevara, 2008 National Network for Educational Renewal Annual Conference, Arlington, Texas, September 20, 2008.



“Arkansas Capacity Building Science Partnership: Effective Practices in Professional Development for Science Coaches”, facilitated by Dr. Roger Guevara, U.S. Department of Education Mathematics and Science Partnerships Program (MSP) 2007-2008 Regional MSP Conference at the Drake Hotel, March 10, 2008, Chicago, Il.

“Effective Collaborations through Education Renewal Zones: Beyond Traditional School Partnership Models”, facilitated by Dr. Roger Guevara, with Dr. Ruby Burgess and Dr. Bryan McCoy, 2008 American Association of the Colleges of Teacher Education Annual Meeting, New Orleans, spring 2008.

“We Can't Afford Days-Off: Send Home the Baby-Sitter”, with Dr. Bryan McCoy and Mr. Judge Larry. National Middle School Association's 34th Annual Conference and Exhibit, Houston, Texas, November 9, 2007.

“Effective Collaborations Through Education Renewal Zones: Taking School Partnership Models To The 21st Century”, 2007 National Network for Educational Renewal Annual Conference, Charleston, West Virginia, October 5, 2007 International” Grant Writing, Technology, and Outreach: The Next Generation of International Leadership”, with Mr. Judge Larry, NAFSA: Association of International Educators Conference, Little Rock, Arkansas, November 15, 2006.

In addition, the Director was invited to present to share some opening remarks about the ERZ to the Arkansas Department of Higher Education State Board of Education when its monthly meeting was held at Southern Arkansas University on November 4, 2005.

Legislative Requirement #9

The focus of Legislative Requirement #9 is to outline short-term and long-term evaluation strategies to evaluate the progress of each participating public school and the ERZ in its entirety. The Southwest-B Education Renewal Zone, as part of its Capacity Building Science Partnership grant, has engaged in data driven evaluation practices that are scientifically measuring the growth in content knowledge among the science grant participants. A report was submitted to the United States Department of Education and the Arkansas Department of Education reflecting student performance in October 2008. This year the report for Year Three is due to the State Department of Education on July 30, 2009 for both the science and math grants.

In addition, the Southwest-B Education Renewal Zone works closely with the representatives from the National Office for Research on Measurement and Evaluation Systems (NORMES) in facilitating the regional evaluation in Hope and Prescott. **The Southwest-B Education Renewal Zone had the best mean effect rate in content knowledge growth among participating science teachers when compared to 6 other Arkansas university MSP grants as measured by NORMES (see Legislative Requirement #9).**



LEGISLATIVE REQUIREMENT #1: Develop meaningful collaboration between and among the higher education institution partners, education service cooperatives, schools, and communities participating in the education renewal zone, including academic departments within the higher education institution partners.

Indicate the current level of implementation of this goal within the ERZ:

Fully functioning and operational level of development and implementation	Limited development or partial implementation	Little or no development or implementation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide detailed evidence to support the level of implementation indicated:

The Southwest-B Education Renewal Zone (ERZ) capitalizes on an infrastructure of committed educators across Southwest Arkansas who engage in regular, strategic



collaborations that facilitate the achievement of indicators directly related to overall school performance. The Director facilitates meaningful collaborations by utilizing a variety of strategies. One key strategy is to interact personally on a 50% basis with each participating ERZ school principal and school staff (as well as appropriate central office personnel including the district superintendent) to mutually identify, analyze, and ultimately determine strategies for instructional focus and support at their

respective ERZ schools.

A needs assessment is conducted for each of the ERZ schools in order to provide customized collaboration. A planning session involving the principal, key staff leaders, and the ERZ Director is conducted to plan and administer the implementation of the needs assessment.

Other activities that the Director facilitates include conducting quarterly Advisory Council meetings (composed of representatives from partnering ERZ schools, Southwest Education Service Center, South Central Service Cooperative, Southern Arkansas University,

community members, business leaders, parents, and students) where the calendar dates are mutually agreed upon by consensus during each summer for the following school year.



There is also a process in place to conduct additional meetings or tasks as they may assist partner schools, as necessary, to address emerging issues beyond the set calendar meetings. Additionally, as a prime measure to continuously increase communication, the Southwest-B ERZ e-mails to consortium members the proposed agenda and minutes from the meetings

for them to review and then to provide valuable feedback to the ERZ office on various relevant issues. That way even if one member was unable to attend a particular meeting, he or she could still provide helpful input on key issues.

Another way the ERZ office facilitates collaboration from consortium partners is conducting weekly site visits to initiate various types of data collection, information dissemination, planning, and evaluation practices as a key strategies for engaging stakeholders in improving overall school performance. All partners are kept informed and given an equal opportunity for participation and evaluation in ERZ activities. In order to fully tap the resources available from institutions of higher education, the Director is constantly conducting an environmental scan to link opportunities at Southern Arkansas University (and beyond) with the needs of ERZ consortium members. This is accomplished by regularly attending departmental meetings, College of Education faculty meetings, university-wide faculty meetings, and even events hosted at other universities like the High School Redesign State meeting in Little Rock, The Co-Teach meeting with the Texarkana School District principals and district administrators, e University and The University of Arkansas at Little Rock and the High School Redesign meetings with the Arkansas Department of Education in Little Rock. Furthermore, other leadership activities like the Director's role as a member of Southern Arkansas University's NCATE, Assessment and General Education committees plus and a member of the College of Education Leadership Team all serve to inform the Director of significant events, resources, and trends that may impact ERZ schools.

Beyond the university involvement, the Director is a member of several committees that also function as opportunities to inform constituents and potential constituents of what the ERZ is and how it can benefit their organizations. The Director is active in Magnolia School District's Closing the Achievement Gap and Magnolia Discipline Policy Committees, Magnolia's Arkansas Communities of Excellence (ACE), Leadership Magnolia, and a board member of Magnolia Arts. The Director is part of the Columbia County Health Coalition and a part of the Columbia County Democratic Committee. On a statewide basis, the Director is an active part of the Leadership Academy's resource task force, and the Science, Technology, Engineering and Mathematics (STEM) coalition. On the national level, the Director is on the Educational Testing Services' National Assessment Committee for the Praxis Pre-Professional Skills Test (PPST). Each of these memberships contribute to a broader understanding of resources available to partner schools and how the

ERZ school leadership may maximize opportunities made known to them by the ERZ Director through deliberate collaboration.

Other methods to provide quality exchange of information includes the following:

- Updating the Southwest-B ERZ web site to provide key information to consortium members and others interested in obtaining data on the Southwest-B ERZ.
- Maintaining regular telephone communications to each of the consortium members as driven by need as well as a regular telephone rotation.
- Developing the ERZ Strategic Plan collaboratively with all partners and creating a vision statement that addresses the common needs of partners and acts as a guide for decision-making. All partners share in the responsibility of the plan and understand the roles, responsibilities, and relationship of each partner to the overall success of the Southwest-B ERZ and each of the partner schools. The Strategic Plan reflects the legislative purposes from Act 106 and the ERZ Logic Model.



Detail the future direction of this ERZ as it relates to this goal:

The Southwest-B ERZ will continue to address the needs of its consortium members by using innovative strategies that drive overall school performance. Successful strategies include, but are not limited to, the following:

- Committed leadership – The Advisory Council revisited the vision statement during the First Quarterly Advisory Council Meeting in 2009 and will continue to do so annually.
- Shared vision – The director will facilitate the vision statement with advisory council and action team members.
- High expectations - The ERZ will continue to cultivate a culture of excellence and high expectations. Before the 2008 school year began, two Southwest-B ERZ schools were removed from the state school improvement list.
- Premium professional development - The Southwest-B ERZ will continue to provide hands on professional development addressing the needs of regional school partners and focusing on those needs that are not currently being met by traditional means.

- Individualized attention – Service provided by the ERZ will be tailored to meet the needs of each partner school.
- High visibility – The director will attend a variety of functions and perform multiple duties within the communities served, like the best practices for the instructional model for Magnolia School District.
- Strong communication patterns – The ERZ office will continue to communicate utilizing a variety of methods including but not limited to personal visitations, telephone, web site, newsletters, and e-mail.
- Quality strategic planning methodologies – The ERZ will assist partner districts in implementing the ERZ strategic plan as well as key aspects of each campus' ACSIP plans.
- Thorough evaluation strategies – The ERZ utilizes qualitative and quantitative evaluation strategies for ERZ research and activities, particularly for the two Math Science Partnership grants which the Southwest-B ERZ Director administers and which combine for over three-quarters of a million dollars over a three-year period. This calculated articulation of the grants to help produce overall school performance is a prime example of how this ERZ addresses the needs of our constituents, practices active research, delivers premium professional development, and conducts rigorous program evaluation under the banner of our High School Redesign.



State Representative Bruce Maloch provides the legislative perspective on the direction of science during the Spring Science Invitational in the picture above.

LEGISLATIVE REQUIREMENT #2: Develop a comprehensive program of professional development (PD) to assure the practical knowledge base of pre-service and in-service teachers with respect to pedagogical practice, content knowledge, and competent use of distance learning technology.

Indicate the current level of implementation of this goal within the ERZ:

<p>Fully functioning and operational level of development and implementation</p>	<p>Limited development or partial implementation</p>	<p>Little or no development or implementation</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please provide detailed evidence to support the level of implementation indicated:

Recognizing that quality professional development is paramount to organizational improvement, a large part of the culture of Southwest-B Educational Renewal Zone centers the shared value of continuous growth as an individual educator and as a fully functioning school unit.

The following initiatives have been facilitated by the Southwest-B ERZ that relate to professional development:

- ◆ *Arkansas Capacity Building Math Partnership grant*
 - 2008 Math Summer Institute
 - 2008 Fall Math Invitational
 - 2009 Summer Institute (in progress)
 - 2009 Spring Math Invitational
- ◆ *Arkansas Capacity Building Science Partnership grant*
 - 2008 Science Summer Institute
 - 2008 Fall Science Invitational
 - 2009 Spring Science Invitational
 - Fouke Fine Arts Integration to *Arkansas Capacity Building Science Partnership*
 - Hope Fine Arts Integration to *Arkansas Capacity Building Science Partnership*



- ◆ Co-Teach Model with Nevada and Texarkana schools
- ◆ High School Redesign with Texarkana, Lafayette, and Genoa High Schools
- ◆ Business in Heels with 7-9 grade girls from Prescott, Fouke, and Emerson
- ◆ Guys in Ties 7-9 grade boys from Prescott, Fouke, and Emerson
- ◆ Math and science instructional resources from the Center of Teaching Excellence in Science and Math
- ◆ Technology Essentials and Advanced Technology Essentials
- ◆ Substitute Teachers Professional Development in Fouke



The Director provides a comprehensive series of strategies in professional development to address the needs of the Southwest-B ERZ constituents. This process begins with the Director conducting site visits to consortium schools to meet with administrators, teachers, and other stakeholders to facilitate a clear understanding of the results of a needs assessment cross referenced to the strategic plan components and implementation scheme. For example, technical support in identifying critical need areas through the use of a comprehensive needs assessment is the initial step in assisting a campus move toward overall school improvement. That data from the needs assessment is utilized to shape custom professional development for each particular partner school and to bring about a data-driven focus area(s).



Another structure the Director uses to inform constituents of available professional development is to facilitate involvement from each partner by regularly disseminating professional development opportunities, including emerging strategies or initiatives such as the High School Redesign or the Co-Teach Model – both of which the Southwest-B ERZ is helping partner schools obtain. Part of this process model, for example, stressed that partner schools obtain, analyze, and incorporate data from a Strategic Plan Collection Instrument form for relative strength and forced ranking criterion to help



determine the priorities and direction of the ERZ professional development emphasis. One of the outcomes of this data was the *Arkansas Capacity Building Math Partnership* grant to agree on a middle level (grades 4-8) math focus for the 2008-09 school year. In May 2008, the Director received official notification that \$467,000 was awarded to our consortium for a three-year grant beginning with the 10-day Math Summer Institute. Dr. Bill Nielsen of the ADE address the crowd during the Math Fall Institute in the picture above.

The first landmark grant the Southwest-B ERZ obtained was conceived and designed as an extremely innovative plan to provide professional development for teachers in rural Southwest Arkansas based on feedback from our partners. The *Arkansas Capacity Building Science Partnership* grant, a No Child Left behind Title II Part B federal grant administered by ADE, was funded for approximately \$105,000 per year for three years beginning in 2006 to fill the professional development gap in the capacity building of science coaches. Compressed



interactive video was used to deliver and share content into principle and remote locations, serving some rural teachers that would not have had the opportunity to capitalize on the training because of distance constraints. While the 2008-09 school year marked the final year for this particular funding source, plans are already being developed to replicate the current model for new prospective science coaches grant. Furthermore, the graduates of the existing cohort met for one week in July 2009 to continue their professional

development under professor Tim Daniels of SAU.

The Math/Science Center for Excellence at SAU also acts as a resource for regional schools. Two experts, one especially trained in math (Lynne Nielson) and another in science (Mary Crisp), offer a variety of professional development training options that assist regional school districts. The ERZ continuously helps disseminate information about the center including during the Spring Math Invitational on February 7, 2009 and the Spring Science Invitational on February 13, 2009, both at Southern Arkansas University.

The Director has also conducted a series of technology integration workshops for both SAU and the South Central Service Center entitled Technology Essentials and Advanced Technology Essentials. These technology workshops during the past 4 years were used as part of the technology professional development hours that the state requires. The workshop evaluations were extremely positive and focused on academic integration skills using technology as an instructional tool.



Principal candidates, as part of their required coursework, also take several classes in Educational Leadership at SAU as a part of a comprehensive program to develop administrators ready to lead effective schools in the new millennium. The Director is also on faculty as an assistant professor in educational leadership department which also extends the sphere of influence into greater parts of southwest Arkansas and beyond.

Detail the future direction of this ERZ as it relates to this goal:

The High School Redesign will remain at the forefront of the initiatives of professional development of our partner schools. While three schools of Texarkana, Genoa, and Lafayette will be the primary focus of the High School Redesign efforts, other schools will also benefit from the best practices shared. Using personal visits and working directly with the faculty, we can supplement communication with our partners via our newsletters and Advisory Council Meetings to focus our efforts on a comprehensive professional development program.



LEGISLATIVE REQUIREMENT #3: Enhance and expand local school curricula offerings through the use of two-way interactive television to include advanced placement, dual-credit, and advanced high school courses.

Indicate the current level of implementation of this goal within the ERZ:

**Fully
functioning and
operational
level of
development
and
implementation**

**Limited
development or
partial
implementation**

**Little or no
development
or
implementation**

Please provide detailed evidence to support the level of implementation indicated:

Each of the Southwest-B ERZ ERZ high school campuses of Ashdown, Bradley, Dierks, Fouke, Geneoa, Hope, Lafayette, Mineral Springs, Nevada, and Prescott take full advantage of distance learning technology via compressed interactive video (CIV). All campuses are filling in the circular gaps by enrolling students in hard-to-staff areas such as advanced math courses at the Arkansas Department of Education Distance Learning Center in Maumelle. Several significant advantages are realized through the effective distance learning environments:

- Enhanced course offerings to meet new, emerging needs;
- Low cost to enroll students in the curriculum; and
- Low costs in maintaining the technological equipment necessary to receive and deliver the required CIV specifications after the initial investment.

Another resource for Arkansas teachers, the Arkansas Education Teacher Network also is hosting a portal for professional development at the website "<http://ideas.aetn.org/>" which



provides a comprehensive listing of various types of workshop for educators. The SW-B ERZ encourages its members to take full advantage of the technological resources of all types in order to maximize overall school performance.

Detail the future direction of this ERZ as it relates to this goal:

The ERZ would like to facilitate even more on advanced placement, dual credit courses, and advanced high school courses by partner schools. Once need in each of the new ERZ partner schools has been established, the ERZ will work with those schools in developing effective course recovery support as part of a concerted strategy to address identified curricular gaps.



LEGISLATIVE REQUIREMENT #4: Develop a means of sharing of faculty for core course offerings when schools are unable to hire highly-qualified teachers in core subject areas required for college entrance or teachers necessary to meet state accreditation standards.

Indicate the current level of implementation of this goal within the ERZ:

**Fully
functioning and
operational
level of
development
and
implementation**

**Limited
development or
partial
implementation**

**Little or no
development
or
implementation**



Please provide detailed evidence to support the level of implementation indicated:

Through the *Arkansas Capacity Building Science Partnership* grant the SW-B ERZ has been sharing faculty members from Southern Arkansas University in science. This includes a 10-day Summer Science Institute, 2 Science Invitationals, and 4 additional follow up sessions in each teacher's classroom. The focus of the follow up is to reinforce the science content learned from the institute. The knowledge gains in science are "significantly significant" according to the external evaluator for the 2006, 2007, and 2008 Summer Science Institutes, which is in part due to the faculty sharing practices of Southern Arkansas University.

The *Arkansas Capacity Building Math Partnership* grant has also gained much success in improving content knowledge among the math participants. SAU is sharing its math professors and replicating a similar effective model in the area of mathematics using a 10-day Summer Science Institute, 2 Science Invitationals, and 4 additional follow up sessions in each teacher's classroom format. A total of 5 math professors deliver/participate in the instruction and 3 will conduct the follow up visits to each teacher's classrooms for the 2009-2010 school year.

While the artwork below reflects work conducted in the spring of 2008, it was conducted by SAU faculty and students from the college of Liberal and Performing Arts who shared their



expertise with teachers and students from Hope and Fouke in the integration of fine arts into the science grant. Fouke students are to the left.

Similarly, students and two faculty members below from Beryl Henry Elementary in the Hope School District

stand proudly in front of their creation.



The elementary students worked with university students on this concrete art venture. The teachers have developed several interdisciplinary instructional units designed around the art work to keep the learning going beyond the physical completion of the project.

Other innovative faculty sharing initiatives include the following:

- ◆ “Grow Your Own Teacher”
- ◆ Dr. Allen, SAU Vice President of Student Affairs, speaks to the “Business in Heels” girls on the picture on the right
- ◆ 2+2 articulation program with University of Arkansas Community College at Hope for all students enrolled in the pre-service teacher preparation program



Over the past four years, three members of the Southwest-B Education Renewal Zone have shared faculty. Fouke and Bradley shared an advanced placement teacher in the 2006-07 fall semester while Fouke and Hope shared an advanced placement teacher during the 2007-08 school year. The 2008-09 school year did not necessitate faculty sharing as all staffing needs were met by traditional means or in collaboration with the Arkansas Department of Education Distance Learning Center in Maumelle.

Detail the future direction of this ERZ as it relates to this goal:

The Southwest-B ERZ continues to communicate with the ERZ superintendents to fill in hard to staff subjects and geographical locations. For example, the Southern Arkansas University Employment Center sends out lists of contact information for SAU education graduates three times a year to our superintendents after the fall, spring, and summer graduations. We also advocate for our partner schools to capitalize on senate Bill 843 which is the Arkansas Traveling Teachers Program to its fullest potential. In addition, the ERZ helps promote initiatives like the Teacher Next Door Program which could facilitate the concept of sharing of faculty. Overall, we will continue to create seamless channels of communication with our consortium partners to address teacher shortages, particularly in hard to staff subject areas or more remote geographical areas of Southwest Arkansas.

LEGISLATIVE REQUIREMENT #5: Develop a strategy to recruit and retain highly-qualified teachers with particular focus on hard-to-staff schools.

Indicate the current level of implementation of this goal within the ERZ:

Fully functioning and operational level of development and implementation	Limited development or partial implementation	Little or no development or implementation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please provide detailed evidence to support the level of implementation indicated:

The focus of Legislative Requirement #5 is to develop a strategy to recruit and retain highly-qualified teachers with particular focus on hard-to-staff schools. To help address that need, Southern Arkansas University conducted a Teacher Job Fair in April 2009 to connect the school districts with SAU graduates.

Partners in the Southwest-B ERZ continue to maximize resources available. For example, the Office of Teacher Recruitment and Retention at the Arkansas Department of Education offers assistance with brochures, staging artifacts, and other recruitment strategies to promote local school districts. In the picture below, SAU College of Education Dean MohdZain recruits existing teachers into the graduate school.

The teacher recruitment video, “Teacher Teach Me” video is still being used to generate interest in the teaching profession to audiences that may have a future teacher in their ranks. Some outstanding candidate in other professions just might be lured into the field of education with its promise of making a difference.



Southern Arkansas University’s partnership with the University of Arkansas Community College at Hope (UACCH) in the “Two Plus Two Inclusive Early Childhood Education Program” helps recruit teacher candidates interested in teaching directly from the junior college level.

Part of the retention plan for Southwest-B ERZ's teachers is to provide stipends or SAU graduate hours as part of the *Arkansas Capacity Building Science Partnership* grant where 23 regional

science teachers participated in the 2008 Science Summer Institute. The *Arkansas Capacity Building Math Partnership* grant is also helping retain 43 regional math teachers by addressing their professional development needs.

Even the Technology Essentials and Advanced Technology Essentials workshops provided by the Director serve as a retention strategy by arming the participants with additional skills that facilitate both classroom instruction and classroom management as they sharpen their technology skills with specific training. After all, one great way to insure teacher morale is to have a great learning environment. Technology can be a fantastic catalyst in making that happen when appropriately utilized for instruction.

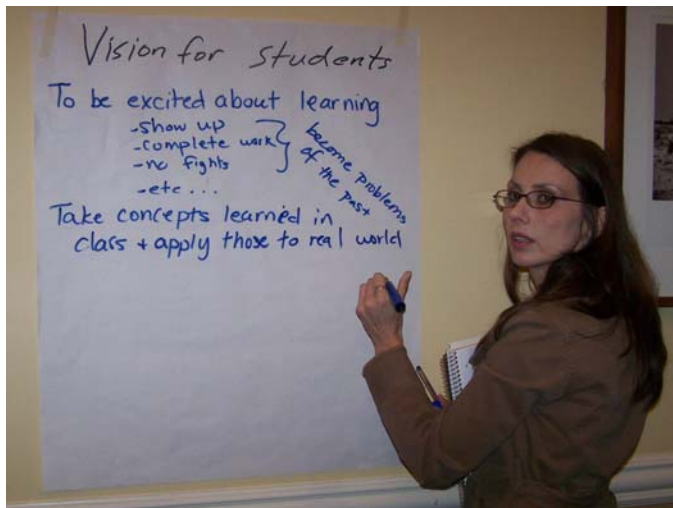
Additionally, the Southwest-B ERZ works directly with ERZ superintendents and principals in their efforts to fill vacancies by working with the Employment Resource Center at Southern Arkansas University.

Detail the future direction of this ERZ as it relates to this goal:

The Southwest-B Education Renewal Zone will continue to collaborate with partner schools to identify common challenges and develop realistic solutions. One focus area is assisting schools that traditionally have difficulty attracting teacher candidates to promoting the advantages of teaching as a career.

Other options and resources for teacher recruitment and retention among ERZ schools include:

- 1) Providing SAU Scholarship information to ERZ schools;
- 2) Capitalizing on SAU's non-traditional Master of Arts in Teaching (MAT) program;
- 3) Coordinating graduate credit through SAU for Arkansas initiatives like science coaches training or math coaches training;
- 4) Visiting P-12 students from our regional schools will have the opportunity to tour



SAU through a combination of activities and learning events. The ERZ will facilitate such events such as the Business in Heels, Gus in Ties (see appendix), Future Teachers Club, SAU Student Teacher Association, and the SAU Science Fair.

LEGISLATIVE REQUIREMENT #6: Develop a system for mentoring teachers with three (3) or fewer years of professional service.

Indicate the current level of implementation of this goal within the ERZ:

Fully functioning and operational level of development and implementation	Limited development or partial implementation	Little or no development or implementation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please provide detailed evidence to support the level of implementation indicated:

Both the *Arkansas Capacity Building Science Partnership* and the *Arkansas Capacity Building Math Partnership* allow for each participant to have a professor from SAU conduct follow up visits each semester as a continuing education approach to the challenge of increasing teacher content knowledge in science. In addition to the 2008 10-day summer institute, each of the 23 participants in the science grant received 3 follow up visits each fall and spring semesters which included the Science Invitationals where representatives from 12 regional school districts gathered to participate in additional professional development and function as a professional community of learners. SAU professors Mr. Tim Daniels and Dr. Tom Smith conducted



classroom observations, model lessons, and acted as a resource for the participating teachers. The Science Invitationals brought in industry experts like the Albemarle Corporation to help bridge the gap between studies and the real world. The focus on longitudinal mentoring will continue for the 2009-10 school year as an additional 5-day workshop beyond the grant was conducted in July 2010 in partnership with South Center Service Cooperative.

Similar mentoring took place with the *Arkansas Capacity Building Math Partnership* as SAU professors conducted follow up site visitations in 43 of the participants classroom, providing feedback and modeling as primary tools for engagement. Dr. Debe Kincaid and Dr. Lynne Neilson were instrumental in making the university-school connection as part of the mentoring process.

Southern Arkansas University's Center for Teaching Excellence in Science and Math also provides mentoring opportunities for regional schools by offering such resources as instructional

modeling and professional development. Ms. Mary Crisp worked with the science teachers participating in these training sessions and was often able to provide science resources and materials for our ERZ partners as another facet of mentoring.

Finally, each ERZ school has an established Pathwise program where each beginning teacher who has less than 1 year of classroom experience is assigned a mentor. Many of the SAU higher education faculty have participated in assisting public education in math, science, and literacy. For example, our pilot program to assist students for college, Get Ready for ACT Institute, joins higher education faculty with P-12 faculty to deliver high impact training directly to regional high school students.



Detail the future direction of this ERZ as it relates to this goal:

Southern Arkansas University is focusing on special education training for new and experienced teachers as a service to ERZ schools who may need to gain additional professional development. Working with the Texarkana School District, the Director and UALR professor Kathy Balkman have outlined 2 years of professional development for the secondary and elementary schools as part of the Co-Teach Training. Follow up discussions and observations as part of the ERZ Advisory Council Meetings will be part of this approach to mentoring as well.

LEGISLATIVE REQUIREMENTS #7 & 8: Develop active participation of the community in the work of the school and parents in the academic work of the school.

Indicate the current level of implementation of this goal within the ERZ:

Fully functioning and operational level of development and implementation	Limited development or partial implementation	Little or no development or implementation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please provide detailed evidence to support the level of implementation indicated:
 The Southwest-B Education Renewal Zone includes not only higher education and P-12 educators, but also parents, community members, and business leaders as part of the Advisory Council who help provide the identification and solutions to key challenges that may impact ERZ schools. The Advisory Council offers direction and prioritization of these challenges for the Director. The Advisory Council meets every three months.

The ERZ has partnered with Albemarle to provide professional development to our regional partners which includes the community members, professionals, school faculty and Southern Arkansas University faculty from the science department.

The ERZ is conducting Substitute Teacher Training annually in conjunction with Southwest Education Service Cooperative and the Fouke School District to recruit diverse community members into the teaching profession and provide an additional resource for regional substitutes. On the right, SAU faculty member Judge Larry makes a key point during the substitute teacher training last August.



The Fouke School District superintendent had sought assistance from the Southwest-B ERZ Director in conducting research on models of service learning as a graduation requirement. Now service learning is an intricate component of the graduation policy for the Fouke School District.

The Director has also engaged in multiple events to strengthen the ties of Southern Arkansas University with Magnolia School District and with the local community. The Director's membership to a Magnolia School District committee including Closing the Achievement Gap Committee and the Magnolia Discipline Policy Committee. Another significant event is the



Arkansas Capacity Building Science Partnership grant in which 2 participants are from Magnolia School District. Seven Magnolia The ERZ Director facilitated the community and business sectors to be an active participant in the academic work of the schools including the following:

- ◆ Augmenting the Albemarle partnership for professional development among our science teachers;
- ◆ Expanding the “Business in Heels” conference/competition in conjunction with the SAU’s College of Business to target middle school aged girls to consider high level problem-solving in the world of business; and
- ◆ Capitalizing on the “Guys in Ties” push for 7th, 8th, and 9th grade students as a means for community/business leaders to work directly with the youth and provide mentoring on a real world challenge in a competition-type environment.
- ◆ Dr. Dennis Plyer shares the direction of science from the ADE’s perspective in the picture above.

Detail the future direction of this ERZ as it relates to this goal:



The Southwest-B ERZ Director will continue to focus on extending the message of the Education Renewal Zones by making presentations and delivering papers at various conferences throughout the United States. A forthcoming conference that the Director will present includes the “Education Reform Through Professional Development: Results of a 3-year study”, which will be presented at the 2009 National Council of Professors of Educational Administration National Conference at the Marriott Riverwalk in San Antonio, Texas, on August 6, 2009.

More opportunities will present themselves and the Director will use them to continue to share our commitment, research, and model of implementation. For example, the picture to the left depicts the ground breaking ceremony of the SAU’s new 14 million dollar state-of-the-art Science Building, and the ERZ was there to help celebrate the massive implications for education and advancement of science in the region.

The picture below shows the Fouke students participating in the Substitute Teacher Training at the beginning of the 2008-09 school year:



LEGISLATIVE REQUIREMENT #9: Outline short-term and long-term evaluation strategies, including a means of collecting data necessary to evaluate the progress of each participating public school and the ERZ in its entirety.

Indicate the current level of implementation of this goal within the ERZ:

<p>Fully functioning and operational level of development and implementation</p>	<p>Limited development or partial implementation</p>	<p>Little or no development or implementation</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide detailed evidence to support the level of implementation indicated:

The following strategies were used to collect data necessary to evaluate the progress of each participating school and the Southwest-B ERZ in its entirety to measure the effectiveness of the Education Renewal Zone initiative for the short and long term on a formative and summative basis including the following:

- 1) Quantitative measures
- 2) Qualitative measures
- 3) Communication and outreach
- 4) Quarterly ERZ Advisory Council Meetings
- 5) Formative feedback from the NORMES visit
- 6) Summative feedback from the NORMES visit
- 7) Analysis from a longitudinal perspective once a baseline has been established
- 8) Summative perspective on the Annual Report

Furthermore, the Southwest-B ERZ, as part of its Capacity Building Partnership grants, has engaged in data driven evaluation practices that are scientifically measuring the growth in content knowledge in both science and math. This objective performance measure has shown significant gains in the participants' content knowledge in science using a validated Diagnostic Teacher Assessments in Mathematics and Science (DTAMS) instrument from the University of Louisville as pre- and post-tests. A report to the United States Department of Education and the Arkansas Department of Education reflecting students' performance will also be submitted for the 2008-09 on July 31, 2009.



In addition, the Southwest-B ERZ collected key data for the National Office for Research on Measurement and Evaluation Systems (NORMES), which in turn used it to compare other MSP grants in Arkansas. Please analyze the following data from the Table 1 and Table 2 below compiled by the NORMES office:

Impact of Arkansas MSP Projects on Teacher Content Knowledge

J. Hawley, C. A. Holaway-Johnson, and C. E. Stegman

INTRODUCTION

- Professional development (PD) opportunities for math and science teachers increasingly emphasize growing teachers' content knowledge (TCK).
- Workshop frequency, PD model, evaluation design, and analysis procedures are often insufficiently described in annual reports.
- Thus, the evidence provided does not support the claims regarding the impact on TCK.
- This poster addresses the effect of PD on TCK and identifies features that contribute to variability in PD efficacy using examples from Arkansas MSP projects.

OBJECTIVES

- Determine the effect on TCK resulting from participating in PD.
- Identify the features that contribute to variability in PD efficacy

MATERIALS AND METHODS

- 2007-2008 Arkansas MSP projects reporting pre-test and post-test scores from TCK tests of established reliability and validity were included.
- Using Pearson product moment correlations and subsequent Fisher's Z transformations, effect sizes (ES) were calculated.
- Mean number of participants, ES, and percent proficient were calculated for projects assessing multiple content categories.
- Effect sizes of 0.2, 0.5, and 0.8 were considered small, moderate, and large magnitude.
- Proficiency was defined as scoring 70% or greater on the post-test.

RESULTS

Table 1
Arkansas MSP Project Descriptive Statistics and Mean Effect Sizes

Project	Mean Number of Participants	Time Between Pre- and Post-test	Mean Effect Size (r)	Mean Proficient (%)
AR Capacity Building Science Partnership	21	1 year	0.67	24
Exceeding Expectations in Science	13	6 months	0.15	33
Middle Level Integrated Science	17	1 year	0.45	0
Science Coaches Academy	26	1 year	0.15	88
UARK Summer Science Institute	16	3 months	0.56	44
UCA Science Partnership	14	2 weeks	0.64	22
Fort Smith Math Partnership	14	1 year	0.58	93
Improving Quality of Mathematics	23	2 weeks	0.80	87
Math Coach Training	48	9 months	0.72	93
Measure-Up Mathematics	25	1 year	0.63	28
NEARK Region Math Partnership	22	6 months	0.56	9
SEARK Mathematics Project	14	1 year	0.45	34

Table 2
Overall and Content Effect Sizes

Overall	Mean Effect Size (r) Math Content	Science Content
0.55	0.62	0.44

Table 3
Contact Information

Contact Information	
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Judy Towell	Judy.Towell@arkansas.gov

DISCUSSION

- Data gathered from 12 PD projects and 253 teacher participants (see Table 1).
- Professional development had a moderate effect ($r = 0.53$) on TCK (see Table 2).
- Professional development emphasizing science content exhibited the greatest variability in ES magnitude.
- Effect size magnitude repeatedly did not correlate with proficiency.
- Time between pre-test and post-test did not correlate with ES magnitude.
- Time between pre-test and post-test did not correlate with proficiency on post-test.
- Number of grade levels served did not correlate with ES magnitude.
- Number of content strands addressed during PD did not correlate with ES magnitude.
- Instruments used to assess TCK produced similar ES magnitude.

LIMITATIONS

- Projects were not excluded on the basis of methodological criteria.
- Effect sizes were calculated without a control condition.
- Effect size magnitude was likely inflated as a result of weak testing methodologies.
- Project participation was voluntary.

ACKNOWLEDGMENTS

The authors thank the 12 Arkansas MSP projects featured in this study for cooperating in providing their TCK data.

National Office for Research on Measurement and Evaluation Systems (NORMES)

E-mail: normes@uark.edu Phone: (479) 575-5593

As you can see, the Arkansas Capacity Building Science Partnership had the greatest mean Effect Size of all 6 pure Arkansas science grants, with a Mean Effect Rate of .67. This is highly significant for a number of reasons: 1) Since the mean Effect Rate was the highest (measuring the greatest amount of teacher content knowledge growth) of all the MSP science grants in Arkansas, the professional development model is worthy of replication; 2) the time between the Pre-Test and Post-Test was at a highly desirable 1 year for the Arkansas Capacity Building Science Partnership, compared to 6 months, 3 months, or even less statically valid, 2 weeks for 3 of the other grants; 3) the overall average of the science content Mean Effect Rate was .44, but that includes our VERY strong .67 impact which significantly raises the overall average. If we were to eliminate our .67 from the overall average, the resulting average would be .39. **Thus, the .67 of the Arkansas Capacity**

Building Science Partnership performed at a 170% better than the average of the remaining science grants; 4) When comparing to the Mean Effect Rate of the Math grants, the Arkansas Capacity Building Science Partnership still was the top performer in the state when a more valid 1-year analysis for retention of teacher content knowledge was used. The .80 rate of the Improving Quality of Mathematics had only a 2-week duration between the pre- and post-tests and the Math Coaches Training, while scoring a healthy .72 rate, used a 9-month duration between tests. The only math models using a one-year duration (the most desirable) between the pre- and post-test scored .63, .58, and .45 – all very, very good scores but still below the .67 achieved by the Arkansas Capacity Building Science Partnership model.

Detail the future direction of this ERZ as it relates to this goal:

The Southwest-B ERZ will continue to use data driven decision making in its approach to designing high performance professional development and corresponding meticulous evaluation procedures. The results of the past 3 years in the science grant not only received national recognition by the United States Department of Education, which tapped the Director to showcase the professional development model at the Math Science Partnership National Conferences in Chicago in 2008 for professional development design and in San Francisco in 2009 for high quality evaluation methodologies, but it also paved the way to obtaining the Arkansas Capacity Building Math Partnership grant in 2008, which was worth almost a half a million dollars over a three-year period. It also bears mentioning that in the entire United States, there are only approximately 550 No Child Left Behind Math Science Partnership grants. Southern Arkansas University, through the Southwest-B Education Renewal Zone, has 2 of the 550 federal grants currently being administered.

Below is Dr. Roger C. Guevara making a presentation at the 2009 Math Science Partnership National Conference in San Francisco:

