

ABSTRACT OF CAPSTONE

Jeff Hawkins & Henry Webb

The Graduate School

Morehead State University

March 15, 2013

PERPETUATING EXCELLENCE IN TEACHING, LEADERSHIP, AND
LEARNING (PETLL©): PILOT IMPLEMENTATION STUDY

Abstract of capstone

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
College of Education
At Morehead State University

By Henry Webb

Prestonsburg, KY

and

Jeff Hawkins

Hazard, KY

Committee Chairs: Dr. David Barnett, Professor

& Dr. Carol Christian, Assistant Professor

Morehead, KY

March 15, 2013

Copyright © Henry Webb & Jeff Hawkins March 15, 2013

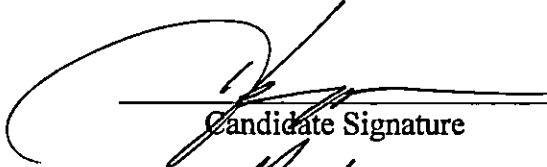
ABSTRACT OF CAPSTONE

PERPETUATING EXCELLENCE IN TEACHING, LEADERSHIP, AND
LEARNING (PETLL©): PILOT IMPLEMENTATION STUDY

Perpetuating Excellence in Teaching, Leadership and Learning (PETLL)

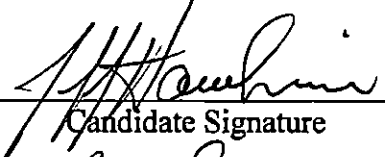
Educational systems across the country and in our rural region of Kentucky continue a concentrated effort to improve student achievement and the stakes in that effort continue to increase. The PETLL Initiative was designed to attain the goals of higher student achievement and a fully functioning professional community in the context of decreasing fiscal resources. PETLL is a sustainable and systemic improvement model that addresses unique challenges and builds on existing resources. The centerpiece of the design is building Teacher and Principal efficacy through an ongoing instructional coaching process providing resources, mentoring, and concrete techniques and strategies to participating instructional leaders. The PETLL Initiative pilot implementation study was made up of seven school districts, 17 schools, 524 teachers, 77 leaders and 7,690 students. Preliminary examination of data is encouraging as ACT scores are up an average of 1.6 points, student attendance has increased by 1.7%, teacher attendance has increased by 2.3%, and both teacher and principal efficacy have increased on the *Teacher and Principal Sense of Efficacy Scale* (William and Mary University and Ohio State University). This study uses a mixed-method research design. Qualitative and quantitative data were collected and triangulated to provide an in-depth analysis.

KEYWORDS: efficacy, instructional leadership, systemic, systemic, culture



Candidate Signature
March 15, 2013

Date



Candidate Signature
March 15, 2013

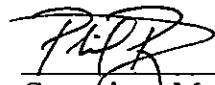
Date

PERPETUATING EXCELLENCE IN TEACHING, LEADERSHIP, AND
LEARNING (PETLL©): PILOT IMPLEMENTATION STUDY

By

Jeff Hawkins & Henry Webb

Approved by

 3-15-2013
Committee Member Date

Alisie Combs 3-15-2013
Committee Member Date

David Barnett 5/10/13
Committee Chair Date

Carol Christian 5/10/13
Committee Chair Date

David Barnett 5/10/13
Director of EdD Date

David Barnett 5/10/13
Department Chair Date

RULES FOR THE USE OF CAPSTONES

Unpublished capstones submitted for the Doctor's degree and deposited in the Morehead State University Library are as a rule open for inspection, but are to be used only with due regard to the rights of the authors. Bibliographical references may be noted, but quotations or summaries of parts may be published only with the permission of the author, and with the usual scholarly acknowledgements.

Extensive copying or publication of the capstone in whole or in part also requires the consent of the Dean of the Graduate School of Morehead State University.

A library that borrows this dissertation for use by its patrons is expected to secure the signature of each user.

Name

Date

CAPSTONE

PERPETUATING EXCELLENCE IN TEACHING, LEADERSHIP, AND
LEARNING (PETLL©): PILOT IMPLEMENTATION STUDY

Henry Webb

and

Jeff Hawkins

The Graduate School

Morehead State University

March 15, 2013

PERPETUATING EXCELLENCE IN TEACHING, LEADERSHIP, AND
LEARNING (PETLL©): PILOT IMPLEMENTATION STUDY

Capstone

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
College of Education
At Morehead State University

By Henry Webb

Prestonsburg, KY

and

Jeff Hawkins

Hazard, KY

Committee Chairs: Dr. David Barnett, Professor and

Dr. Carol Christian, Assistant Professor

Morehead, Kentucky

March 15, 2013

Copyright © Henry Webb and Jeff Hawkins

Dedication

We dedicate our capstone work to our family, friends and all of the wonderful professional educators who have touched our lives to encourage, support and challenge us to grow professionally.

Acknowledgements

The PETLL Initiative is co-designed by Jeff Hawkins, Executive Director– Kentucky Valley Educational Cooperative and Henry Webb, Superintendent– Floyd County School System. Critical partners in the design include staff members from the Kentucky Valley Educational Cooperative, staff from participating schools and districts, the Rutherford Learning Group, and the Center for Improving School Culture.

Both primary designers of the PETLL Initiative are members of Morehead State University's (MSU) first doctoral cohort in education leadership. Participation in the MSU Doctoral program provided the designers opportunities to interact and collaborate with education leaders across the region. Learning opportunities presented through doctoral course work and guided discussions with MSU faculty helped to expand and deepen the PETLL design and implementation model.

In addition to the collaborators identified above, the initiative is designed in a manner that actively involves each participant at every level in a continuous feedback and communication loop intentionally seeking ways to achieve efficiencies and effectiveness in the process. Information on best practice is shared among participants during visits and through on-going communication. The initiative also employs the use of a web page and a wiki-spaces site.

TABLE OF CONTENTS

Conceptual Framework 14

PETLL Protocol 15

Executive Summary 17

 What is the core of the capstone..... 17

 Who is the capstone meant to impact? 28

 How/When was the capstone project implemented?..... 46

 Why were these capstone and related strategies selected?..... 51

 Impact of capstone 57

 Limitations of study 59

 Delineation of work..... 60

 Reflections..... 61

Capstone Project

 CHAPTER 1 – PETTL Pre-Condition 63

 CHAPTER 2 – Whole Staff Participatory Reflective Analysis 70

 CHAPTER 3 – External Team Qualitative Visit 93

 CHAPTER 4 – Quantitative and Qualitative Analysis 110

 CHAPTER 5 – Individual Action Plan and Blueprint Implementation 134

 CHAPTER 6 – On Going Reflective Collaboration 139

 CHAPTER 7 – Pilot Implementation- Lessons Learned 150

Reference List

Executive Summary-Capstone Reference List..... 181

Secondary Reference List..... 187

Appendices

Forms:

Form 1: District Commitment to Excellence 67

Form 1.2: Eight Lessons From Whole School Reform 68

Form 1.3: Managing Complex Change 69

Form 2.1: Reflective Analysis Timeline 73

Form 2.2: 23 Themes of Teacher Talent 76

Form 2.3: Reflective Analysis 79

Form 3.1: External Visit Checklist 96

Form 3.2: Core Interview Questions 98

Form 3.3: Reflective Interview Questions 99

Form 3.4: Learning Culture Survey 103

Form 3.5: Student Survey 106

Form 3.6: Classroom Observation Instrument 109

Form 4.1: PETLL Crosswalk 115

Form 4.2: Talent Matrix 129

Form 4.3: 30 Day Action Plan 130

Form 4.4: Blueprint for Improvement 131

Form 5.1: Talent Matrix Log 137

Form 5.2: Leadership Implementation Plan 138

Form 6.1: Recurring Reflective Visit Agenda 143

Form 6.2: Recurring Visit Talking Points 144

Form 6.3: Recurring Reflective Visit End of Day 145

Form 6.4: District Action Plan 146

Form 6.5: Observation Guidance 147

Figures:

Figure 1: Relative Poverty 32

Figure 2: Regional Degree Attainment 33

Figure 3: PETLL Coaching Component Graphic 45

Figure 4: Pilot Participation 47

Figure 7.1: PETLL Evaluation Process 153

Tables:

Table 1: County Needs Data 30

Table 2: Regional Needs Data 31

Table 3: PETLL Logic Model 48

Table 7.1: Data Sources 158

Table 7.2: ACT Comparison Growth Scores 162

Table 7.3: College and Career Readiness 163

Table 7.4: School Attendance Data 164

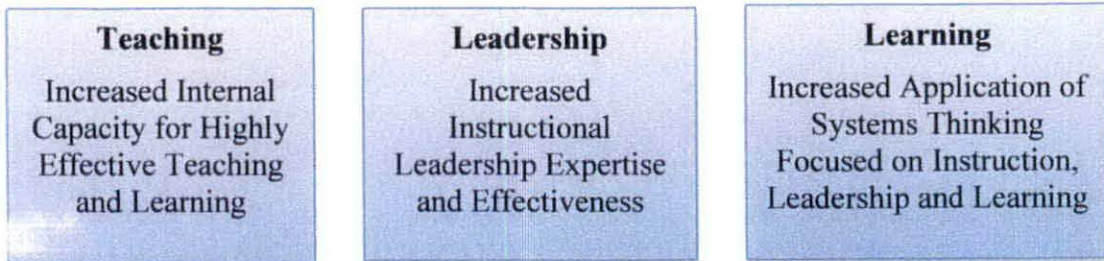
Table 7.5: Efficacy Measures 166

Vita 250

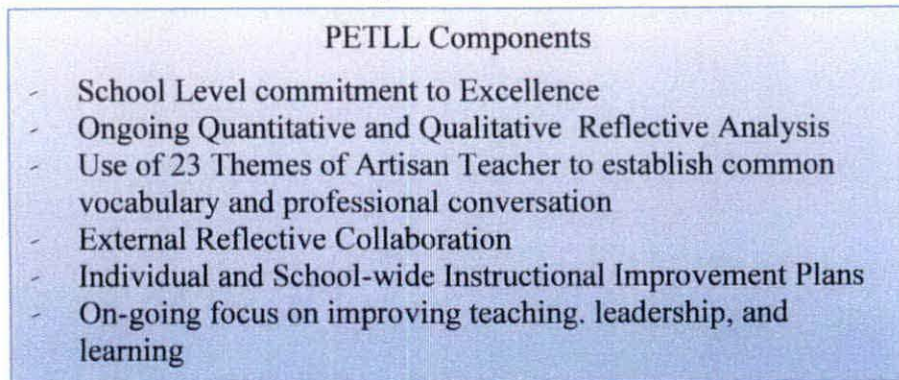
Conceptual Framework

PETLL Conceptual Framework
Perpetuating Excellence in Teaching, Leadership and Learning

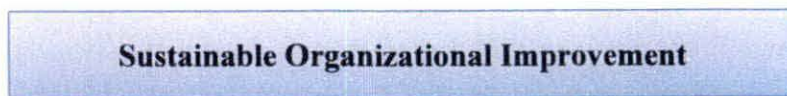
Significant outcomes expected:



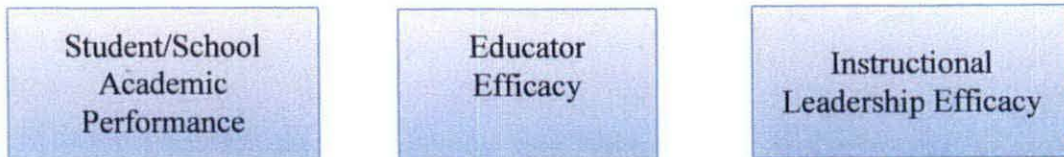
Accomplished through:



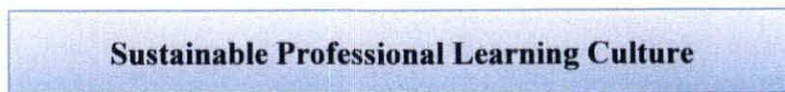
Resulting in:



Measured by:



Impacting



PETLL Protocol

Action Steps

Pre-condition: *The district and school has a commitment to systemic growth focused on instructional improvement.*

Step 1: Whole Staff Participatory Reflective Analysis

- a. Examination of multi-year academic trend data
- b. Scaffold analysis of data findings
- c. Consolidation of findings
- d. School community presentation of interpretation of findings

Step 2: External Team On-site Visit

- a. Learning culture survey
- b. Interview questions
- c. Classroom observations

Step 3: School Team and External Team Collaborative Analysis

- a. School report on data analysis
- b. External team report
- c. Introduction to artisan teacher themes
- d. Identify three high impact instructional leverage points (Small/Whole Group)
- e. Identify Individual Talents for Leverage Points
 - i. Individual talent

- ii. Latent talent

- f. Develop Individual 30-day Action Plan

Step 4: Development of One Page Instructional Blueprint

Step 5: Implementation of Individual Action Plans/Instructional Blueprint

- a. Organize with common growth needs

- b. Develop Systematic Review and Development Plan for Action Plans

- c. Develop talent map

- d. Publish and implement instructional blueprint: Focus on fidelity of implementation

Step 6: Internal Review/Guidance for Implementation

- a. District level leadership monitoring/support for implementation

- i. Monthly PETTL Meeting

- ii. Review progress/implementation of:

- 1. School Blueprint

- 2. Individual Action Plan

- 3. Provide support and guidance going forward

Step 7: Ongoing Focused Reflective Visits

- a. External team engages in ongoing 30-day site visits

- i. Review blueprint leverage points

- ii. Instructional Observations

- iii. Exit collaboration with school lead team to review findings and work to discover opportunities for extended support and growth

Executive Summary

What is the core of the capstone?

Educational systems across the country, state, and in the rural region of Kentucky in which the researchers work continued a concentrated effort to improve student achievement while the accountability of that effort continued to increase. The belief that all children can learn at high levels was put into action and is a national and state mandate. The increased rigor required by the Common Core Standards and the increased demand for schools to graduate students college and career ready contributed to a sense of urgency among educators while funding for public education continued to decline resulting in schools being asked to “do more with less.” The Perpetuating Excellence in Teaching Leadership and Learning (PETLL) Initiative is a response to school and district needs for school improvement that adopted a research based approach to school improvement efforts that lead to success from the inside out.

Public school systems in the Appalachian region of Kentucky are poised to emerge as a national and international leader in rural education. The region has long been measured by the challenges that face its education systems rather than the opportunities that exist. Those opportunities include: a unified consortia of school districts committed to putting students first, the willingness to share resources and strategies in an intra-district collaborative, the capacity to engage broad cross sections of the community in a systemic process for positive change, and the drive to recreate the landscape of rural public education. A consortium of seven rural school districts and one regional Education Cooperative made the commitment to share resources, and

professional learning opportunities, and also worked to affect policy and protocol in an effort to connect learners to highly effective teachers and educational leaders every day through their engagement in the PETLL Pilot.

PETLL created systems, resources, and tools that led to a revival in educational achievement in the Appalachian region. PETLL provided support for districts to develop effective teachers, strong principals, and engaged school communities in a collaborative effort to provide students with a personalized learning environment. Anticipated results are this program will increase high student academic achievement, reduce learning gaps, turn around low performing schools, increase graduation rates, higher college enrollment and post-secondary completion, and develop responsible and capable citizens who participate nationally and globally in successful careers.

The districts involved in the PETLL Pilot included some of the most distressed counties in Kentucky and the United States as documented in the 2010 Census Bureau Data (2010, U.S. Census Bureau). The Census identified the poorest counties in the nation and three of the top five counties included PETLL participating districts. Those counties are: #2 Breathitt County; #3 Lee County; #5 Magoffin County. Reporting on the data for the American Broadcasting Company's 20/20 news program, Kentucky native and ABC commentator, Diane Sawyer said, "I think you can argue that the history of the hills and the isolation of the hills is an added mountain to climb" (Shea, 2009, p. 1). The collaboration developed through the PETLL Pilot was a catalyst for positive change that broke historical patterns of ineffective behaviors while capitalizing

on the strengths of the extraordinarily resilient people committed to bringing about a better way of life in Appalachia.

The educational community must create professional development strategies that allow for replication in various size and resource-varying districts; strategies that are not a one-time experience but allow for on-going development and sustainability. (2003, Loucks-Horsley, Stiles, Mundry, Love & Hewson). The initiative's goal was to create schools of excellence where every student is engaged in high quality learning, where every teacher is engaged in an intentional instructional growth process, and where every instructional leader is engaged in growing a staff's capability to teach at an ever-expanding level to ensure college and career readiness for every child. The major emphasis areas of PETLL's focus are Effective Teaching, and Effective Instructional Leadership.

The PETLL Initiative is based on the foundational belief that educators are responsible to ensure a high quality learning experience for every student and supports the creation of a system where every teacher will rise to their greatest ability level by establishing a culture of growth with excellence in instruction as the overarching goal. Within the PETLL Initiative, a professional learning culture is defined as one in which educators are committed to personal growth and development necessitated by a commitment to continue to develop knowledge and skills and maximize opportunities for learning. The educator's position was that a professional learning culture is central to effective, high quality teaching. The intent of the PETLL Initiative was to foster a professional learning culture where educators view themselves, and are viewed by

others, as lifelong learners both in the subject they teach and in the craft of teaching itself. A critical element contained in the PETLL position of a professional learning culture is a belief in “learn by doing,” which requires commitment, participation, collaboration and shared responsibility that establishes building level trust and is not seen as something that is done to staff. The PETLL Initiative increased educator awareness that a culture of professional learning is created through their actions. In short – a professional learning culture is the way educators work and interact as a team focused on maximizing student achievement.

The PETLL systemic improvement process consists of eight actionable steps:

1. Pre-condition for whole staff commitment.
2. Whole Staff Participatory Reflective Analysis.
3. External Team on-site analysis.
4. School Team and External Team collaboration.
5. Development of Instructional Blueprint for Improvement.
6. Implementation of Individual Action Plans/Instructional Blueprint.
7. Internal review/guidance for implementation.
8. Ongoing focused reflective visits.

Fidelity of implementation was vital to the success of any programmatic model.

The first action step required the school and district to formally make a commitment to the work of improving internal capacity for the benefit of all students and ensure high quality instruction for every child. Working with the leadership teams, the PETLL initiative became the catalyst for continuous improvement that started with data

analysis, helped schools unearth root causes for performance gaps, underlying assumptions and beliefs; and attitudes, values and expectations that drove decisions and behaviors. Through this process, the staff built on strengths, identified talents and opportunities for improvement, and focused efforts on targeted strategies that leveraged significant gains. Ultimately the school and community took ownership for school success and provided direction for perpetual growth, increasing the capacity and range of improvement efforts to fully realize the school's potential to make positive change in the lives of students.

“In God we trust; all others must bring data” (Widely attributed to W. Edwards Deming) in Step 2, the Whole Staff Participatory Reflective Analysis caused educators to look at themselves and their performance through a mirror focused on an accurate representation of current reality. PETLL used a data trend analysis model that engaged the entire staff in a process that enabled them to see themselves as the most important controllable factor connected to student achievement. The data analysis was conducted by the entire school staff that examined relevant data, answered critical questions related to those findings and bravely faced the reflection of their actions on student learning.

Step 3, the External Team On-Site Analysis, incorporated the use of professionals from outside the school community as “critical friends” in a qualitative process to examine daily practice. A collection of tools originally developed through the Center for Improving School Culture was adapted to assess, analyze, and provide feedback on the school's learning culture. The quantitative and qualitative findings

were triangulated to complete a sharply focused depiction of current reality including academic trend data, non-cognitive data, student, staff and community perception data, staff skill level, and school learning culture.

“We cannot become what we need to be by remaining what we are” (Dupree 2004, p. 19). The PETLL Initiative called for all members of the school community to realize that individual talent should be cultivated and created an environment where intentional collegiality and collaboration led to a team approach supporting individual and collective improvement. The quantitative analysis of school data conducted by the staff and the qualitative analysis of practice guided by the visiting team was used as a “jumping off point” to identify existing teacher instructional strengths in the creation of a school-wide “Talent Map” (utilizing the Rutherford Learning Group’s *Artisan Teacher Themes* and to develop individual 30 Day Action Plan for instructional improvement.

According to a recent study of continuously improving school systems conducted by Barber and Mourshed (2007),

the most powerful method for developing teacher accountability came from peers through collaborative practice. By developing a shared concept of what good practice looks like, and basing it on a fact-based inquiry into what works best to help students learn, teachers hold each other accountable. (p. 34)

PETLL developers selected the 23 Artisan Teacher Themes to establish a common language for instructional improvement because the Principles were research-based and couched in a best practice framework.

The consistent use of an Individual Action Plan for Instructional Improvement by each staff member during the PETLL Initiative enabled each building leader to engage and be engaged in the specific growth of each staff member. Staff identified at least one specific area of strength and a specific area for individual improvement and developed an Action Plan specifying how that improvement would occur, how it was measured, and what resources were necessary to insure its completion. The Building Leader(s) interacted with each staff member during a specified timeframe (three times per semester or approximately every 30 instructional days) through a series of classroom observations, professional learning committee meetings and discussions in small groups and face-to-face settings.

At the end of the 30-Day timeframe the individual and the building leader determined whether the goal had been reached or if it was necessary to extend the learning into the next 30-Day period. The teacher and building leader collaboratively decided when improvement initiatives had been achieved and moved those mastered skills to the Talent Map for that teacher.

The creation of a school-wide electronic web-based “Talent Matrix” that identified individual instructional strength and made those strengths’ public was an integral part of the PETLL Initiative. One of the greatest resources in area schools was the professional staff and their collected experiences. Michael Fullan wrote, “for teachers to improve their practice they learn best from other teachers provided these teachers are also working on improvement. These exchanges are thus purposeful, and based on evidence” (2011, p.3). The talent mapping activity made it possible to chart

the specific skills and abilities of each staff member. The process simultaneously developed the confidence of each staff member and challenged each staff member to increase and build upon their talents. The use of an online electronic data-base describing the discreet expertise and capabilities of an entire staff served as a tool to access professional resources in the building and assisted in creating an environment of interdependence.

In a recent interview, noted author and educational consultant Dr. Gary Phillips suggested strongly that effective school leaders insure that they “Invest in People, Not Programs” (2011, p.2). Additionally, utilizing school wide talents to grow the staff efficacy in turn grew leadership efficacy and this was an important component of the PETLL process. Unlike most school improvement efforts the PETLL process focused on teacher talent and the implementation of the action plans was heavily reliant on utilizing existing instructional strengths to build internal capacity. A designed critical friend program was essential to build upon strengths in the building and to build internal capacity.

The school’s PETLL lead team developed a “Blueprint” for Improvement, written in community friendly language that identified three high leverage areas for instructional improvement. The Blueprint was developed through an inclusive approach that contributed to the sense of urgency and the necessity to move quickly. Traditional school improvement plans are often very complex, and frequently overlook core instructional practices. That complexity makes it difficult for everyone in the school community to have a shared understanding of the plan, and that lack of

understanding leads to a lack of implementation. “The size and prettiness of the plan is inversely related to the quality of action and the impact on student learning” (2009, Reeves, p. 81). The PETLL Blueprint for Improvement identified clear goals that addressed key instructional leverage points and systemic follow-up - making it easier for everyone in a school to work together to dramatically improve teaching and learning.

Ongoing implementation of the PETLL processes included significant building leader and teacher collaboration focused specifically on classroom learning and professional growth. It was essential for participants to understand the significance of collaboration in a systemic approach. Purposeful collaboration focused on a common goal (student achievement) established clarity and coherence. Top-down change often did not work because staff resisted the leader’s efforts to intensify improvement processes. Bottom-up change created an environment that allowed some staff to thrive while others remained stagnant. The PETLL Initiative called on the leader to enable, facilitate, and cause staff to interact in a purposeful and focused manner. In *Drive: The Surprising Truth About What Motivates Us*, (2009) author Daniel Pink argues that educators work diligently to accomplish goals they set for themselves, but goals imposed on them by others seldom motivated them to change. According to Pink there are Seven Deadly Flaws associated with extrinsic rewards: (a) they can extinguish intrinsic motivation, (b) they can diminish performance, (c) they can crush creativity, (d) they can crowd out good behavior, (e) they can encourage cheating, shortcuts, and

unethical behavior, (f) they can become addictive, and (g) they can foster short-term thinking (p. 59).

In *Linking Leadership to Student Achievement* (2012) authors Leithwood and Louis discuss three elements from their work that led to a significant difference from the district level: (a) District efforts to develop principal and teacher capacity to implement targeted improvements in teaching and learning. (b) Efforts to identify and support the diffusion of effective practices linked to specific needs for improvement. (c) Continuous monitoring of the process and effects of improvement efforts on leadership, teaching, and learning, with changes in practices where needed. The PETLL Initiative internal review/guidance action step was designed to ensure that the central office supported and guided the PETLL School to ensure fidelity of implementation, provide needed professional support and ensure impact on student achievement is evident. PETLL districts were required to meet monthly with schools engaged in the PETLL process for review of implementation of the Instructional Blueprint, 30 Day Action Plans and address necessary adjustments/support at that time. Additionally, it recommended that district staff visit schools regularly to monitor and provide onsite assistance with PETLL implementation.

The PETLL Reflective Visit component of the Initiative was a formative growth opportunity designed to support a school's ongoing improvement efforts by involving "critical friends" in a continuous feedback loop focused on classroom instruction and instructional leadership. A visiting team of experienced educators selected by the facilitator visited each school in the initiative at specified way-points (three times per

semester or approximately every 30 instructional days) and discovered evidence specific to the goals outlined in each school's Instructional Blueprint for Improvement. The visiting team collected tangible evidence based on observed instructional practice, student work, staff interaction, etc. It provided the host leadership team with a report of their findings and collaborated in an on-going dialogue focused on instructional improvement. Michael Fullan wrote in his article "Learning is the Work," "It is not sufficient for schools to work out collaboration on their own. External facilitation is required. And since we are interested in system change we also need schools to learn from each other" (2011, p. 3).

The PETLL Initiative moved a school to be part of a learning community that extended beyond itself and not develop an "Island" mentality. The Initiative's design brought multiple schools from multiple districts together and enabled them to look to each other for support and positive pressure to improve. Participation in the PETLL Initiative allowed staff members to interact in a meaningful way with staff from other schools. The interaction across school and district boundaries caused a greater level of learning to occur and created an atmosphere of collegial competition. Negative competition dissolved and a collective pride in overall student success increased.

Improving instruction is a complex and difficult task during the best of times. In this era of declining revenue, increasing accountability, and challenging student needs educators need a clear, cohesive, and simple process to cut through the complexity and maintain their focus on the core business of student achievement. When principals, teachers, teams, coaches, and district leaders consistently worked toward a

shared vision with a plan of action implemented with fidelity, schools dramatically improved teaching and learning for KIDS.

Who is the capstone meant to impact?

The PETLL Initiative impacted principals, teachers, students and the respective school communities in each school participating in the initiative and those educators who utilized research drawn from studies associated with PETLL Implementation. The PETLL Initiative was designed to address challenges specific to rural school districts and to districts that traditionally struggled to attract the most talented educators. That specificity focused the impact toward those schools and districts that shared common challenges.

The Appalachian region of Kentucky is among the most distressed in the United States in terms of poverty, education, and employment. Table 1 (compiled from Kentucky Postsecondary Education Data Portal and Research, and Kentucky Department of Education School Report Card includes data by county on poverty, degree attainment, and unemployment. The poverty level for every county participating in PETLL exceeded the Kentucky and U.S. poverty level average. A comparison of data from Table 1 and Table 2 show that every county was below the average degree attainment, was below the average high school graduation rate, and was below the bachelor degree attainment of Kentucky and the U.S. Additionally, every participating county had a higher unemployment rate than the average unemployment rate for Kentucky and the U.S. Table 2 compares poverty in the region with the state and the nation.

Southeast Kentucky is one of the most distressed regions of the Commonwealth of Kentucky characterized by low incomes and high rates of poverty, high unemployment, and low levels of education attainment among the working age population. All of the counties involved in the Pilot Initiative were classified as “Distressed Areas” in accordance with the Appalachian Regional Commission’s (ARC) County Economic Status Classification System and Distressed Areas since 2007 (2012, RC County Economic Status).

Table 1

County Needs Data

	Breathitt	Floyd	Johnson	Lee	Letcher	Magoffin	Perry	AVG.
% Below Poverty Level	33.2%	28.1%	22.1%	31.6%	26.8%	29.8%	27.9%	28.5%
Free Reduced Lunch	78.0%	76.0%	67.0%	78.0%	69.0%	86.0%	79.0%	76.1%
High School Attainment	62.6%	68.9%	67.8%	65.3%	71.0%	65.5%	68.7%	67.1%
Bachelor Degree Attainment	10.4%	11.7%	10.5%	7.8%	11.7%	10.5%	11.9%	10.6%
Unemployment	13.0%	11.0%	9.5%	12.6%	14.0%	16.6%	12.4%	12.7%

Compiled from Kentucky Postsecondary Education Data Portal and Research (2012), Kentucky Department of Education School Report Card (2012), and 2010 US Census Bureau Report.

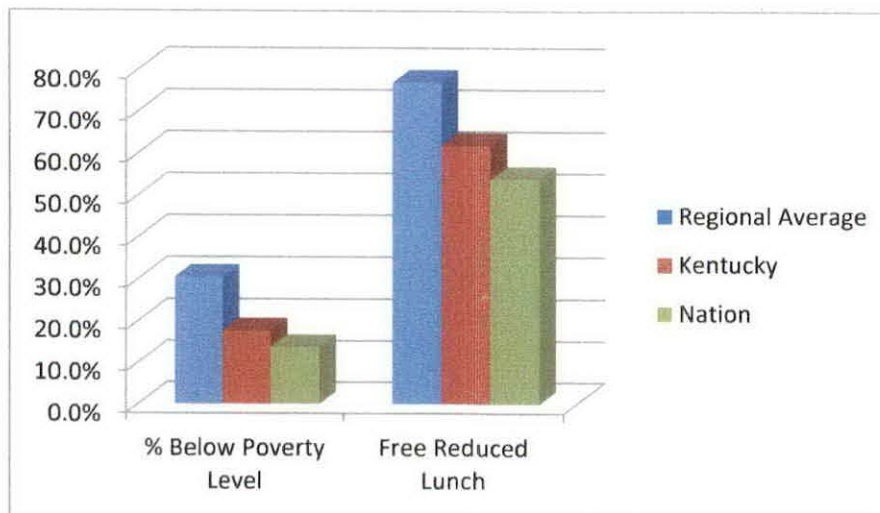
Table 2***Regional Needs Data***

	Regional Average	Kentucky	Nation	Absolute Difference National	Percentage Difference National
% Below Poverty Level	30.5%	17.7%	13.8%	16.7%	-120.8%
Free Reduced Lunch	71.2%	62.0%	54.0%	23.1%	-42.7%
High School Attainment	65.9%	85.0%	81.0%	15.1%	18.7%
Bachelor Degree Attainment	10.2%	27.9%	24.2%	10.1%	49.8%
Unemployment	12.7%	8.5%	8.1%	4.6%	-56.8%

Compiled from Kentucky Postsecondary Education Data Portal and Research (2012), Kentucky Department of Education School Report Card (2012), and 2010 US Census Bureau Report.

By definition this means that all of the counties involved in this Pilot were in the bottom 10% of counties in the United States based on per capita income, poverty, and unemployment. As depicted in Figure 1, more than 30% of the residents in the geographic area live below the Federal poverty threshold (2010, U.S. Census), which is more than double the national average. The average Free/Reduced Lunch rate for the geographic area is 77.1%. This rate is 15 percentage points higher than the state average and 43% higher than the national average. Simply stated, the relative poverty rate was defined as the percentage of people whose average standard of living in their society required more spending than the income they have available.

Figure 1- Relative Poverty

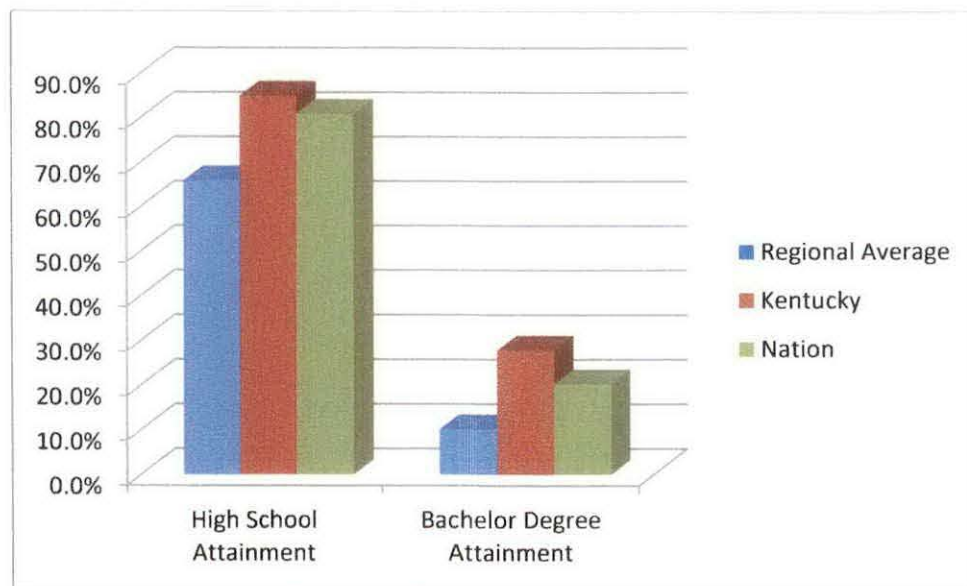


Source: Compiled from 2010 U.S. Census and Kentucky Department of Education School Report Card.

Figure 2 illustrates the region’s percentage of citizens who obtained a high school diploma or college degree. The region’s high school diploma attainment rate

was more than 18% below the national average. Even more disturbing was the fact that barely 10% of adults in the region have a college degree, compared to a national average of more than 24%. This data highlighted a persistent and intergenerational problem and provided one reason PETLL placed a heavy focus on college- and career-readiness.

Figure 2 - Regional Degree Attainment



Kentucky Council on Postsecondary Education (2012)

PETLL was a systemic process that is focused on the development of internal capacity to ensure that all students have access to high quality instructional leaders and teachers. The PETLL initiative was designed to enhance Principal and Teacher efficacy and relies on the definition of Teacher Efficacy expressed by Hoy (2002) as “teachers’ confidence in their ability to promote students’ learning.” According to Protheroe (2008) “researchers have taken the concept of teacher efficacy to a different level and developed a complimentary construct referred to as “collective teacher efficacy”.

Goddard, Hoy, and Hoy (2000, p. 43) (as cited by Protheroe, 2008) define collective teacher efficacy as “the perceptions of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students,” with the faculty in general agreeing that “teachers in this school can get through to the most difficult students.” In the view of these researchers, “teachers’ shared beliefs and actions shape the normative environment of schools.”

In *Teacher Efficacy: What it is and does it matter* (2008) author Nancy Protheroe observed that

Veteran educators have likely experienced some of the effects of a strong positive—or negative—sense of collective efficacy. Teachers in a school characterized by a “together we can make a difference” attitude are typically more likely to accept challenging goals and be less likely to give up easily. In contrast, teachers in a school characterized by a low level of collective efficacy are less likely to accept responsibility for students’ low performance and more likely to point to student risk factors, such as poverty as causes. As with an individual teacher’s sense of efficacy, there is a positive relationship between collective efficacy and student achievement. (pp. 43-44)

As cited in Protheroe (2008) “Hoy, Sweetland, and Smith found that collective efficacy ‘was more important in explaining school achievement than socioeconomic status’ and highlighted the finding’s practical significance ‘because it is easier to change the collective efficacy of a school than it is to influence the socioeconomic status of the school’” (p. 44).

The PETLL Initiative was designed to enhance teacher efficacy through a systemic process by implementing protocols to increase intra-school collaboration that is specifically focused and consistently targets instructional capacity building and principal efficacy. A great deal has been written about the principal's role as an instructional leader and a recent study by Leithwood and Louis (2012), *Linking Leadership to Learning*, finds that “no single documented case of a school improving its student achievement record in the absence of talented leadership exist” (p. 3). Additionally, in a meta-analysis of 69 public education studies conducted from 1978 to 2001 in the United States it was noted that principal leadership has a significant and positive relationship with student achievement (2005, Marzano, Walters, & McNulty). According to Michael Fullan (2010, p. 63), “the single most important factor in moving schools forward is that the principal is also a learner”.

The PETLL Initiative is grounded on the belief of research and summarized in a statement often made by Dr. John C. Maxwell during presentations and speaking engagements that “Everything Rises and Falls With Leadership.” Student learning is positively impacted through increased teacher efficacy when the instructional leader acts as an instructional coach and is engaged in a systemic process to ensure that the growth of his/her team is a priority. PETLL practices promote a purposeful and specific connection between practice and outcomes. Staff members learn, grow, and share – and – learn, grow, and share again in a perpetuating cycle. According to Green (2003, p. 9), “when the professional staff begins with sincerity to believe that all students can achieve, hold high expectations for student accomplishments, and do whatever it takes

to ensure that students will learn, then the school operates in a self-sustaining climate of effectiveness.”

The early work of Joyce and Showers (1982) established the hypothesis that initial training followed by coaching would result in greater transfer (of the skills and knowledge presented in the training) than the training alone. Their original model of professional development includes four components: (a) the study of theory, (b) observation of demonstrations, (c) opportunities for practice with feedback, and (d) coaching. They found the coaching component, whether provided by an outside expert or by peer experts (2002), was critical in terms of actually helping teachers change their classroom practice. Training that consisted of the first three components alone without coaching had very little impact.

Joyce and Showers (2002) describe five ways that coaching contributes to the transfer of skills learned in training:

1. “Coached teachers and principals generally practiced new strategies more frequently and developed greater skill in the actual moves of a new teaching strategy than did uncoached educators who had experienced identical initial training.
2. “Coached teachers used their newly learned strategies more appropriately than uncoached teachers in terms of their own instructional objectives and the theories of specific models of teaching.
3. “Coached teachers exhibited greater long-term retention of knowledge about and skill with strategies in which they had been coached and, as a

group, increased the appropriateness of use of new teaching models over time.

4. "In our study of peer coaching, coached teachers were much more likely than uncoached teachers to explain new models of teaching to their students, ensuring that students understood the purpose of the strategy and the behaviors expected of them when using the strategy.
5. "Coached teachers in our studies exhibited clearer cognitions with regard to the purposes and uses of the new strategies, as revealed through interviews, lesson plans, and classroom performance." (p. 3)

Neufeld and Roper (2003) expand on the potential improvement coaching can contribute to a school with the following list of advantages:

1. "Better school-based professional development. Professional development that addresses the needs of teachers and principals in light of their students' needs.
2. "Greater transfer of instructional practices to the classroom. Coaches support teachers and help them better implement instructional practices learned in a range of professional development opportunities.
3. "Greater collegiality and collective responsibility for student learning. Faculty develops a willingness to share their practice with one another and seek help from their peers and their coaches in order to help meet the needs of all students.

4. “Developing instructional leaders. Principals develop greater knowledge about and are better prepared to take on the role of leaders of instructional improvement.
5. “Enhanced school culture. Coaching can focus the nature of a school culture towards instruction and improved student achievement when dialog among faculty and staff centers on instruction, teachers reflect on their practice, and student data is used to drive instructional improvement”. (p. 27)

Instructional Coaching is a critical component of PETTL and the effort required to implement a viable coaching component requires training and coordination of skilled experts, a supportive environment that promotes trust, commitment from an entire faculty, and must be integral to systemic improvement efforts within a school to increase student achievement. Neufeld and Roper (2003) discuss the promise of coaching. These authors note that “coaching does increase the instructional capacity of teachers and schools, and this is a prerequisite for increasing learning” (p. 1). They go on to state that “a thoughtfully developed and implemented coaching program can not only provide teachers with the opportunity to increase their instructional capacity, but as research indicates can also help principals improve their leadership, and districts to improve their schools” (p. 3).

The PETLL Initiative’s coaching component is guided by the work of Bob and Megan Tschannen-Moran. The Tschannen-Morans are cofounders of the Center for School Transformation and developers of the evocative coaching process. Bob is

immediate past-president of the International Association of Coaching. Megan is a professor of educational leadership at the College of William and Mary in Williamsburg, Virginia. They serve as expert advisors to the PETLL Coaching component.

The PETLL Initiative embraces the philosophy of evocative coaching, especially the belief that good coaching supports excellence by tapping into five critical areas of concern; a concern for consciousness, a concern for connection, a concern for competence, a concern for contribution, a concern for creativity. The PETLL developers also share the belief that coaching needs to be teacher-centered, no-fault, and strength-based. Following is a brief description of the undergirding philosophy of our expert advisors that is embedded in the PETLL coaching model.

Evocative Coaching is defined as “Calling forth motivation and movement in people, through conversation and a way of being, so they achieve desired outcomes and enhance their quality of life. Fundamental to Evocative Coaching are five crucial concerns that apply the principles of both adult learning theories and growth-fostering psychologies” (Tschannen-Moran & Tschannen-Moran, 2010, p. 22).

These critical concerns are:

1. “A Concern for Consciousness

The coach's concern for consciousness generates increased self-awareness, self-knowledge, and self-monitoring on the teacher's part. This lays the groundwork for all experiential learning. Fostering learning and growth

requires mindfulness, the nonjudgmental awareness of what's happening in the present moment, as well as conscious awareness.

2. "A Concern for Connection

The carrot and stick may, on occasion, prod people to meet minimum standards, but only high-trust connections can inspire greatness. Such connections free up teachers to take on new challenges by virtue of the safety net they create.

3. "A Concern for Competence

By appreciating a teacher's current level of competence, coaches value the natural learning processes of those they coach. Encouraging teachers to clarify what they want and need, to build on their strengths, and to experiment in the service of mutually agreed-on goals empowers them to take more initiative and responsibility for their own learning and professional development.

4. "A Concern for Contribution

Most teachers enter education for more than just a paycheck and summer breaks; they want to contribute to the learning and well-being of students, families, and communities. Unfortunately, the pressures of schooling can cause teachers to lose sight of the reason they became educators in the first place. When coaches invite educators to reconnect with that original inspiration, the motivation for continuous improvement takes off.

5. "A Concern for Creativity

For true learning to take place, coaching must also unleash creativity. The coaching space needs to be a no-fault playing field in which teachers can follow their motivation and adopt a beginner's mind as to what steps they will take to achieve their goal. Creativity can't be coerced; it can only be invited” (p. 64).

The coaching component of the PETLL Initiative is interwoven across the model's design. The coaching component lends itself to embedded professional development, and professional development in PETLL schools is focused on increasing student learning.

The PETLL Instructional Coaching model addresses the disconnection from the classroom experience and the traditional “workshop model” of professional development. The PETLL model is an ongoing, Learn By doing, improvement process that occurs in an authentic school setting. Participants in this collaborative process engage in an instructional coaching model that promotes relationship building, positive collegial interactions, providing constructive feedback, and reflection for personal growth. Specifically the PETLL model provides participants with job embedded professional development and active learning in an environment that will create research based professional development opportunities that:

- Fosters ownership and build capacity by giving teachers an active role in determining the focus of professional learning, as well as its design and implementation (Fullan & St. Germain, 2006)

- Builds skills through purposeful transfer of learning from training to classroom practice (Joyce & Showers, 2002)
- Monitors progress in order to make necessary changes throughout the process (Guskey, 2000)

Another significant purpose of the coaching model as a component of the PETLL initiative is the instructional leader developing and a school-wide “Talent Matrix” to access available resources and individual staff expertise to support school systemic improvement. Participation in PETLL provides staff with access to skills, knowledge, and expertise that might otherwise not be affordable or available.

As supported in the previous discussion, the PETLL instructional coaching model incorporates research based best practices for coaches drawn from the work of national experts in the field. It meets the definition of high quality professional development as defined on the Kentucky Department of Education’s website “704 KAR 3:035 – Section 1(1) and Section 4(2)” and all of the Kentucky Department of Education Professional Development Standards which are consistent with the federal criteria in Section 9101 of No Child Left Behind. The PETLL coaching model includes:

- Minimum of 12 days engaged in coaching training over a three-year period, with 15 days of ongoing job-embedded mentoring and co-planning over the same period of time
- Access to the PETLL Webpage www.PETLL.com

- Access to PETLL's coaching model guidebook and materials.
- Guided interactions with a community of school and district leaders providing mutual understanding and support.
- Individual mentoring by an experienced PETLL team lead.
- Development of skills and expertise necessary to bring evidenced based practices into classroom by working with teachers and other school leaders.
- Guidance to general education and special education teachers in working collaboratively or cooperatively to combine their professional knowledge, perspectives, and skills.

The effort required to implement a viable coaching component requires training and coordination of skilled experts, a supportive environment that promotes trust, commitment from an entire faculty, and must be integral to systemic improvement efforts within a school to increase student achievement.

The PETLL Initiative acknowledges that instructional coaches work within a complex social network and cannot be expected to perform their duties unsupported. Coaches require a range of supports in order to effectively conduct their work and meet the desired purpose and outcomes. Some of these are social supports that allow the coaches to perform their duties as desired. A supportive culture that generates trust and collaboration is one support that is often mentioned (Neufeld & Roper, 2003; Wong & Nicotera, 2003). This type of environment has been considered a condition of readiness for initiating the PETLL coaching program; a toxic

environment can diminish success for any well-intentioned school or district. Coaches may need emotional and organizational support, including the support of the local administration and clear expectations for the development process that are understood and agreed upon by all participants.

Feger, Woleck, & Hickman (2004) list six categories of skills peer coaches need to successfully conduct their coaching duties:

1. "Interpersonal skills. Change can be difficult and coaches must be able to establish a trusting relationship and communicate with teachers during a process of change.
2. "Content knowledge. It goes without saying that coaches working with teachers will need content knowledge, but they must also know how that content informs the curriculum. A coach serves as a content expert with whom a teacher can reflect and collaborate.
3. "Pedagogical knowledge. Coaches need to understand how people learn and have a deep understanding of strategies that support different learning needs within a classroom and its surrounding school culture.
4. "Knowledge of the curriculum. Coaches need a deep understanding of the big ideas of the curriculum and how they connect across grade levels.
5. "Awareness of coaching resources. Coaches need to know what resources are available to them to support their work and professional growth as a coach.

6. “Knowledge of the practice of coaching. Coaches need to know the processes and activities of their selected model, which may include conferencing strategies, asking probing and clarifying questions, collecting and analyzing data, and conducting demonstration lessons” (p. 15).

PETLL developers contend that a concentrated focus on teaching, learning and leadership within the systemic structure of a school community transforms schools. This focus develops true leadership teams, teams that change the landscape of learning in our schools. Figure 3 provides a graphic representation of the PETLL Coaching Model.

Figure 3: PETLL Coaching Component Graphic

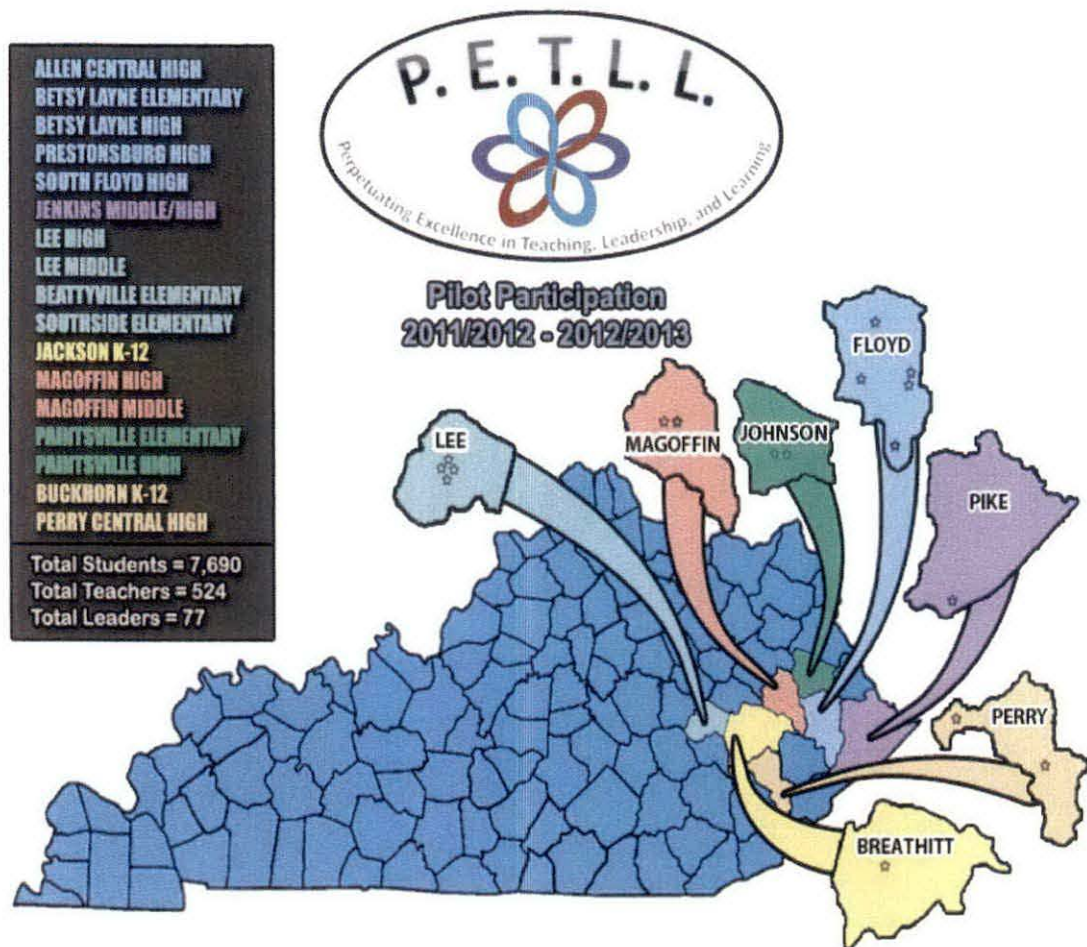


How/When was the capstone project implemented?

The PETLL Pilot Initiative occurred during a two year period beginning in the Spring Semester of 2011 and continuing into the Spring Semester of 2013. The initial pilot group was made up of seven school districts, 17 schools, 524 teachers, 77 leaders and 7,690 students. It is important to note that schools entered the Pilot at different points during the period as capacity for inclusion was developed.

Districts and schools were selected through KVEC based on volunteer basis during early fall 2011. Immediate training of the PETLL process was initiated and additional systemic leadership training to include the 23 Artisan Teacher Themes and Leadership Coaching was conducted by Mike Rutherford, President and founder of The Rutherford Learning Group (RLC). The process outlined in the opening section

Figure 4: Participating Districts



and more detailed sections in the following chapters began and were fully implemented. KVEC (Kentucky Valley Educational Cooperative), serving twenty (20) rural public school districts in south east Kentucky took the lead and assigned facilitators to work with pilot schools/districts to provide support/guidance to ensure that the process was scheduled/implemented and equitable among pilot schools. Kentucky Valley Educational Cooperative staff including regional special education consultants, math and literacy coaches from the region’s content leadership networks, Reading Recovery

teacher leaders, teacher and principal effectiveness coaches, career and college readiness specialists, leadership mentors and/or district leadership staff provided critical support to schools participating in PETLL and served as an ongoing resource to school and leadership staff.

An initial Logic Model was developed to provide guidance to the developers of the PETLL Initiative as implementation occurred in seventeen separate school settings. The Logic Model was intended to serve as a roadmap enabling multiple sites to engage in implementation with similar goals and priorities. The Logic Model is reprinted below.

Table 3

Initial PETLL Logic Model		
Strategies/Action Steps	Inputs or Program Investments	Outputs (Process Measures)
<ul style="list-style-type: none"> • PETLL (2.0) (Perpetual Excellence for Teaching and Leadership and Learning). Districts conduct self-assessment. Establish targets. Group of consultants look for identified targets, weaknesses related to targets. 15-20 snapshot observations. Looking for artisan teacher/effective talents. Use successful teachers to provide PD in school. Part of capacity building. 7 districts, maybe 17 schools. 	<ul style="list-style-type: none"> • KVSEC Staff • KVEC • Higher Ed (Asbury, Morehead, Pikeville) • PETLL Schools and leadership staff assist with ongoing evaluation 	<ul style="list-style-type: none"> • Induction training (familiarity with teacher talents, cross walk to teacher effectiveness, coaching w/ feedback, mentoring, external examinations of teacher practice, focus on instructional practice/coaching) • Training materials • Reflective analysis process • Clearly defined goals

Table 3 (continued)

Initial PETLL Logic Model		
Short-Term Outcomes (Impact on Knowledge, Attitudes)	Intermediate Outcomes (Impact on Skills, Behavior, Policy)	Long-Term Outcomes
<ul style="list-style-type: none"> • Teachers become more familiar with the teacher standards for effectiveness (Danielson model) • Artisan teacher talents are identified and magnified • Teachers are more knowledgeable/engaged about data analysis • Teachers are better able to identify goals based on reflective analysis. • Teachers are able to identify their areas of strength and growth related to instruction. • Principals are more focused on what to look for in classroom instruction 	<ul style="list-style-type: none"> • Improved instructional practices by teachers • Improved instructional leadership practices • Increased level of transparency related to instructional practice. (celebrate success, everyone is aware of teaching strategies) • Decrease teacher isolation • Increased use of co-teaching • More opportunities for use of mentor teachers. 	<ul style="list-style-type: none"> • Increase achievement for all students in Kentucky so that the achievement gap decreases for all subgroups (African-American, Hispanic, Native American, With Disability, Free/Reduced Price Meals, Limited English Proficiency) from ___% in 2012 to ___% in 2017 as measured by school report cards.

Why were these capstone and related strategies selected?

PETLL was selected as a Capstone Project to address common and critical education needs within the rural region of south east Kentucky. Districts in the region are faced with multiple common challenges including ensuring that highly qualified and highly competent teachers and leaders serve the needs of students every day. This capstone was designed to enhance teacher efficacy through a systemic process by implementing protocols to increase intra-district collaboration that is specifically focused and consistently targets instructional capacity building and building leader efficacy.

Funding for public education continues to decline and schools are asked to “do more with less” or as some have phrased the challenge of operating with declining revenue, “adapt to the New Normal”. A myriad of improvement programs are available to schools, and sometimes their implementation serves to mask systemic problems that actually limit genuine improvement. Districts/schools “have adopted new programs, restructured schools, realigned organizational charts” and exhausted resources on “quick fixes. In many cases, we have made the solution much more complicated than it needs to be” (para. 2).

The goals of higher student achievement and a fully functioning professional community combined with the reality of decreasing resources cause state and local education agencies to revision their design for improvement and concentrate on achieving high levels of productivity through efficiency and effective systemic processes. Strong instructional leadership and effective teaching and learning are

essential to achieving district/school goals of excellence for all students. The element that must change in order to increase student achievement is instruction.

Educational improvement is a priority nationally and locally. While some data indicates that we have made gains other data can be produced that indicates the P-12 education system in the United States continues to fall behind expectations and the rest of the world. Capehart (2012) citing Carnavale, Smith & Strohl (2010) states that

by 2018, the economy will create 46.8 million openings: 13.8 million brand-new jobs and 33 million 'replacement jobs,' positions vacated by workers who have retired or permanently left their occupations. Nearly two-thirds of these 46.8 million jobs, some 63 percent, will require workers with at least some college education" (para. 9).

About 33 percent will require a Bachelor's degree or better, while 30 percent will require some college or a two-year Associate's degree. Only 36 percent will require workers with just a high school diploma or less. The message is clear, we need to improve teaching and learning in a significant unprecedented way to meet the demands of the 21st Century.

In Kentucky we have experienced improvements in education in the last twenty years with the reform act of 1990 but still fall short of the overall improvement needed to adequately prepare all students for college and career success. These demands to continue to improve P-12 education come at a time when education as well as many other businesses and organizations have faced severe funding reductions.

Educational improvement is imperative for the future of our national, state and local economy and future. This can only be achieved by removing all excuses and identifying significant research based means of meeting these high demands for students who are our collective future. The essential question becomes, how do educators raise educational standards to ensure educational excellence and college and career readiness for every child? Day (2000) argues that successful and skillful leaders are essential for school reform efforts to increase overall student achievement. Leadership is essential to organizational growth and development. Educational leadership is no longer viewed as just the principal working in isolation; teacher leaders as part of a leadership team are now accepted as critical to organizational success. Elmore (2000) outlines five principles for a model of distributed leadership focused on large-scale education improvement: (a) the purpose of leadership is the improvement of instructional practice and performance, regardless of role; (b) instructional improvement requires continuous learning; (c) learning requires leaders that model the values and behavior that represent the collective good; (d) the roles and activities of leadership flow from the expertise for learning and improvement, not from the formal dictates of the institution; and (e) the exercise of authority requires reciprocity of accountability and capacity.

Schmoker (2006) presents an argument that if student achievement is to improve, instruction will have to change and improve simultaneously. This can only be achieved through collective leadership development and growth of all staff as Boyd and McGree (1995) assert, as schools are restructuring teachers are becoming leaders

of change. Teacher leaders do not subscribe to hierarchical definitions of leadership, but rather prefer the view of leadership as a collaborative effort. Teachers who become leaders often experience personal gain, intellectual and professional growth, and decreased isolation. Highly effective instructional leaders who embrace change and understand that change must be based on data as Lambert (1996) asserts that there are four main reasons why teacher leadership is essential in building leadership capacity “(a) teacher leadership sustains improvement, (b) teaching is intellectual work, (c) teacher leadership breaks patterns of resistance built up by the hierarchy, (d) since we are all leading it tends to build collective responsibility” (p. 7).

PETLL is a systemic model that addresses leadership development at all levels of the organization, classroom, school, and district. Leadership must create changes that are embraced and owned by the teachers who are responsible for implementation in classrooms (Fullan, 2006; Hall & Hord, 2001). The PETLL Initiative is designed to build capacity from within by empowering and developing all staff to create a culture of academic excellence. Corcoran and Goertz (1995) suggest that "capacity" means the maximum production of a school or educational system if the product is defined as high quality instruction. The instructional capacity of a school appears to be determined by the intellectual ability, knowledge, and skills of the faculty. Submitting to the strong belief of capacity development this is a critical component of the PETLL Initiative. Additionally, the model is designed to change organizational culture through the systemic continuous improvement of the faculty by establishing a professional learning community that is focused on building upon the strengths of all staff while addressing

identified school and individual growth needs. DuFour and Berkey (1995) declare the principals' role to nurture and develop teachers' professional growth as part of the school culture. The authors remind us to create consensus, promote shared values, ensure systematic collaboration, encourage experimentation, model commitment, provide one-on-one staff development, offer purposeful staff development programs, promote self-efficacy, and monitor the sustained effort. Sergiovanni (1994) discusses the importance of building a learning community by reorganizing our educational values, beliefs, and practices. He argues for an understanding of a community as a collection of individuals who are bonded together by natural will and who are bound to a set of shared ideas and ideals. This bonding and binding is tight enough to transform them from a collection of "I's" into a collective "we."

Hord (1997) summarizes the research, articulating the requirements for effective professional learning communities: (1) the collegial and facilitative participation of the principal who shares leadership, power, and authority through inviting staff input in decision making; (2) a shared vision that is developed from the staff's unswerving commitment to students' learning and that is consistently articulated and referenced for the staff's work; (3) collective learning among staff and application of the learning to solutions that address students' needs; (4) the visitation and review of each teacher's classroom behavior by peers as a feedback and assistance activity to support teachers; (5) physical conditions and human capacities that support such an operation. Additionally, a study of the world's best performing school systems concluded with three guiding principles:

“(a) The quality of an education system cannot exceed the quality of its teachers.

“(b) The only way to improve outcomes is to improve instruction.

“(c) Achieving universally high outcomes is only possible by putting in place mechanisms to ensure that schools deliver high quality instruction to every child” (Barber & Mourshead, 2007, p.4).

Based on an examination of related research and experience gained through the PETLL pilot, PETLL developers contend that for successful systemic change to occur an organization must have effective leadership that is data driven and focused on the development of highly effective leaders and teacher leaders. PETLL developers also maintain that a move toward the collective utilization of strengths or talents and partnerships is essential to academic excellence. In addition, PETLL developers assert that their examination of research and experience gained through the implementation of the PETLL pilot supports a systemic process that is clear and concise in stated goal attainment and capable of individualizing an approach to address the unique needs of individual schools. Lastly, PETLL developers assert that professional development that is not individualized to empower the learner and ensure frequent follow up and monitoring is a repeat of the failures of the past.

The experience gained through the PETLL Pilot Initiative combined with the foundational research conducted led to refinements in the process specific to capacity and efficacy building and not constrained by unreasonable financial burdens. The PETLL Initiative is grounded in researched “best practices” and is an approach that

will equip and empower leaders throughout the organization while enabling an organization to meet the demands of the new normal in education in the 21st century and more importantly the demands of our students who are our most precious resource. The time for a systemic model that will improve teaching, leadership, and most importantly learning, is now and we cannot wait on a bail out, a reform or a revival. The key to sustainable growth comes from within the learning organization.

Impact of the capstone

The goal of PETLL was to increase student achievement through an organized, sequential and perpetuating process that builds school staff capacity. The PETLL Pilot was implemented during a two year period beginning in the Spring Semester of 2011 and concluding in the Spring Semester of 2013 school year in seven districts and seventeen schools. It is important to note that schools entered the PETLL model at varying stages during the school year which altered the amount of time each school spent within the system. Continued on-going analysis is essential to determine the long term impact of PETLL on participating districts and schools.

It is clear through our early work that school and district leadership is critical to the successful implementation of PETLL. This observation is consistent with the work of Leithwood & Louis (2012), *Linking Leadership to Learning*, which indicates that

although there is a high degree of convergence across districts in terms of the priority accorded by district leaders to improving instruction as a focus for

improving student learning, there remains considerable variability in the concrete actions taken to support this priority (p. 189), which leads to a lack of district “concrete involvement” which leads to varied implementation which leads to varied results for students. Ongoing research on the subject suggests that most common and elaborate forms of school improvement planning have a negative relationship to achievement (Kannapel & Clements, 2005). Studies point to how elaborate multi-page templates for improvement tend to divert organizations from their core purposes. Collins (2001) discusses how such plans cause schools and districts to become “scattered and diffused, moving on many levels” (p. 91) and that they are committed to “pursue many ends at the same time” (p. 91). Collins went on to discuss how “simple plans” seemed to work most effectively – those plans that had a focus on straightforward actions and opportunities (p. 177).

Multiple sources of data, both qualitative and quantitative, were collected and analyzed to identify patterns and themes and evaluate the success of PETLL. Because PETLL was launched in the spring semester of 2011, long term quantitative trend data is not currently available, but will continue to be collected for analysis. Baselines have been established and first year data has been compiled. PETLL researchers began data analysis with a focus on the ACT component of the EPAS system, the Kentucky Department of Education’s College and Career Readiness measures, measure of educator efficacy, and attendance data. PETLL developers identified comparison districts for comparative data analysis through assistance from

the Kentucky Department of Education (information on comparison group selection can be found in chapter seven).

The PETLL pilot study has been conducted to test instrumentation and processes for the PETLL Systemic Improvement process. It is conducted to improve the quality and efficiency of the system. The intent is to reveal deficiencies in the design and address them before expanding PETLL to a larger scale.

A more in-depth analysis of the impact of the PETLL process can be found in chapter seven of this Capstone.

Limitations of the study

The PETLL Initiative, while providing a wealth of data to be analyzed and evaluated which resulted in some positive early results has limitations. With districts and schools implementing PETLL at varying times throughout the year and full implementation achieved at varied points of the year, implementation time was varied at PETLL schools/districts. Additionally, longitudinal data on the state assessment was heavily impacted by the implementation of the new Kentucky assessment (Kentucky Performance Rating for Educational Progress). While this change had significant impact on some statewide trend data the developers engaged in the identifying a “comparison group” for data comparisons while still gathering baseline trend data on current PETLL schools. Also, while implementation was occurring PETLL researchers were constantly analyzing the process for changes to improve the process to ensure systemic implementation and success. Initial training of facilitators was not systemic so initially schools/districts may have received different experiences

based on the facilitation which may have had an impact on results. Lastly, while the PETLL initiative has been implemented in a wide range of districts to include ranges in school structure and student population differences the Pilot was confined to the south eastern region of the Kentucky.

The decision was made to focus on accessible data that would provide the study with valid comparisons and not be affected by differences in treatment administered to the student or teaching population. The EPAS assessment system was selected as a primary data source because of its consistent use across all participating schools, its accepted validity as a measure of student readiness, and its historic and projected lifespan.

All schools participating in the PETLL Pilot and all schools identified in the Comparison Group also participated in the Kentucky Department of Education Leadership Networks (Instructional Supervisors, English/Language Arts, and Mathematics).

Delineation of work

The PETLL Initiative is co-designed by Jeff Hawkins, Executive Director--Kentucky Valley Educational Cooperative and Henry Webb, Superintendent--Floyd County School System. Critical partners in the design include staff members from the Kentucky Valley Educational Cooperative, staff from participating schools and districts, the Rutherford Learning Group, and the Center for Improving School Culture. Countless hours of collaboration in the design, development, implementation and revisions have occurred between the two primary developers.

Henry Webb's primary engagement was in the PETLL design and leadership systemic development whereas Jeff Hawkins' primary engagement was design, protocol document development and implementation as the pilot initiative was facilitated through the Kentucky Valley Educational Cooperative (KVEC). While a clearer, concise delineation may not be evident we find that this is a result of the close thought provoking and higher order work sessions on behalf of both developers who have worked simultaneously in the creation, implementation and now revision of PETLL. The developers took full advantage of 21st Century technology to create a collaboration platform that enabled them to immediately share documents, research findings, and engage in challenging and thought provoking discussion that expanded the work of the capstone in the moment. PETLL researchers are proud of our collaborative commitment to work as a team to protect time to meet, plan, write and analyze to develop a wonderful initiative to benefit the KIDS of our region, our state and our nation.

Reflections

The research is clear, and the developers experience along with the foundational aspects of the research, led to the development of a model that was based on improvement from within and is not bound by financial burdens. The PETLL initiative is grounded in researched "best practices" and is a systemic approach that will equip and empower school leaders while enabling a school to meet the demands of the "new normal" in education in the 21st century. The time for a systemic model that will improve teaching, leadership, and most importantly learning, is now. The key to

sustainable systemic growth must be discovered and enabled from within the learning organization. There is much to be learned from PETLL's implementation. Analysis will continue, revisions will be warranted and made to ensure that the model is one that, when implemented with fidelity, will build internal capacity, establish high quality professional learning communities, increase student achievement and establish schools as schools of excellence for KIDS.

Chapter 1

PETLL Pre-Condition:

Commitment to Systemic Growth Focused on Instructional Improvement

Educational systems across the country and in the region in which PETLL was implemented continue a concentrated effort to improve student achievement – and the stakes in that effort continue to increase. The belief that all children can reach challenging standards is now a national and state mandate. Funding for public education continues to decline and schools are asked to “do more with less”. A myriad of improvement programs are available to schools, and sometimes their implementation serves to mask systemic problems that actually limit genuine improvement. Districts and schools have adopted new programs, restructured schools, realigned organizational charts and exhausted resources on quick fixes. In many cases, it seems educators have made the solution much more complicated than it may need to be.

The PETLL Initiative was designed to attain the goals of higher student achievement and a fully functioning professional community in the context of decreasing fiscal resources. Every school and every district possess a unique dynamic consisting of existing resources, staff expertise, academic performance, etc. The PETLL Initiative was designed to meet the unique challenges of each school and build upon the resources currently in place.

The PETLL Initiative works to focus efforts in participating districts and schools on “inside-out” instructional improvement at the individual and collective level

leading to a culturally embedded long-term systemic change. The major emphasis areas of the Initiative are: (1) Effective Teaching, and (2) Effective Instructional Leadership. District/School participation in the PETLL Initiative enabled researchers to measure the initiative's impact on instructional practice, professionalism, leadership effectiveness, and most importantly student achievement.

The hard work of school improvement is a difficult process with no single measure of academic soundness for every district, school, or student. The various factors that contribute to the educational process must be evaluated while taking into consideration their interrelationship with distinct qualifiers, including the learning culture of the school. PETLL researchers examined research on school improvement, while deliberating on unique attributes that must be taken into consideration in rural eastern Kentucky districts and schools. Participation in the PETLL Initiative supported schools as staff members reviewed selected pieces of evidence and trend data to discover patterns and to draw conclusions related to school effectiveness. School staff used this process as a mirror to view a clear reflection of school strengths and challenge areas. Staff analyzed trend data as they worked toward systemic instructional improvement.

A prerequisite for a school's involvement in the PETLL Initiative was a district and school commitment to excellence. The PETLL Initiative was not intended to support a school in achieving compliance measures of success – it was and is intended to support a school in its ongoing pursuit of excellence. The Initiative maintains that in order to achieve excellence, a school and a district must use a systemic approach to

improvement and implement programmatic change with fidelity. Only a school or district that is interested and committed to achieving excellence for all learners should engage in the PETLL Initiative as a viable growth model. “Plans are only good intentions unless they immediately degenerate into hard work” (Peter Drucker. Great-Quotes.com, Gledhill Enterprises, 2011, p. 147).

The PETLL Initiative is committed to providing training, full implementation support, ongoing opportunities for intra-district staff collaboration, and continuous feedback and follow-up on systemic continuous improvement initiatives. The participating school and district must understand that change is a long term process and will not happen immediately. Therefore PETLL participants must commit to a multi-year engagement for their school, their staff, and their leadership.

The first action step in the PETLL Protocol is the Pre-Condition. The Pre-Condition asks all participating schools to participate in the Initiative with the assurance that they will engage in the PETLL processes with fidelity. The precondition begins with a deep understanding of the PETLL Components and the realization on behalf of the new district/school that a long term commitment is necessary to ensure success. PETLL researchers have been reminded through our work and experiences that a commitment is necessary in order to ensure the greatest likelihood for success in any change initiative.

Following a complete explanation of the components in the PETLL Initiative, the school and district leadership (Superintendent and Principal) is required to commit resources and sign a District Commitment to Excellence Agreement Form. A copy of

the form is located below (Form 1.1). Additional tools are used to assist leaders in understanding the complex variables necessary to create an environment for change and innovation to occur. Two recommended awareness and worksheets that support that process are listed below (Form 1.2 and Form 1.3).

Form 1.1

PETLL
Perpetuating Excellence in Teaching, Leadership, and Learning
District Commitment to Excellence Agreement Form

KVEC is committed to training, full implementation support, monitoring, and continual feedback and follow-up for school-wide improvement. KVEC will:

1. Coordinate school-wide training and professional development related to needs identified in the Initiative.
2. Coordinate/Oversee/Support initial Comprehensive Reflective visit and ongoing Reflective site visits at participating schools.
3. Provide ongoing support to member schools coordinated through a primary Point of Contact. Continual support for schools will be made available through the PETLL website, email, KVEC wiki page, etc.
4. Provide technical assistance to PETLL Schools/Districts as requested.
5. Provide information and support for collecting baseline, ongoing, and annual data related to the PETLL Initiative.
6. Provide ongoing technical support for PETLL related tools and processes including website and regional "Talent Mapping" Initiative.

The District/School Leadership Team commits to:

1. Acknowledge organizational commitment to systemic growth benefitting all Kids.
2. Ensure that PETLL processes, tools, and protocol are followed with fidelity.
3. Communicate goals and objectives of PETLL and engage all stakeholders in ongoing process.
4. Ensure that the District/School Leadership Team meets regularly to plan, analyze, and review district and school PETLL activities.
5. Ensure that the District PETLL Coordinator, the Principal, and identified members of the School Leadership team, participate in the ongoing Leadership training with Rutherford Learning Group at a minimum cost per person.
6. Ensure that each school contributes identified staff members to participate in ongoing site visits to member PETLL schools throughout the process.
7. Assist and support other districts/schools in accessing and analyzing PETLL Initiative and processes.

I have read the PETLL Commitment to Excellence Agreement and understand and agree to meet the obligations listed above.

_____ **Date** _____
District Superintendent

_____ **Date** _____
Principal

Form 1.2

Eight Lessons from Whole-System Reform	
Lesson 1	The drive to make progress in our schools can't be a FAD .
Lesson 2	Education reform is not important to your system unless it's important to your Leaders – PERSONALLY .
Lesson 3	You won't get results unless teachers are on-board and contributors to the process from the outset.
Lesson 4	To succeed you need to build capacity .
Lesson 5	Select a few priorities and pursue them relentlessly .
Lesson 6	Once you start making progress, you've got permission to invest more .
Lesson 7	You're never done.
Lesson 8	The best way to sustain your effort to improve schools is to keep it personal .
<p>Source: McGuinty, 2010</p> <p>Fullan, 2010, Pg.96</p>	

Form 1.3

Managing Complex Change
 "Change" Formula

(Adapted from Knoster, T. (1991) Presentation at TASH Conference, Washington, D.C.)

Vision + Collaboration + Skills + Incentives + Resources + Action Plan

+ Collaboration + Skills + Incentives + Resources + Action Plan =
Confusion

Vision + + Skills + Incentives + Resources + Action Plan =
Sabotage

Vision + Collaboration + Incentives + Resources + Action Plan =
Anxiety

Vision + Collaboration + Skills + Resources + Action Plan =
Resistance

Vision + Collaboration + Skills + Incentives + Action Plan =
Frustration

Vision + Collaboration + Skills + Incentives + Resources +
Treadmill

Chapter 2

Whole Staff Participatory Reflective Analysis

The goal of the PETLL Initiative was to create schools of excellence where every student is engaged in high quality learning, where every teacher is engaged in an intentional instructional growth process, and where every administrator is engaged in growing a staff's capability to teach at an ever-expanding level. Ernest Boyer, one of the most influential figures in advancing public education and teacher training observed: "When you talk about school improvement, you are talking about people improvement. That is the only way to improve schools. The school is people, so when we talk about excellence or improvement or progress, we are really talking about the people" (Sparks, 1984 p. 33).

PETLL is a systemic process designed to address classroom instruction and the work of the instructional leader, the two areas that have the greatest impact on student learning and the two leverage points we as educators have the greatest ability to influence. A study of the world's best performing school systems concluded with three guiding principles,

- 1) "The quality of an education system cannot exceed the quality of its teachers.
- 2) "The only way to improve outcomes is to improve instruction.

- 3) “Achieving universally high outcomes is only possible by putting in place mechanisms to ensure that schools deliver high quality instruction to every child.” (Barber & Mourshed, 2007, p. 4).

In a meta-analysis of 69 public education studies conducted from 1978 to 2001 in the United States the researchers found that principal leadership has a significant and positive relationship with student achievement (Marzano, Walters, & McNulty, 2005). According to Michael Fullan, “the single most important factor in moving schools forward is that the principal is also a learner” (2010, p.63).

Researchers consistently conclude that the instruction students receive from their classroom teacher is one of the most important controllable variables in how much the students achieve. Quality of instruction is repeatedly identified as the most important factor affecting student learning in multiple studies (Buddin, & Zamarro, 2009; Hattie, 2009; Rivkin, Hanusheck, & Kain, 2005; Wright, Horn, & Sanders, 1997). PETLL action steps focus attention on ensuring a high quality learning experience for every student and supporting the creation of a system where every teacher will rise to their greatest ability level by establishing a culture of growth with excellence in instruction as the overarching goal.

The initiative causes educators to look at their performance through a mirror focused on an accurate representation of current reality. The PETLL initiative uses a data trend analysis model that engages the entire staff in a process that enables staff to see themselves as the most important controllable factor connected to student achievement. The data analysis model includes metrics to incorporate trends and site-

specific academic growth data. The data analysis is conducted by the entire school staff that examines relevant data, answers critical questions related to those findings and faces the reflection of their actions on student learning. The analysis incorporates the use of professionals from outside the school community as “critical friends” in a qualitative process to examine daily practice. A collection of tools originally developed through the Center for Improving School Culture have been adapted to assess, analyze, and provide feedback on the school’s learning culture. The quantitative and qualitative findings are triangulated to complete a sharply focused depiction of current reality.

The second step in the PETLL Protocol is the Whole Staff Reflective Analysis. The Analysis is designed to be implemented in a manner that includes participation by each individual staff member so that each member of the school community is caused to deeply examine relevant data pertinent to student academic growth. Leadership organizes staff members in small groups relevant to their individual role and engages them in the analysis through active participation. Leaders from each working group form a “Core Team” where the analysis from each group is combined to present a fully developed and encompassing reflective vision.

A Reflective Analysis Toolkit is found below (Form 2.1).

Form 2.1

**PETLL Reflective Analysis
"Recommended Timeline"**

(The timeline outlined below is only one of several possible scenarios. Schools may have set aside half or whole days for data analysis which would compress the schedule considerably.)

Day 1 School Leadership receives Reflective Analysis Document and begins process of small group analysis. Working in small groups (existing PLCs', grade or content specific groups); teams will complete the data forms and respond to the reflective questions contained in the document. One (1) member of each small group should be identified as a member of a whole-school CORE Team – responsible for consolidating data and generating consolidated responses to questions associated with data analysis).

Day 10 Leadership Team members begin process of consolidating Data Analysis findings from small groups.

Day 12 External Team sends school leadership guidelines for schedule of observations and surveys on pre-set visit day.

Day 15 External Team visits school at start of school day. Scheduled interviews and observations begin.

2:00 p.m. External Team meets to consolidate observations and interview responses.

After School Meeting with ENTIRE Staff

- 5 min. Entire School Staff and Central Office support staff - along with invited partners meet in a common area (coffee, soft drinks, and snacks provided).
- 25 min. School Based Leadership Team reports on Data Analysis Findings.
- 25 min. External Team presents findings and presents overview of Artisan Teacher Themes.
- 15 min. Small Group Identification of three (school-wide) high leverage areas for improvement based on analysis of data.
- 15 min. Whole Group consolidation of small group priorities
- 20 min. Individual Teachers identify (at minimum) two talents to be included in the School Wide "Talent Matrix". At least one Talent will be a proven Talent that that teacher possesses and at least one Talent will be an area the teacher is working to improve upon.
- 20 min. Individual 30 day Instructional Improvement goal development
- Closing Establish Calendar Dates for follow-up meetings to fully develop plan for improvement that will include SMART (Short, Measureable, Attainable, Results

oriented, Time) goals, Monitoring Process, Dates,
persons responsible, etc.

Day 20 External Team (led by PETLL Point of Contact) attends first CORE Team
planning session contributing as a long-term Process Observer and
resource to the School staff in the ongoing systemic work.

Form 2.2**23 Themes of Teaching Talent Memory Jogger**

*Adapted from the Rutherford Learning Group's Developing the Artisan Teacher, for use in
PETLL©*

Clear Learning Goals: The ability of the teacher to identify and precisely express what students will know and be able to do as a result of a lesson. Key Terms: Micro-goals (20 min. goals), content clarity (expressed as nouns), performance clarity (expressed as verbs).

Congruency: The ability of the teacher to design classroom activities that are accurately matched to the clear learning goal. Key terms: congruent vs. correlated or imposter activities.

Task Analysis: The ability of the teacher to identify and sequence all the essential steps necessary for mastery of a learning goal. Key Terms: roadmap, dependent sequence, independent sequence, essential sub-learning.

Diagnosis: The ability of the teacher to verify what students already know and can do for the purpose of determining where to begin instruction. Key Terms: formal, informal, inferential.

Overt Responses: The ability of the teacher to regularly obtain evidence of student learning for the purpose of determining next steps for teaching/ learning. Key Terms: all students, overt responses, during instruction- not after.

Mid-Course Corrections: The ability of the teacher to quickly adapt instruction to meet the learning needs based on overt student responses. Key Terms: practice, re-teach, temporarily abandon, move on, extend, connect.

Conscious Attention: The ability of the teacher to gain then focus student's attention on a relevant learning activity. Key Terms: invitation, discrepancy, emotional hook, finite attention, temporary attention.

Chunking: The ability of the teacher to segment the curriculum and learning activities into manageable portions to avoid working memory overload. Key Terms: working memory overload, serial processor, limited capacity.

Connection: The ability of the teacher to establish a mental link between the intended learning and past learning experiences. Key Terms: neural schema, neural network, misconception.

Practice: The ability of the teacher to improve recall and application of learning through effective rehearsal, repeated effort, drill, repetition, study, and review. Key Terms: duration, amount, frequency, quality, cusp of mastery.

Personal Relevance: The ability of the teacher to embed the intended curriculum into issues and contexts that are linked to students' survival or immediate well-being. Key Terms: interesting vs. personally relevant, two-step process.

Locale Memory: The ability of the teacher to enhance learning by organizing information around the learning position or "locale" in three dimensional spaces. Key Terms: spatial memory, navigation memory, map learning.

Mental Models: The ability of the teacher to create a structure for learning using images, models, sensory experiences, symbol systems, and creative processing methodologies. Key Terms: artifact replication, image-text model, sensory-symbol model, L-R hemisphere processing model.

First Time Learning: The ability of the teacher to capitalize on the brains tendency to attend to, processes deeply, and recall information that is presented as new, original, or as an initial experience. Key Terms: degree of original learning, imprinting, accurate, complete, connected to reality, level three.

Neural Downshifting: The ability of the teacher to reduce stress and threat in the classroom environment to avoid "survival mode" thinking and to increase higher order thinking. Key Terms: limbic system, amygdala, fight or flight response, survival thinking, physical threat, psychological threat, loss of control threat.

Enriched Environments: The ability of the teacher to shape the physical and social environment of the classroom to enhance learning. Key Terms: physical-attractive, engaging, changing, social-unconditional positive regard, relaxed alertness, positive rituals, special treatment, collaboration.

Success: The ability of the teacher to increase and sustain student effort by designing and adapting learning tasks to ensure that students experience success. Key Terms: aptitude, persistence, perception, prior experience, value, consequences.

Performance Feedback: The ability of the teacher to increase student's persistence at a task by providing knowledge of results regarding students' work. Key Terms: abundant, immediate, specific, successive approximation.

Stagecraft: The ability of the teacher to enhance, deepen, or prolong student engagement by utilizing a theatrical treatment. Key Terms: props, music, lighting, scenery, A/V effects, animation, costume body position, voice, choreography.

Complimentary elements: The ability of the teacher to sequence instructional experiences that build on the preceding and set the stage for the subsequent: Key Terms: ying-yang, contrast, addition, generalization, categorization, essence role swap, big picture-details, preliminary practice.

Time and Timing: The ability of the teacher to strategically manage the duration of learning activities and the intervals between instructional elements in order to optimize learning. Key Terms: duration (time), interval (timing) - pauses, transitions, seques, wait time, readiness (timing) - cognitive readiness, emotional readiness, experiential readiness, energy readiness.

Personal Presence: The ability of the teacher to become a person of significance in the lives of students and to use this position to enhance student engagement. Key Terms: influence, persuasion, interpersonal connection, affinity, interest, respect, admiration, loyalty, importance, efficacy, unconditional positive regard, complex duality, unique selling proposition, loss of self-consciousness, presence in the moment, being influence-able.

Delight: The ability of the teacher to create instances of learning that are extra-memorable by designing a "positive surprise"- something that is exceptionally pleasing and unexpected. Key Terms: memory response to surprise, "waypoints" of learning, design delight, preparation delight, exceeds expectations delight, random acts of positivity delight, twist of plot delight, suspense-resolution delight.

A comprehensive listing of research supporting the 23 Artisan Teacher Talents can be found in the bibliography of this capstone.

Form 2.3**Perpetuating Excellence in Teaching, Leadership, and Learning****“Reflective Analysis”****School Name:** _____**District Name** _____ **Date:** _____**Rationale:**

PETLL districts/schools analyze school specific data and recently released state assessment data to determine individual student need as well as school wide curriculum strengths and weaknesses in order to focus efforts by adopting a proactive approach in preparation for the next generation of assessments. This requires each of us to adapt to new paradigms of how student achievement and school success will be calculated and reported next fall.

Use school specific data and this year’s state testing results to complete the charts on the following pages. Our goal is to reflect on Next Generation Assessment and Accountability as we direct resources and focus efforts in making data informed decisions.

KEY Concepts:

- **Achievement** (Content Areas are reading, mathematics, science, social studies and writing)
- **Attendance** (Both Student Attendance and Staff Attendance)
- **Gap** (percentage of proficient and distinguished) for the Non-Duplicated Gap Group for all five content areas
- **Growth** in reading and mathematics (percentage of students at typical or higher levels of growth)
- **College Readiness** as measured by the percentage of students meeting benchmarks in three content areas on EXPLORE at middle school
- **College/Career-Readiness Rate** as measured by ACT benchmarks, college placement tests, and career measures
- **Graduation Rate** (AFGR - Average Freshman Graduation Rate used for 2011, 2012, 2013. Cohort Model will be used beginning in 2014)

The following tables and worksheets are used in the initial stages of the

PETLL Process to support a school staff in their reflective analysis of pertinent data.

School Enrollment					
	School Year (5 Years)				
	2008/2009	209/2010	2010/2011	2011/2012	2012/2013
Number of Students					
Number of Teachers					
Number of Administrators					
Is our school enrollment increasing or declining? How has this trend affected our school?					

Average Daily Attendance Percentage (S = Student/T= Teacher)												
Grade Level	Jan.		Mar.		May		July		Sept		Nov	
	S	T	S	T	S	T	S	T	S	T	S	T
K												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
What conclusions can we draw from the correlation between student ADA and teacher ADA?												

Average Daily Attendance Percentage (S = Student/T= Teacher)												
Grade Level	Jan.		Mar.		May		July		Sept.		Nov	
	S	T	S	T	S	T	S	T	S	T	S	T
K												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
<p>What conclusions can we draw from the correlation between student ADA and teacher ADA?</p>												

Achievement and Accountability

Fill in the charts below with most current data. * designates tested grade and content.

SUBJECT AREA	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8	HIGH SCHOOL EOC
READING	*	*	*	*	*	*	
MATH	*	*	*	*	*	*	
SCIENCE		*			*		
SOCIAL STUDIES			*			*	
WRITING		*	*	*		*	*
ENGLISH II							*
ALGEBRA II							*
BIOLOGY							*
U.S. HISTORY							*

EPAS Results Year: _____						
SUBJECT AREA	EXPLORE		PLAN		ACT	
	ACT Benchmark	Score	ACT Benchmark	Score	KY Benchmark	Score
READING	15		17		20	
ENGLISH	13		15		18	
MATHMATICS	17		19		19	
SCIENCE	20		21		24	

Achievement: Elementary and Middle grades are determined by K-PREP scores in Reading, Mathematics, Science, Social Studies and Writing. High School achievement is determined by scores on End of Course Assessments (English II, Algebra II, Biology, U.S. History and On-Demand Writing). For each content area, one point is awarded for each student scoring proficient or distinguished, ½ point is awarded for each student scoring apprentice. No points are awarded for novice students. * .5 bonus points are given for each distinguished above novice number.

Reflection on Achievement at our school:

Gap: Elementary and Middle grades are determined by K-PREP scores in Reading, Mathematics, Science, Social Studies and Writing. High School is determined by scores on END of Course Tests (English II, Algebra II, Biology, U.S. History and On-Demand Writing). Gap Calculation is the non-duplicated gap group who score proficient or distinguished.

Reflection on Gap at our school:

Growth: Determined by Reading and Math K-PREP scores over two years in Elementary and Middle School. At the high school level growth is determined by PLAN to ACT Reading and Mathematics. 1 point is awarded for each student that was higher than at least 40% of their academic peer group. Percentile rank (40-99)

Reflection on Growth:

College/Career Readiness: Middle School students meeting benchmarks on EXPLORE (Eng., Math, Reading). High school College Ready: Success on ACT Benchmark or college placement test. Career Ready: Success on Career Academic Test and career certification.

Reflection on Readiness:

Graduation Rate: 2012-2013 Cohort Baseline Set.

Reflection on Graduation Rate:

**Program Reviews: Program reviews currently exist in the following areas:
Practical Living/Career, A&H, Writing and K-3**

Reflection on Program Reviews:

Response to Intervention Reflection
<p>Please Identify the science-based interventions being used with students at different grade levels and in varied subject areas:</p>
<p><i>Guiding Questions:</i> Are the numbers of students in RTI tier status declining with interventions? Have numbers increased? What does this data reveal? What might the data tell us about the need for professional development? How often do we talk with groups of students about how they are doing academically? Behaviorally? How do we share this information with students and colleagues? How do we measure improvement? <i>Reflection:</i></p>

School Climate Factors				
School Year	2009-10	2010-11	2011-12	2012-13
Discipline-Drug or Weapon				
Discipline-Disorderly or Disruptive Behavior (Office Referrals)				
Truancy				
School Climate Reflection				
<p><i>Guiding Questions:</i> Are referral rates/suspensions, etc., different for different groups of students? Are there specific areas of concern in the data that need to be addressed? How would they best be addressed? Who needs to be involved? What preventive measures are we taking and what might we do to intervene more quickly?</p>				

Unique School Data Reflection

Include additional data sources unique to your school. What are the findings and implications of this data?

Reflections from “TELL Kentucky” Data

Protocol: To participate in this activity, please access the results of the TELL Kentucky Survey online at www.tellkentucky.org.

1. Review your TELL report
2. Divide participants into eight groups each assigned to analyze one TELL Construct.
3. In small groups analyze each construct question result (percentage).
4. Each construct group will identify two reflection questions and results for large group discussion. The first question may cause you to discover an unexpected success. The second question may leave you feeling uneasy or even angry.
5. Construct groups will share their reflection and entire group should engage in discussion to consolidate findings.

The Eight Teaching Conditions Constructs

Time—Available time to plan, collaborate and provide instruction and eliminating barriers to maximize instructional time during the school day.

Facilities and Resources—Availability of instructional, technology, office, communication, and school resources to teachers.

Community Support and Involvement—Community and parent/guardian communication and influence in the school.

Managing Student Conduct—Policies and practices to address student conduct issues and ensure a safe school environment.

Teacher Leadership—Teacher involvement in decisions that impact classroom and school practices.

School Leadership—The ability of school leadership to create trusting, supportive environments and address teacher concerns.

Professional Development—Availability and quality of learning opportunities for educators to enhance their teaching.

Instructional Practices and Support— Data and support available to teachers to improve instruction and student learning.

Construct (Topic)	RATIONALE			
	Q. #	Positive Aspects	Q. #	“Challenging” Aspects
Time				
Facilities and Resources				
Community Support				
Managing Student Conduct				
Teacher Leadership				
School Leadership				
Professional Development				

(2011 TELL Kentucky Initiative Research Brief)

REFLECTION:

When holistically reviewing the construct question results from the chart, are there obvious areas on which we can agree that we are doing well? Explain. How can we leverage this information for school wide improvement in our school's learning culture?

REFLECTION:

Are there question results that you disagree with? What was the main source of conflict for you? Could the problem be in perception? If so, how do we change perception?

REFLECTION:

Using the same holistic approach from reflection question 1, can we determine an area of needed improvement in our school learning culture? Can we formulate a goal for our 30 day improvement plan?

Overarching Reflection based on Data Analysis <i>To be completed after a complete review of the collected data and team analysis.</i>
What do the data tell us?
What do the data <u>not</u> tell us?
What are causes for celebration?
What are opportunities for improvement? (Significant Leverage Points)
What are our next steps?

Chapter 3

External Team Qualitative Visit

The External Team's Initial Qualitative visit component of the Initiative is a critical element in establishing a positive collaboration between the school staff and the external team. An outside agent is often required to cause necessary and recognized change.

The PETLL Initiative calls on a school/district to engage in a meaningful Reflective Analysis process. This is often a challenging endeavor, especially when this is a relatively new experience for a school. It can lead to initial defensive and threatened attitudes, particularly when the Reflective Process arises out of the need to address problems that have been identified or to make changes to the way things are done at the school. It is important to the success of the Initiative that the external agent becomes involved in the process at a point when these cautious feelings have subsided through active involvement in the reflective process and through the acceptance that the purpose of the Reflective Analysis can be an essential component of the ongoing development of school and individual effectiveness. The external agent must, then, position him/herself as someone who will extend and deepen the reflective process by providing both support and an outside perspective. According to MacBeath (1999) as cited by Carlson (2009 p. 83):

The contribution of an external agent can bring a measure of objectivity as well as a measure of support. It should not take away from the school's ownership of change but should assist the process in ways which the school feels

appropriate. To be useful, a 'critical friend' must be someone with experience of school improvement and with expertise in working with a range of groups and in a variety of contexts.

Costa and Kallick (1993) describe a critical friend as

... a trusted person, who asks provocative questions, provides data to be examined through another lens and offers criticism of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward.

The friend is an advocate for the success of that work (p. 1).

The 'critical' component does not imply being judgmental or negative but rather implies the ability to stand back from the particular situation and view it through different lenses, to use Costa and Kallick's (1993) metaphor. In their words, "...you need another person to continually change your focus, pushing you to look through multiple lenses in order to find that 'just right' fit for you ..." (p. 1). The role of the critical friend is not so much to provide the answers as to ask the appropriate questions, to gather and present relevant information and evidence, and to challenge people to explore different perspectives and formulate effective responses. In addition, being critical involves affirming the positive as much as challenging what may not be effective.

The third step in the PETLL Initiative is the External Team Qualitative Visit. The External Visit occurs on the final day of the Reflective Analysis and enables a school community to combine their own internal quantitative insights with a team of

trained and experienced educator's qualitative examination of school operations and learning environment. The External Team arrives at the school and engages in conducting classroom observations using a common tool that focuses acutely on what the teacher does as instructor and what students do as learners. Information from multiple observations conducted throughout the day are used to present a report to school faculty by the end of that day's visit. Immediate feedback on observations is critical to establishing trust and building rapport with the staff. The ability to provide a comprehensive report in real time focused classroom learning increases the sense of urgency innate within the process of continuous quality improvement.

Tools and processes developed specifically for use in the PETLL Initiative include:

Form 3.1 – PETLL External Visit Advance Preparation Checklist

Form 3.2 – Core PETLL Interview Questions

Form 3.3 – PETLL Reflective Analysis Initial Interview Questions

Form 3.4 – PETLL Learning Culture Survey

Form 3.5 – PETLL Student Survey

Form 3.6 – PETLL Classroom Observation Instrument

Form 3.1**PETLL External Visit - Advance Preparation Checklist**

The host district/school will prepare the following materials and take the following actions prior to the External

Team Visit.

School Contact Information:

Principal Name:

E-mail:

Phone Number:

911 Address of School:

School Secretary Name:

Student Survey Contact:

Materials: (have copies prepared for each team member on day of arrival)

- ✓ Master Schedule
- ✓ List of Teachers & Room Numbers
- ✓ Building Floor Plan
- ✓ Bell Schedule

a. End of Day Activity (1st Visit only)

- ✓ Copies of Talent Matrix and Individual Instructional Action Plan for each staff member.

Resources:

- ✓ Private meeting Room for External Team use throughout the day
- ✓ Access to copier and printer (coffee, water, soft drinks if possible)
- ✓ Lunch for external team (cafeteria lunch is perfectly acceptable)

- ✓ Use of Computer Lab for Student Surveys
- ✓ Room for entire staff meeting at end of day (1st visit only)
- ✓ Exit Meeting Room large enough accommodate entire staff, with projector, copies of Reflective Visit Report Document, Presenter(s)

Actions performed by school prior to external team arrival:

- ✓ Completion of Reflective Analysis and readiness to present (1st visit only)
- ✓ 3 Identified High Leverage Strategies (if applicable)
- ✓ 1 page “Instructional Blueprint for Success” (if applicable)
- ✓ Appropriate Staff Awareness of PETLL Process

Form 3.2

“Core” PETLL Interview Questions

Adapted from the Center for Improving School Culture’s Assessment Manual for use in PETLL

<p>When a student fails at this school, who takes ownership for the failure?</p>		
<p>What are you doing <u>more of</u> and <u>less of</u> as a teacher than you did last year?</p>	<p>More of....</p>	<p>Less of....</p>
<p>What legacy will you leave?</p>		
<p>What is the best you can imagine for this school?</p>		

Form 3.3

**PETLL Reflective Analysis
Initial Interview Questions**

Adapted from the Center for Improving School Culture's Assessment Manual for use in PETLL

Interview Theme #1 – Emotion is 93% of the Message

<p>When you woke up this morning and thought about another day in this school – what was the dominant <u>emotion</u> or <u>feeling</u> you experienced?</p>	
---	--

Interview Theme #2 – What happens to people here?

<p>Recall one way you have improved in the past year?</p>	
<p>What – specifically – did you do to get better?</p>	

Interview Theme #3 – Are we Building capacity or dependency?

<p>How have students changed in the past five (5) years?</p>	
<p>How have your instructional strategies changed to match changes in students?</p>	

Interview Theme #4 – Ruts or Grooves?

<p>Describe something you do really well and practice often in your role as a teacher.</p>	
<p>To what degree are your grooves appreciated, valued, and nurtured here?</p>	
<p>Describe a professional challenge you currently face.</p>	

<p>To what degree are you able to address this challenge?</p>	
---	--

Interview Theme #5 – What do we do when.....?

<p>List some rituals that are repeated regularly here.</p>	
<p>Based on the rituals you identified – if you were an outside observer, what would you say is really important here?</p>	
<p>Imagine and invent some new rituals that would encourage bringing out the best in each:</p> <ul style="list-style-type: none"> • student • teacher. 	

Interview Theme #6 – Power and Governance = Energy

<p>How are important decisions made here?</p>	
---	--

<p>What suggestions do you have that would help everyone feel some ownership in decisions that affect them?</p>	
---	--

Interview Theme #7 – Human Nature is such that if we don’t have a problem... we create one.

<p>What is your most perplexing problem?</p>	
<p>If you wanted to solve the problem, how would you go about it?</p>	

Interview Theme #8 – Paradoxical Intention

<p>What are three (3) things you could do to make your school or classroom <u>worse</u>?</p>	
<p>What are three (3) things you could do</p>	

intentionally to make your school or classroom <u>better?</u>	
---	--

Form 3.4

PETLL LEARNING CULTURE SURVEY

Adapted from the Center for Improving School Culture's Assessment Survey for use in PETLL

Please circle your role: Administrator, Bus Driver, Counselor, Custodian, Instructional Assistant, Secretary, Teacher, Other.

BACKGROUND:

The fifteen items in this survey have been identified as key indicators of a school's culture. Your opinion and ranking of these factors is important and will prove valuable in assessing your school's culture.

DEFINITION:

For the purpose of this survey, culture is defined as follows: The beliefs, attitudes and behaviors that characterize the school in terms of:

- How people treat and feel about each other,
- The extent to which people feel included and appreciated, and
- Rituals and traditions reflecting collaboration and collegiality.

DIRECTIONS:

Please rate each item twice. First, rate the item by circling an appropriate number reflecting its **PRESENCE** in your school. Second, rate the item by circling the appropriate number relative to its **IMPORTANCE** to you.

1. System in place that ensures broad input from multiple role groups on relevant school decisions

Not present	1 2 3 4 5 6 7 8 9 10	Always
present		
Not important	1 2 3 4 5 6 7 8 9 10	Extremely
important		

2. Strong leadership from administrators, teachers, or teams of both

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

9. District support for and involvement in school improvement efforts

Not present 1 2 3 4 5 6 7 8 9 10 Always present

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

10. Collaborative instructional planning and collegial relationships

Not present 1 2 3 4 5 6 7 8 9 10 Always present

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

11. Sense of community, family and team

Not present 1 2 3 4 5 6 7 8 9 10 Always present

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

12. Clear goals and high expectations for students and staff

Not present 1 2 3 4 5 6 7 8 9 10 Always present

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

13. Order and discipline established through common, agreed upon, and consistent application

Not present 1 2 3 4 5 6 7 8 9 10 Always present

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

14. System in place to develop leadership capacity at all levels within the school/district

Not present 1 2 3 4 5 6 7 8 9 10 Always present

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

15. Individual initiative is valued, encouraged, and supported

Not present	1	2	3	4	5	6	7	8	9	10	Always
present											
Not important	1	2	3	4	5	6	7	8	9	10	Extremely
important											

Please provide additional comments on back page:

Form 3.5

PETLL Student Survey

Thank you for participating in this survey. Please respond to each question candidly and accurately based on your own experience. Your teacher and your principal will not look at your answers. Someone from outside your school will share the results of the total survey with the school staff - but - individual students will not be identified.

1. Please answer what you really think and feel. You do not have to answer any question that you do not want to answer.

Strongly Disagree Disagree Undecided Agree Strongly Agree

1. The administration of the school is responsive to students' needs.
2. The principal really cares about students.
3. My parents are informed about the good things I do at school.
4. Problems in this school are solved by students and staff.
5. I feel satisfied with my progress in school.
6. I spend most of my class time working by myself on written class assignments.
7. I usually understand my homework assignments.
8. My homework assignments help me do better in class.
9. Teachers in my class try different kinds of instruction to help students learn (discussion, group work, lecture, etc.)
10. Teachers are available when I need to talk with them.
11. Most students treat teachers with respect in this school.
12. Teachers treat students with respect.
13. Teachers know and treat students as individuals.
14. The rules of the school are fair.
15. I enjoy coming to school.
16. I can count on teachers and staff members to listen to my side of the story.
17. It is easy to talk with teachers.
18. My teachers make it clear to me when I have misbehaved in class.
19. Teachers and staff seem to take a real interest in my future.
20. Many students are publicly recognized and rewarded for improvements and achievements in their classes.
21. In this school, students who get high grades are respected by the other students.

22. Students are publicly recognized for their outstanding performances in speech, drama, art, music, etc.
23. Teachers offer time before or after school to give additional help in a subject.
24. When I do well, my teachers praise me.
25. I try hard to succeed in my classes.
26. I believe that teachers expect all students to learn.
27. In my classes I am learning the things that I need to know to prepare me for the future.
28. Teachers really believe that I can achieve academically.
29. Students are frequently rewarded or praised by faculty and staff for following school rules.
30. I am encouraged to question and discuss the subject matter in my classroom.

2. Please answer what you really think and feel. You do not have to answer any question that you do not want to answer.

- | 25% or less | 26% - 50% | 51% - 75% | 76%-100% |
|-------------|-----------|-----------|----------|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |

16. The percentage of my teachers who ask questions to be sure we are following along when s/he is teaching.
17. The percentage of my teachers who ask students to explain more about answers they give.
18. The percentage of my teachers who accept nothing less than our full effort.
19. The percentage of my teachers who don't let people give up when the work gets hard.
20. The percentage of my teachers who want us to use our thinking skills, not just memorize things.
21. The percentage of my teachers who want me to explain my answers—why I think what I think.
22. The percentage of my classes where we learn a lot almost every day.
23. The percentage of my classes where we learn to correct our mistakes.
24. The percentage of classes that do not keep my attention—I get bored.
25. The percentage of my teachers' who make learning enjoyable.
26. The percentage of my teachers' who make lessons interesting.
27. The percentage of classes where I like the ways we learn.
28. The percentage of my teachers' who want us to share our thoughts.
29. The percentage of my classes where students get to decide how activities are done.
30. The percentage of my teachers' who respect my ideas and suggestions.
31. The percentage of my teachers' who post learning targets and help us achieve them.
32. The percentage of my teachers' who take the time to summarize what we learn each day.
33. The percentage of my teachers' who check to make sure we understand what s/he is teaching us.
34. The percentage of my teachers' who give helpful comments to let us know what we did wrong on assignments.

Form 3.6

PETLL Classroom Observation Instrument

*Adapted from the Rutherford Learning Group's – Developing the Artisan Teacher –
for use in the PETLL Initiative*

(Actual document reduced for reprinting)

School _____		Classroom _____		Teacher _____	
Grade/Subject _____					
Day/Date _____		Start Time/End Time: _____		Special _____	
Notes _____					
Instructional Practices		Student Work		Environmental Cues	
Artifacts/Actions:		Artifacts/Actions:		Classroom Sketch (and movement): Physical Environmental Descriptors: Social/Emotional Descriptors:	
Analysis/Notes		Analysis/Notes		Analysis/Notes	
Evidence of 3 School-wide “High Leverage” Strategies identified in Improvement Blueprint:		Artisan Teacher Themes:		Environmental Cause-Effect:	

Chapter 4

Quantitative and Qualitative Analysis: Improvement Planning

An important element in the PETLL Initiative is an intentional plan to improve individual instructional effectiveness. Personal mastery gives each individual a conceptual model to reference as they engage in individualized continuous learning and growth toward school improvement. Only when individuals gain that independence can they effectively work to reach the group goal of interdependence and powerful collaboration. Learning together, with a continual emphasis on the destination, keeps everyone focused on the vision, goals and expectations. This generates the necessary belief, excitement and synergy to move in an upward spiral and to bring about significant positive results in the classroom.

The PETLL Initiative calls for all members of the school community to realize that individual talent should be cultivated and creates an environment where intentional collegiality and collaboration lead to a team approach supporting individual and collective improvement. The quantitative analysis of school data conducted by the staff and the qualitative analysis of practice guided by the visiting team were used as an initial starting point to identify existing teacher instructional strengths in the creation of a school-wide electronic web-based “Talent Matrix” (utilizing the Rutherford Learning Group’s Artisan Teacher Themes) and to develop individual 30 Day Action plans for instructional improvement. According to a recent study of continuously improving school systems, “the most powerful method for developing teacher

accountability came from peers through collaborative practice. By developing a shared concept of what good practice looks like, and basing it on a fact-based inquiry into what works best to help students learn, teachers hold each other accountable” (Barber & Mourshed, 2007, p. 86).

The school’s PETLL lead team developed a Blueprint for Improvement written in community friendly language and identified three high leverage areas for improvement. The Blueprint was developed through an inclusive approach that contributes to the sense of urgency and the necessity to move with a sense of urgency. Traditional school improvement plans are often very complex, and frequently overlook core instructional practices. That complexity makes it difficult for everyone in the school community to have a shared understanding of the plan, and that lack of understanding leads to a lack of implementation. “The size and prettiness of the plan is inversely related to the quality of action and the impact on student learning” (Reeves, 2009, p. 81). The PETLL Blueprint for Improvement will identify clear goals that address key leverage points and systemic follow-up. Clear goals should make it easier for everyone in a school to work together to dramatically improve teaching and learning. In his book, *The Moral Imperative Realized*, Michael Fullan states, “Effective districts identify a few key priorities and then pursue them relentlessly” (2010, p. 12).

Ongoing implementation of the PETLL processes included significant building leader and teacher collaboration focused specifically on classroom learning and professional growth. It is essential for participants to understand the significance of collaboration in a systemic approach. Purposeful collaboration focused on a common

goal (student achievement) established clarity and coherence. Top-down change often will not work because staff will resist a leader's efforts to intensify processes necessary to bring about improvement. Bottom-up change creates an environment that allows some staff to thrive while others remain stagnant. The PETLL Initiative calls on the leader to enable, facilitate, and cause staff to interact in a purposeful and focused manner. In *Drive: The Surprising Truth About What Motivates Us*, (2009) author Daniel Pink argues that we will work diligently to accomplish goals we set for ourselves, but goals imposed on us by others seldom motivate us to change. According to Pink there are Seven Deadly Flaws associated with extrinsic rewards; 1) they can extinguish intrinsic motivation, 2) they can diminish performance, 3) they can crush creativity, 4) they can crowd out good behavior, 5) they can encourage cheating, shortcuts, and unethical behavior, 6) they can become addictive, and 7) they can foster short-term thinking (2009, p. 59).

The creation of a school-wide "Talent Map" that identifies individual instructional strength and makes those strengths' public is an integral part of the PETLL Initiative. One of the greatest resources in our schools is the professional staff and their collected experiences. Michael Fullan (2011) writes, "for teachers to improve their practice they learn best from other teachers provided these teachers are also working on improvement. These exchanges are thus purposeful and based on evidence" (p. 3). The talent mapping activity made it possible to chart the specific skills and abilities of each staff member. The process simultaneously serves to develop the confidence of each staff member and challenges each staff member to increase and build upon their

talents. The creation of a data base describing the discreet expertise and capabilities of an entire staff serves as a tool to access professional resources in the building and assist in creating an environment of interdependence. In a recent interview, noted author and educational consultant Dr. Gary Phillips suggested strongly that effective school leaders will insure that they “Invest in People, Not Programs” (2011, p. 2).

The fourth step in the PETLL Initiative Protocol is an examination of the school’s Quantitative and Qualitative Analysis. In this step the internal and external team meets in a collaborative setting to compare and learn from the quantitative and qualitative analysis conducted during Step Two and Step Three of the PETLL Protocol. The School’s Core Team presents their report on academic trend data and an analysis of that data to the entire school community including External Team members. The External Team then shares their qualitative findings focused on classroom instruction and learning with the entire school community. The combined reports are blended and examined to capture a more comprehensive understanding of current reality. The combined teams then use this robust data set as a launching point to establish three to five clearly articulated school-wide improvement strategies that become part of a one-page “Blueprint for Instructional Improvement.” In addition, each individual educator identifies two areas for professional growth based on the 23 Artisan Teacher Themes. This individualization addresses specific professional training for growth and utilizes the strengths of the entire staff which builds capacity and promotes professional efficacy.

This step in the PETLL Protocol provides Leadership with a specific set of instructional focus areas that are school-wide and based on data analysis. It also provides Leadership with differentiated professional growth goals for each individual teacher that enables the Leader to engage in opportunities to engage in the implementation of a 30 Day Instructional Action Plan process. Perhaps most importantly, the Leader is provided with the self-identified strength areas of each individual teacher enabling them to establish a collegial environment focused on trust and positive professional growth.

Specific tools and processes were developed relevant to the PETLL Initiative to make this step in the Protocol more effective and more efficient. A crosswalk document that clarifies the seamless connection between the 23 Artisan Teacher Themes and the newly adopted Kentucky Standards for Teacher Effectiveness. Specific Tools include:

Form 4.1 – PETLL Teacher Talent/Kentucky Teacher Effectiveness Crosswalk

Form 4.2 – PETLL Talent Matrix

Form 4.3 – PETLL 30 Day Individual Action Plan

Form 4.4 – PETLL Blueprint for Improvement

Form 4.1

Teacher Talent/KY Teacher Effectiveness Crosswalk

<i>23 Artisan Teacher Themes</i>	<i>KY Framework for Teaching</i>	<i>What Does It Look Like In The Classroom?</i>
<p><u>1. Clear Learning Goals</u></p> <p>The ability of the teacher to identify and precisely express what students will know and be able to do as a result of a lesson.</p>	<p>Domain 1 : Planning and Preparation Component 1c: Setting Instructional Outcomes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Value, sequence, and alignment <input type="checkbox"/> Clarity <input type="checkbox"/> Balance <p>Suitability for diverse Learners</p> <p>Domain 2: The Classroom Environment Component 2b: Establishing a Culture for Learning</p> <ul style="list-style-type: none"> <input type="checkbox"/> Importance of Content <input type="checkbox"/> Expectations for Learning and Achievement <p>Student Pride in Work</p> <p>Domain 3: Instruction Component 3a. Communicating with students</p> <ul style="list-style-type: none"> <input type="checkbox"/> Expectation for learning 	<p>Teacher establishes instructional goals or outcomes by identifying exactly what students will be expected to learn.</p> <p>Learning Targets are posted and referred to in teaching.</p> <p>Students understand what they are expected to know and do.</p> <p>There are high expectations for all students, and the classroom is a place where the teacher and students value learning and hard work.</p> <p>All students receive the message that while the work is challenging, they are capable of achieving the goal if they are prepared to work hard.</p>
<p><u>2. Congruency</u></p> <p>The ability of the teacher to design classroom activities that are accurately matched to the clear learning goal.</p>	<p>Domain 1 : Planning and Preparation Component 1e: Designing coherent instruction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Learning Activities <p>Lesson and Unit Structure</p> <p>Component 1f: Designing student assessments</p> <ul style="list-style-type: none"> <input type="checkbox"/> Congruence with Instructional Outcomes 	<p>Teacher coordinates knowledge of content, of students, and of resources, to design a series of learning experiences aligned to instructional outcomes and suitable to groups of students.</p> <p>Teacher plans for student assessment aligned with the instructional outcomes</p>

<p><u>3. Task Analysis</u></p> <p>The ability of the teacher to identify and sequence all the essential steps necessary for mastery of a learning goal.</p>	<p>Domain 1 : Planning and Preparation</p> <p>Component 1e: Designing coherent instruction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Learning Activities <input type="checkbox"/> Instructional Materials and Resources <input type="checkbox"/> Instructional groups <p>Lesson and Unit Structure</p>	<p>Teacher coordinates knowledge of content, of students, and of resources, to design a series of learning experiences aligned to instructional outcomes and suitable to groups of students.</p> <p>The learning activities have reasonable time allocations; they represent significant cognitive challenge, with some differentiation for different groups of students.</p> <p>The lesson or unit has a clear structure, with appropriate and varied use of instructional groups.</p>
<p><u>4. Diagnosis</u></p> <p>The ability of the teacher to verify what students already know and can do for the purpose of determining where to begin instruction</p>	<p>Domain 1 : Planning and Preparation</p> <p>Component 1b: Demonstrating Knowledge of Students</p> <ul style="list-style-type: none"> <input type="checkbox"/> Knowledge of Students' Skills, Knowledge, and Language Proficiency <input type="checkbox"/> Knowledge of Students' Interests and Cultural Heritage <input type="checkbox"/> Knowledge of Students' Special Needs 	<p>Teacher understands the active nature of student learning and attains information about levels of development for groups of students.</p> <p>The teacher also purposefully seeks knowledge from several sources of students' backgrounds, cultures, skills, language proficiency, interests, and special needs and attains this knowledge about groups of students.</p>

<p><u>5. Overt Responses</u></p> <p>The ability of the teacher to regularly obtain evidence of student learning for the purpose of determining next steps for teaching/ learning.</p>	<p>Domain 1 : Planning and Preparation Component 1f: Designing Student Assessments Teacher intends to use assessment results to plan future instruction for groups of students</p> <p>Domain 3 : Instruction Component 3D: Using Assessment in Instruction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Assessment Criteria <input type="checkbox"/> Monitoring of Student Learning <input type="checkbox"/> Feedback to Students <input type="checkbox"/> Student Self-Assessment and Monitoring of Progress 	<p>Assessment is used regularly by teacher and/or students during the lesson through monitoring of learning progress and results in accurate, specific feedback that advances learning.</p> <p>Questions, prompts, assessments are used to diagnose evidence of learning.</p>
<p><u>6. Mid-Course Corrections</u></p> <p>The ability of the teacher to quickly adapt instruction to meet the learning needs based on overt student responses.</p>	<p>Domain 3 : Instruction Component 3e: Demonstrating Flexibility and Responsiveness</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lesson Adjustment <input type="checkbox"/> Response to Students <input type="checkbox"/> Persistence 	<p>Teacher promotes the successful learning of all students, making minor adjustments as needed to instruction plans and accommodating student questions, needs, and interests.</p> <p>Drawing on a broad repertoire of strategies, the teacher persists in seeking approaches for students who have difficulty learning.</p>
<p><u>7. Conscious Attention</u></p> <p>The ability of the teacher to gain then focus student's attention on a relevant learning activity.</p>	<p>Domain 3 : Instruction Component 3c: Engaging Students in Learning</p> <ul style="list-style-type: none"> <input type="checkbox"/> Activities and Assignments <input type="checkbox"/> Grouping of Students <input type="checkbox"/> Instructional Materials and Resources <input type="checkbox"/> Structure and Pacing 	<p>The learning tasks and activities are aligned with instructional outcomes and designed to challenge student thinking, the result being that most students display active intellectual engagement with important and challenging content and are supported in that engagement by teacher scaffolding.</p> <p>The pacing of the lesson is appropriate, providing most students the time needed to be intellectually engaged.</p>

<p><u>8. Chunking</u> The ability of the teacher to segment the curriculum and learning activities into manageable portions to avoid working memory overload.</p>	<p>Domain 1.: Planning & Preparation Component 1e: Designing Coherent Instruction <input type="checkbox"/> Learning Activities <input type="checkbox"/> Lesson and Unit Structure</p>	<p>The learning activities have reasonable time allocations. The lesson or unit has a clear structure.</p>
<p><u>9. Connection</u> The ability of the teacher to establish a mental link between the intended learning and past learning experiences.</p>	<p>Domain 3 : Instruction Component 3A: Communicating with Students <input type="checkbox"/> Expectations for Learning Explanation of Content</p>	<p>Teacher clearly communicates instructional purpose of the lesson, including where it is situated within the broader learning. Teacher’s explanation of content is well scaffolded, clear and accurate, and connects with students’ knowledge and experience.</p>
<p><u>12. Locale Memory</u> The ability of the teacher to enhance learning by organizing information around the learning position or "locale" in three dimensional spaces.</p>	<p>Domain 1:Planning and Preparation 1A. Knowledge of Content and Pedagogy Teacher’s plans and practice reflect accurate understanding of prerequisite relationships among topics and concepts. Domain 3: 3C. Engaging Students in learning. <input type="checkbox"/> The pacing of the lesson is appropriate, providing most students the time needed to be intellectually engaged.</p>	<p>Teacher provides a link to necessary cognate structures needed by students to ensure understanding. Teacher asks students to connect information to some place in the past. “Where were you on September 11?” Teacher uses taxon memory learning with drill and rehearsal giving attention to structure and pacing. Example: Learning multiplication facts.</p>

<p><u>13. Mental Models</u></p> <p>The ability of the teacher to create a structure for learning using images, models, sensory experiences, symbol systems, and creative processing methodologies.</p>	<p>Domain 3: Instruction Component 3a. Communicating with students</p> <ul style="list-style-type: none"> <input type="checkbox"/> Expectation for learning <input type="checkbox"/> Directions and Procedures <input type="checkbox"/> Explanation of Content <input type="checkbox"/> Use of Oral and Written Language 	<p>Teacher explains content clearly and imaginatively, using metaphors and analogies to bring content to life.</p> <p>The teacher explains passive solar energy by inviting student to think about the temperature in a closed car on a cold but sunny day or by the water in a hose that has been sitting in the sun.</p>
--	--	--

<p><u>10. Practice</u></p> <p>The ability of the teacher to improve recall and application of learning through effective rehearsal, repeated effort, drill, repetition, study, and review</p>	<p>Domain 1: Planning & Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Designing Student Assessment <input type="checkbox"/> Congruence with Instructional Outcomes <input type="checkbox"/> Criteria and Standards <input type="checkbox"/> Design of Formative Assessments <p>Use for Planning</p> <p>Domain 2: Classroom Environment Creating an Environment for Learning</p>	<p>The teacher reviews her learning activities with a reference to high-level “action verbs” and rewrites some of the activities to increase the challenge level.</p> <p>The teacher creates a list of historical fiction titles that will expand her students’ knowledge of the age of exploration.</p> <p>The teacher plans for students to complete projects in small groups; he carefully selects group members based on their ability level and learning style.</p> <p>Teacher says: “Let’s work on this together: it’s hard, but you all will be</p>
---	---	--

		<p>able to do it well.”</p>
<p><u>14. First Time Learning</u></p> <p>The ability of the teacher to capitalize on the brains tendency to attend to, processes deeply, and recall information that is presented as new, original, or as an initial experience.</p>	<p>Domain 1 : Planning and Preparation Component 1c: Setting Instructional Outcomes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Value, sequence, and alignment <input type="checkbox"/> Clarity <input type="checkbox"/> Balance <p>Suitability for diverse Learners</p> <p>Component 1D: Demonstrating Knowledge of Resources</p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources for Classroom Use <input type="checkbox"/> Resources to Extend Content Knowledge and Pedagogy <p>Resources for Students</p> <p>Domain 3: Instruction Component 3a. Communicating with students</p> <ul style="list-style-type: none"> <input type="checkbox"/> Expectation for learning <input type="checkbox"/> Directions and Procedures <input type="checkbox"/> Explanation of Content 	<p>Students will develop a concept map that links previous learning goals to those they are currently working on.</p> <p>The teacher is not happy with the out-of-date textbook; his students will critique it and write their own text for social studies.</p> <p>The teacher says, “By the end of today’s lesson, you’re all going to be able to factor different types of polynomials.”</p>

<p><u>11. Personal Relevance</u></p> <p>The ability of the teacher to embed the intended curriculum into issues and contexts that are linked to students' survival or immediate well-being.</p>	<p>Domain 1: Planning & Preparation</p> <p><input type="checkbox"/> Demonstrating Knowledge of Students</p> <p style="padding-left: 40px;">Knowledge of Child and Adolescent Development</p> <p style="padding-left: 40px;">Knowledge of the Learning Process</p> <p style="padding-left: 40px;">Knowledge of Students' Skills, Knowledge, and Language Proficiency</p> <p style="padding-left: 40px;">Knowledge of Students' Interests and Cultural Heritage</p> <p style="padding-left: 40px;">Knowledge of Students' Special Needs</p> <p>Domain 2: Classroom Environment</p> <p><input type="checkbox"/> Creating an Environment of Respect and Rapport</p> <p style="padding-left: 40px;">Teacher Interaction with Students</p> <p style="padding-left: 40px;">Student Interactions with One Another</p> <p>Domain 4: Professional Responsibilities</p> <p><input type="checkbox"/> Communicating with Families</p> <p><input type="checkbox"/> Information About the Instructional Program</p> <p><input type="checkbox"/> Information About Individual Students</p> <p><input type="checkbox"/> Engagement of Families in the Instructional Program</p>	<p>Teacher understands the active nature of student learning and attains information about levels of development for groups of students.</p> <p>The teacher purposefully seeks knowledge from several sources of students' backgrounds, cultures, skills, language proficiency, interests, and special needs.</p> <p>Teacher-student interactions are friendly and demonstrate general caring and respect. Such interactions are appropriate to the ages of the students.</p> <p>Students exhibit respect for the teacher. Interactions among students are generally polite and respectful.</p> <p>Teacher responds successfully to disrespectful behavior among students. The net result of the interactions is polite and respectful, but impersonal.</p> <p>Teacher communicates frequently with families about the instructional program and conveys information about individual student progress.</p> <p>Teacher makes some attempts to engage families in the instructional program.</p> <p>Information to families is conveyed in a culturally appropriate manner.</p>
--	--	--

	Use of Oral and Written Language	
--	---	--

<p><u>15. Neural Downshifting</u></p> <p>The ability of the teacher to reduce stress and threat in the classroom environment to avoid "survival mode" thinking and to increase higher order thinking.</p>	<p>Domain 1 : Planning and Preparation Component 1b: Demonstrating Knowledge of Students</p> <ul style="list-style-type: none"> <input type="checkbox"/> Knowledge of Child and Adolescent Development <input type="checkbox"/> Knowledge of the Learning Process <input type="checkbox"/> Knowledge of Students' skills, knowledge, and Language Proficiency <input type="checkbox"/> Knowledge of students' interests and cultural heritage <input type="checkbox"/> Knowledge of students' special needs <p>Domain 2: The Classroom Environment Component 2b: Establishing a Culture for Learning</p> <ul style="list-style-type: none"> <input type="checkbox"/> Importance of Content <input type="checkbox"/> Expectations for Learning and Achievement <p>Student Pride in Work</p> <p>Domain 3: Instruction Component: 3B: Questioning and Discussion Techniques</p> <ul style="list-style-type: none"> <input type="checkbox"/> Quality of Questions <input type="checkbox"/> Discussion Techniques <p>Student Participation</p> <p>Component 3D: Using Assessment in Instruction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Assessment Criteria <input type="checkbox"/> Monitoring of Student Learning <input type="checkbox"/> Feedback to Students <input type="checkbox"/> Student Self-Assessment and Monitoring of Progress 	<p>The teacher plans his lesson with three different follow-up activities, designed to meet the varied ability levels of his students.</p> <p>The teacher plans activities based on student-interest.</p> <p>The teacher regularly creates adapted assessment materials for several students with learning disabilities.</p> <p>Student asks the teacher whether s/he can redo a piece of work since s/he now sees how it could be strengthened.</p> <p>Teacher hands a paper back to a student saying, "I know you can do a better job on this." The student accepts the comment without complaint.</p> <p>A student asks of other students: "Does anyone have another idea how we might figure this out?" A student asks, "What if...?"</p> <p>Students offer feedback to their classmates on their work.</p>
---	---	---

<p><u>16.Enriched Environments</u></p> <p>The ability of the teacher to shape the physical and social environment of the classroom to enhance learning.</p>	<p>Domain 1 : Planning and Preparation Component 1D: Demonstrating Knowledge of Resources <input type="checkbox"/> Resources for Classroom Use <input type="checkbox"/> Resources to Extend Content Knowledge and Pedagogy Resources for Students</p> <p>Component 1F: Designing Student Assessments <input type="checkbox"/> Congruence with Instructional Outcomes <input type="checkbox"/> Criteria and Standards <input type="checkbox"/> Design of Formative Assessments Use for Planning</p> <p>Domain 2: The Classroom Environment Component 2b: Establishing a culture for Learning <input type="checkbox"/> Importance of Content <input type="checkbox"/> Expectations for Learning and Achievement Student Pride in Work</p> <p>Domain 4: Professional Responsibilities Component 4b: Maintaining Accurate Records <input type="checkbox"/> Student completion of assignments <input type="checkbox"/> Student progress in learning Non-instruction records</p>	<p>The teacher is not happy with the out-of-date textbook; his students will critique it and write their own text for social studies.</p> <p>To teach persuasive writing, Ms. H plans to have class research and write principal on an issue that is important to students; the use of cell phones in class.</p> <p>Students get to work right away when assignment is given or after entering the room.</p> <p>Students work even when teacher isn't working with them or directing their efforts.</p> <p>The teacher creates a link on the class website that students can access to check on any missing assignment.</p> <p>The teacher's grade book records student progress toward learning goals.</p>
---	--	---

<p><u>17. Success</u></p> <p>The ability of the teacher to increase and sustain student effort by designing and adapting learning tasks to ensure that students experience success</p>	<p>Domain 4: Professional Responsibilities Component 4b: Maintaining Accurate Records</p> <p><input type="checkbox"/> Student completion of assignments Student progress in learning</p> <p>Non-instruction records</p>	<p>When asked about their progress in class, a student proudly shows her data file and can explain how the documents indicate her progress toward learning goals.</p>
<p><u>18. Performance Feedback</u></p> <p>The ability of the teacher to increase student's persistence at a task by providing knowledge of results regarding students' work.</p>	<p>Domain 1: Planning and Preparation Component 1a: Knowledge of Content and Pedagogy</p> <p><input type="checkbox"/> Knowledge of Content and the structure of the discipline <input type="checkbox"/> Knowledge of Prerequisite Relationships Knowledge of Content-Related Pedagogy</p> <p>Domain 2: The Classroom Environment Component 2b: Establishing a culture for Learning</p> <p><input type="checkbox"/> Importance of Content <input type="checkbox"/> Expectations for Learning and Achievement Student Pride in Work</p> <p>Domain 3: Instruction Component 3b. Questioning and Discussion Techniques</p> <p><input type="checkbox"/> Quality of Questions <input type="checkbox"/> Discussion Techniques Student Participation</p> <p>Component 3d: Using Assessment</p>	<p>The teacher answers student questions accurately and provides feedback that furthers their learning.</p> <p>The teacher says: "Here's a spot where some students have difficulty...."</p> <p>A student asks, "What if...?"</p> <p>Teacher monitoring of student understanding is sophisticated and continuous: Teacher is constantly "taking the pulse" of the class.</p> <p>A student asks whether they might remain in their small groups to complete another activity, rather than work independently.</p>

	<p>in Instruction</p> <p><input type="checkbox"/> Feedback to Students Self-Assessment and Monitoring of Progress</p>	
<p><u>19. Stagecraft</u></p> <p>The ability of the teacher to enhance, deepen, or prolong student engagement by utilizing a theatrical treatment.</p>	<p>Domain 2: Classroom Environment Component 1a: Creating an Environment of Respect & Rapport Teacher Interaction w/Students</p> <p>Domain 3: Instruction Component 4a: Communicating w/Students Use of Oral & Written Language</p> <p>Component 1c: Engaging Students in Learning</p>	<p>Teacher demonstrates genuine effort to enhance the classroom experience to promote engagement.</p> <p>Theatrical treatment may include role-playing activities (oration and/or performance) in addition to teacher-led, theatrical recitation.</p> <p>The teaching modality stimulates student interest.</p>
<p><u>20. Complimentary elements</u></p> <p>The ability of the teacher to sequence instructional experiences that build on the preceding and set the stage for the subsequent.</p>	<p>Domain 1 : Planning and Preparation Component 1e: Designing coherent instruction</p> <p><input type="checkbox"/> Learning Activities</p> <p><input type="checkbox"/> Instructional Materials and Resources</p> <p><input type="checkbox"/> Instructional groups</p> <p>Lesson and Unit Structure</p>	<p>Teacher coordinates knowledge of content, of students, and of resources, to design a series of learning experiences aligned to instructional outcomes and suitable to groups of students.</p> <p>The learning activities have reasonable time allocations; they represent significant cognitive challenge, with some differentiation for different groups of students.</p> <p>The lesson or unit has a clear structure, with appropriate and varied use of instructional groups.</p>

<p><u>21. Time and Timing</u></p> <p>The ability of the teacher to strategically manage the duration of learning activities and the intervals between instructional elements in order to optimize learning.</p>	<p>Domain 1 : Planning and Preparation</p> <p>Component 1e: Designing coherent instruction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Learning Activities <input type="checkbox"/> Instructional Materials and Resources <input type="checkbox"/> Instructional groups <p>Lesson and Unit Structure</p>	<p>Teacher coordinates knowledge of content, of students, and of resources, to design a series of learning experiences aligned to instructional outcomes and suitable to groups of students.</p> <p>The learning activities have reasonable time allocations; they represent significant cognitive challenge, with some differentiation for different groups of students.</p> <p>The lesson or unit has a clear structure, with appropriate and varied use of instructional groups.</p>
<p><u>22. Personal Presence</u></p> <p>The ability of the teacher to become a person of significance in the lives of students and to use this position to enhance student engagement.</p>	<p>Domain 2 : The Classroom Environment</p> <p>Component 2a: Creating an Environment of Respect and Rapport</p> <p>Teacher Interaction with Students</p>	<p>Teacher-student interactions are friendly and demonstrate general caring and respect. Such interactions are appropriate to the ages of the students.</p> <p>The teacher inquires about a student's soccer game.</p>

<p><u>23. Delight</u></p> <p>The ability of the teacher to create instances of learning that are extra-memorable by designing a "positive surprise"- something that is exceptionally pleasing and unexpected.</p>	<p>Domain 2: Classroom Environment</p> <p>Component 3b: Establishing a Culture for Learning Student Pride in Work</p> <p>Domain 3: Instruction</p> <p>Component 1c: Engaging Students in Learning Activities & Assignments</p> <p>Component 1e: Demonstrating Flexibility & Responsiveness Lesson Adjustment</p> <p>Component 2e: Demonstrating... Response to Students</p>	<p>Student work is praised and displayed.</p> <p>Activities and assignments include "meaningful," differentiated instruction that include pre-design and creativity that correlates to the learning targets.</p> <p>Teacher is perceptive in sensing the need for alterations in delivering the lesson</p>
---	---	--

Form 4.2

PETLL “Talent Matrix”

Talent mapping charts every educator in a school/district according to their skills, competencies, and capabilities. The completed “map” analyses individual and collective talent and potential, creating an internal and “intra-district” resource that can add value now and increase value in the future.

Name:		Subject(s) and grade level(s) currently taught:	
Years’ experience in education:		College/University attended:	Degree(s):
Artisan Teacher Theme(s) You Possess and Demonstrate:		Specific Instructional Strategy you are expert in:	
Education organizations, cohorts, training cadres you belong to or participate in:			

Form 4.3

PETLL 30 Day Ind. Action Plan

Name:		District/School:			Date:	
30 Day Plan						
Artisan Teacher Theme	Who is Responsible?	When will it Begin?	When will it be completed?	How will it be monitored?	When will we evaluate it?	
<u>Conscious Talent</u> (What you know you do well and can demonstrate – prove in your instructional practice.)						
<u>Developing Talent</u> (What you're working to improve in your instructional practice.)						
Supports I will access in the process: (Mentors/Web-based/Higher Education/External Colleagues/Peers):						
Evidence of Implementation:			Evidence of Impact:			

Form 4.4**PETLL Blueprint for Improvement – Example**

_____ - School

Identified “High Impact” Areas: Increasing Rigor, Differentiated Instruction, and Addressing Learning Styles

Goal #1: _____ 100% of School teachers will work to master the Quality Core Curriculum and deliver rigorous instruction to all students.

Goal #2: _____ 100% of School students will be involved in a classroom setting that utilizes various teaching methods to deliver curriculum.

Goal #3: _____ 100% students will be involved in instructional classrooms that use varying methods of teaching to address learning styles of all students.

Short Term Strategies:

1. By _____, all teachers and administrators will participate in a professional development on high school teachers teaching rigorous levels.
2. Instructional walkthroughs will be conducted to monitor classroom practices to ensure that varied methods of instruction are being delivered. Each teacher will be observed a minimum of 4 class periods and 1 face to face meeting about these observations by _____.
3. Instructional walkthroughs will be conducted to monitor classroom practices to ensure that learning styles are being addressed. Each teacher will be

observed a minimum of 4 class periods and 1 face to face meeting about these observations by _____.

4. Teachers will be required to complete at least 2 classroom observations/peer reviews based upon each individual's talent map. Teacher will be paired with someone strong in what they identified as a weakness.

Over time the continuous quality improvement component of the PETLL Initiative will provide participating schools with trend data to determine whether improvement strategies are working. School improvement and PETLL team leaders will meet periodically to review the indicator data; determine whether performance is improving; discuss reasons why improvement is or is not occurring; and to refine indicators and improvement strategies. The school team will decide with whom to share the performance information. Regardless of specific dissemination strategies employed, participants in the program improvement process collaboratively decide how best to use the indicator information to bring about improved performance at their school.

PETLL's locally developed performance indicator system is a fairly unique strategy for establishing a data-based program improvement process in districts and schools. By encouraging local educators to articulate their goals and involving them in deciding how to measure their performance on the goals, the PETLL evaluation model ensures that the system will be relevant to local educational objectives. After working through the process, educators will also become familiar with the many

sources data available to them and begin to see the data's usefulness for answering a wide variety of questions about performance and effectiveness. The PETLL system is practical and feasible. All PETLL districts and schools have access to meaningful data. The system teaches participants to use the data in meaningful ways that bring about sustained school improvement.

Multiple sources of data, both qualitative and quantitative are currently being collected and analyzed to identify patterns and themes and evaluate the success of PETLL. Because 2011/2012 was the launch year for pilot schools in the PETLL Initiative quantitative trend data are currently available. Baselines have been established and first year data are being compiled. PETLL researchers have begun data analysis with ACT scores, College and Career Readiness scores, attendance data, and measures of educator efficacy.

Chapter 5

Implementation of Individual Instructional Plans

and Instructional Blueprint

The consistent use of an individual 30-Day Action Plan for Improvement by each staff member during the PETLL Initiative will enable each building leader to engage and be engaged in the specific growth of each staff member. Staff members identified a specific area for individual improvement and develop an Action Plan that specified how that improvement occurred, how it was measured, and what resources were necessary to insure its completion. The building leader(s) interacted with each staff member during the 30 day timeframe through a series of classroom observations/walkthroughs, PLC meetings and face to face settings. At the end of the 30-Day timeframe the individual and the building leader determined whether the goal has been reached or if it is necessary to extend the learning into the next 30 day period. The teacher and building leader collaboratively decided when improvement initiatives had been achieved and moved those mastered skills to the Talent Map for that teacher. Richard Elmore (2003) discusses this notion of reciprocal accountability in his book, *School Reform from the Inside Out: Policy, Practice, and Performance*.

The PETLL Initiative moves a school to be a part of a learning community that extends beyond itself and not develop an island mentality. The Initiative's design brings multiple schools from multiple districts together and enables them to look to each other for support and positive pressure to improve. Participation in the PETLL Initiative allows staff members to interact in a meaningful way with staff from other schools. It

is anticipated that the interaction across school and district boundaries will cause a greater level of learning to occur and create an atmosphere of collegial competition.

The ongoing visit component of the Initiative is designed to support a school's ongoing improvement efforts by involving "critical friends" in a continuous feedback loop focused on classroom instruction and instructional leadership. A visiting team of experienced educators visited each school in the Initiative every 30 days and monitored evidence specific to the goals outlined in each school's Blueprint for Improvement. The visiting team collected tangible evidence based on observed instructional practice, student work, staff interaction, etc. The team provided the host school with a report of their findings and collaborated in an on-going progress evaluation. In an article titled "Learning is the Work", Michael Fullan writes, "It is not sufficient for schools to work out collaboration on their own. External facilitation is required. And since we are interested in system change we also need schools to learn from each other" (2011, p. 3).

Improving instruction is a complex and difficult task during the best of times. In this era of declining revenue, increasing accountability, and challenging student needs we need a clear, cohesive, and simple process to cut through the complexity and maintain our focus on the core business of student achievement. When principals, teachers, teams, coaches, and district leaders consistently work toward a shared vision with a plan of action implemented with fidelity, schools can and will dramatically improve teaching and learning for students.

The PETLL Initiative adopts an approach to school improvement efforts that creates success from the inside out. Working with the leadership teams educators become catalysts for continuous improvement that starts with data analysis, helping schools unearth root causes for performance gaps, underlying assumptions and beliefs; and attitudes, values and expectations that drive decisions and behaviors. Through this process, a staff builds on strengths, identifies talents and opportunities for improvement, and focuses efforts on targeted strategies that will leverage significant gains. Ultimately the school and community take ownership for school success and provide direction for perpetual growth, increasing the capacity and range of improvement efforts to fully realize the school's potential to make positive change in the lives of students.

Step five in the PETLL Protocol is one of the most critical steps in the process. Leadership at the school and district level work collaboratively to ensure implementation of Individual Action Plans and the Blueprint for instructional improvement is implemented with fidelity. This step in the Protocol causes building and district leadership to monitor, support, and provide timely feedback to ensure that identified strategies are operationalized in a continuous quality improvement framework.

Specific tools and processes were developed relevant to the PETLL Initiative to make this step in the Protocol more effective and more efficient. Tools include:

Form 5.1 – PETLL Leadership Talent Matrix Log

Form 5.2 - PETLL Leadership Implementation Plan

Form 5.2

Name:		District/School:			Date:	
PETLL LEADERSHIP IMPLEMENTATION PLAN						
Leadership Action	Who is Responsible?	When will it Begin?	When will it be completed?	How will it be monitored?	When will we evaluate it?	
<u>Instructional Blueprint:</u> (Communicated to all stakeholders, aligned with PLC's -PD's, Monitored Frequently for impact)						
<u>Talent Matrix:</u> (Matrix is developed with all staff strengths and is living document, matrix is utilized to build capacity through critical friends (peer work) and through staff leadership)						
<u>30 Day Staff Action Plans:</u> (All Staff have specific/clear action plans, systemic process in place for monitoring, support, and specific instructional feedback to build staff efficacy)						
<u>Evidence of Implementation:</u>			<u>Evidence of Impact:</u>			

Chapter 6 **Ongoing Reflective Collaboration**

Fidelity of implementation can only be achieved through commitment from all stakeholders and a systemic monitoring/support system. Leithwood & Louis (2012), *Linking Leadership to Learning* found the following strategies as crucial components of district leadership for systemic student achievement.

- Efforts to develop principal and teacher capacity to implement targeted improvements in teaching and learning (professional investment)
- Efforts to identify and support the diffusion of effective practices linked to specific needs for improvement (innovation implementation)
- Continuous monitoring of the process and effects of improvement efforts on leadership, teaching, and learning, with changes in practice where needed (evolutionary planning) pg. 201

The PETLL researchers experience with the Pilot and the research indicates while districts and school commitment is essential, the district leadership must participate in a systemic fashion to ensure programmatic implementation and impact. PETLL researchers developed a process to address this need as district leadership is asked to meet with all PETLL schools monthly to review PETLL implementation data, provide meaningful support/guidance and to visit PETLL schools on regular basis for monitoring feedback, support and guidance.

Costa and Kallick (1993) concluded, “Introducing the role of critical friends into the layers of a school system will build a greater capacity for self-evaluation as well as open-mindedness to the constructive thinking of others” (p. 1). Here they make the connection between self-evaluation and the role of the critical friend, suggesting a circular or even a spiral structure which strengthens itself with each repetition.

Costa and Kallik (1993) cite Senge (1990) “The role of critical friend has been introduced in many school systems that see themselves as learning organizations and know that learning requires assessment feedback (p. 1). Costa and Kallik (1993) go on to describe the critical friend relationship.

A critical friend provides such feedback to an individual—a student, a teacher, or an administrator—or to a group. A critical friend, as the name suggests, is a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of that work. (p. 1)

MacBeath (1999) as cited by Carlson (2009) points out that there is no single prescription as to how a critical friend should function in any particular school context but it is important that the process whereby a critical friend is identified and engaged by a school should be a transparent one, involving the school staff as a whole. It must be clear upfront why such a person is being engaged, what the person

will do, how it will be done, what the time frame will be, and how the report back process will work. Most important of all, a critical friend cannot be anyone who is imposed on a school. If this is accepted, there are responsibilities on both the side of the school personnel and that of the critical friend to create the supportive and purposeful climate necessary for the relationship to work successfully.

The use of a critical friend is also most beneficial to a school when it is part of an overall process that has been carefully considered by all the staff involved with the process. Carlson (2009) cites MacBeath (1999) as suggesting five procedural guidelines leading up to the engagement of a critical friend. These are:

- (1) “Start with the end in mind – the need for clarity and honesty as to why one is engaging in the self-evaluation and what one wants to achieve from it: the best reasons for self-evaluation are educational ones but these do not have to be in conflict with political or pragmatic ones.
- (2) “Create the climate – the need for a climate of trust and an openly agreed agenda.
- (3) “Promise confidentiality – the need to focus on issues rather than individuals, on what needs changing and how to do it rather than on apportioning blame: sources of information will not be identified.
- (4) “Take a risk – the need to be aware of the destabilizing risks (real or perceived) of undertaking self-evaluation: these should be discussed and accepted as a precursor to actually embarking on the self-evaluation

process. (5) “Engage a critical friend – the need to provide the different lenses for both support and ‘objectivity’.” (p.7)

Step six in the PETLL Protocol includes a toolkit of available resources that enables participating leadership teams and external partners to engage in an ongoing process of collaboration focused on instructional improvement. It is recommended that formal visits occur three times per semester or once every 30 days to provide timely feedback and opportunities to inform the ongoing learning. It is expected that school/district leadership will use this framework in an ongoing systemic approach.

Specific tools and processes developed for this step include:

Form 6.1 – PETLL Recurring Reflective Visit

Form 6.2 – PETLL Reflective Visit Beginning of Day

Form 6.3 – PETLL Reflective Visit End of Day

Form 6.4 – PETLL District Action Plan

Form 6.5 – PETLL Observation Training/Guidance

Form 6.1

PETLL Recurring Reflective Visits

-
1. *Start with the end in mind* – the need for clarity and honesty as to why one is engaging in the self-evaluation and what one wants to achieve from it: the best reasons for self-evaluation are educational ones but these do not have to be in conflict with political or pragmatic ones.
 2. *Create the climate* – the need for a climate of trust and an openly agreed agenda.
 3. *Promise confidentiality* – the need to focus on issues rather than individuals, on what needs changing and how to do it rather than on apportioning blame: sources of information will not be identified.
 4. *Take a risk* – the need to be aware of the destabilizing risks (real or perceived) of undertaking self-evaluation: these should be discussed and accepted as a precursor to actually embarking on the self-evaluation process.
 5. *Engage a critical friend* – the need to provide the different lenses for both support and 'objectivity'.

MacBeath J (1999). Schools must speak for themselves: the case for school self-evaluation. London: Routledge

Draft Action Agenda

Beginning of School Day	External Team meets briefly with School Leadership to discuss expected outcomes, confirm High Leverage Areas for Instructional Improvement, review Leadership's Talent Development Matrix, and target specific outcomes for the day.
Morning till 1:30 p.m.	External Team conducts ongoing classroom observations designed to provide constructive feedback on collective staff progress on three School-wide High Leverage Instructional strategies and individual teacher Talent Development.
Lunch Lunch 1:30 till end of Day	(Arrangements made independently at each school site) School Leadership Team and External Team meet to review and analyze results of observations conducted throughout the day. Evidence reviewed will include: 30 Day Talent Matrix, three Column Observation instruments, flip-vid evidence, support and extension opportunities, etc.
End of Day	Schedule/Confirm next Reflective Visit

Form 6.2

PETLL Recurring Reflective Visits

“Beginning of Day Talking Points with Leadership”

Reminder for the 3 High Leverage Instructional Strategies:

Specific Look-fors you'd like the External Team to pay particular attention to:

Substitute Teachers for the Day:

Unique events that have occurred during the last 30 days:

Teacher On-line Survey Status:

Student On-line Survey Status:

Form 6.3**PETLL Recurring Reflective Visits**

“End of Day Talking Points with Leadership”

External Team Lead will Review 30 Day Instructional Leadership Action Plan with Principal prior to Whole Group Sharing:

Review evidence of 3 High Leverage Instructional Strategies (What external team see's in the classroom):

Review updated Instructional Action Plans of whole staff:

Review Principal's Talent Matrix Log:

Share specific findings from observations/video capture during the day's visit:

Discuss opportunities for support, specific needs, collaboration opportunities, structure of next visit's team, etc.

Confirm next meeting Date

Form 6.4

PETLL DISTRICT ACTION PLAN					
Name:	District/School:			Date:	
DISTRICT ACTION	Who is Responsible?	When will it Begin?	When will it be completed?	How will it be monitored?	When will we evaluate it?
<u>PETLL SCHOOL SITE-Monitoring VISITS</u> (How is PETLL process being implemented: Focus on Blueprint, Talent Matix and 30 Day Action Plans – specific feedback provided)					
<u>Monthly Meeting of PETLL School Leadership</u> (Discussion-Mthly Meeting for Principal Efficacy, support/guidance Growth)					
<u>Evidence of Implementation:</u>			<u>Evidence of Impact:</u>		

Form 6.5**PETLL Observation Training/Guidance**

Remember: We are observing Lessons and Never evaluating Teachers. Our goal is to provide the principal with data for reflection that will serve and an addition data source based on school instructional blueprint.

1. Before the Classroom Lesson Observation

The Team Lead will provide the following:

- List of teachers that will be observed by each team member
- School Master Schedule
- Three Column Classroom Observation Instrument Forms and with 23 teacher talent memory Jogger
- School Map
- Team Schedule for the Day
- Other Information Relevant to the Observation

2. Conducting the Lesson observation

As you enter classroom try to locate an inconspicuous observation point that provide a view of both teacher and student.

Do not immediately begin to write notes. Get the feel of the room (Learning Environment)

- Students: Look at what the students are doing and how they are responding: Are they engaged, attentive, interested? Are they having fun? thinking,

learning, excited? Are they challenged? Inhibited? What is the task they are engaged in? What level is the task?

- Teachers: Consider how the teacher interacts with the students: Do students contribute to the lesson? Is questioning used effectively?
- Note the use of physical space and the observational student work.

Observe the lesson being careful to record only evidence. Record what the teacher or student say and do. Guard against interpretation or bias based on your past experience or personal preference. (Neutral observer).

3. After the Lesson

- Quietly leave the room. Do not interrupt the flow of instruction. Leave a non-evaluative positive note stating something positive about your observation.
- Reserve any information (positive or negative) for the post observation debriefing with principals. At no point to we provide evaluative information or teaching suggestions to teachers. **This is not our role.**

4. Debriefing the School Principal: Give quality Feedback.

Giving feedback after a lesson observation

Purposes of post observation feedback

- To acknowledge teacher strengths
- To develop confidence
- To note areas for improvement
- To note school wide trends or areas to explore

- To offer advice and possibly further support/training
- To explore and offer strategies and alternatives
- To encourage self- principal reflection

Giving feedback

Give yourself time to reflect on the lesson before you give feedback, so you can:

Be explicit and specific

Start with the positive

Be evaluative and descriptive

Focus on actions that can be changed

Choose aspects that are most important and limit yourself to those

Chapter 7

Lessons Learned through Pilot Implementation

Unlike many school improvement initiatives championed by for-profit vendors or departments of education, PETLL does not advocate for wholesale staff restructuring or come with an exorbitant price tag. Perhaps most importantly, PETLL respects educators as professionals and seeks to celebrate excellence on an individual and collective level.

The PETLL Initiative was developed and designed to increase teaching and leadership capacity and ultimately student achievement in rural schools. The hypotheses of the developers was that in order for schools to show improvement and increase student achievement all staff must be engaged in building leadership capacity led the developers to create the PETLL Initiative for school improvement. The PETLL Pilot research has been conducted to improve the quality and efficiency of the design. The intent of the research has been to identify strengths and areas for improvement in the Initiative design prior to expanding PETLL to a broader scale.

The PETLL Pilot Study enabled developers to closely monitor the implementation of the processes to determine their effectiveness in a real world setting. Significant early findings from the Pilot include:

- Sustained improvement must be developed from capacity building from within.
- As with any process, the work is never finished – new tools, new processes and enhancements will continue to emerge as the Initiative grows.

- The Pilot permitted a thorough analysis of the planned statistical and analytical procedures, providing researchers an opportunity to evaluate their usefulness for the instrumentation, process, and data. It has also revealed needed alterations in the data collecting methods, and therefore, analyze data in the main study more efficiently.
- The Pilot enabled PETLL developers to greatly reduce the number of unanticipated problems because of opportunities to redesign parts of the instrumentation and process to overcome difficulties that the pilot study revealed.
- The Pilot was cost efficient and provided preliminary indications that sustainable school improvement can be affordable to revenue challenged rural public schools. PETLL researchers tested a concept that shows great promise and believe it to be productive when implemented with fidelity to the process. The pilot study provided data for the researchers to move forward with the project.
- The Pilot allowed researchers to explore a number of alternative measures and then select those that produce the clearest results for a scaled up distribution of PETLL.

Based on the research conducted on varied elements of the PETLL design and the planning and development of the PETLL deliverables, PETLL researchers collective belief is that schools have experienced success that we can be attributed to their participation in the PETLL process. Documentation conducted throughout the process supports this through increases in ACT component of the EPAS system, College and Career Readiness measures from the participating schools measured

against a comparison group of similar schools, increases in teacher efficacy measures, and other data presented in accompanying sections of this publication. Availability of longitudinal data will allow for greater analysis of significance and correlation of PETLL processes contributing to improved student achievement.

Multiple sources of data, both qualitative and quantitative, were collected and analyzed to identify patterns and themes and evaluate the success of PETLL.

Because PETLL was launched in the Spring semester of 20011, long term quantitative trend data is not currently available, but will continue to be collected for analysis. Baselines have been established and first year data has been compiled.

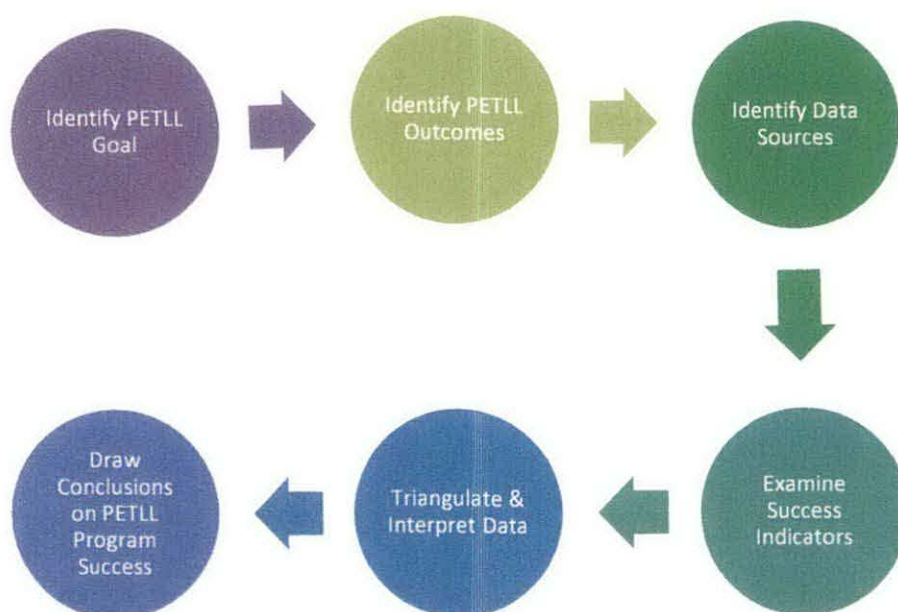
PETLL researchers began data analysis with a focus on the ACT component of the EPAS system, the Kentucky Department of Education's College and Career Readiness measures, measure of educator efficacy, and attendance data. PETLL developers identified comparison districts for comparative data analysis through assistance from the Kentucky Department of Education.

The PETLL pilot study has been conducted to test instrumentation and processes for the PETLL Systemic Improvement process. It is conducted to improve the quality and efficiency of the system. The intent is to reveal deficiencies in the design and address them before expanding PETLL to a larger scale.

The PETLL Initiative was developed and designed to increase teaching and leadership capacity and ultimately student achievement in rural schools. The hypotheses of the developers is that in order for schools to show improvement and increase student achievement all staff must be engaged in professional growth. The

PETLL Pilot research has been conducted to improve the quality and efficiency of the design. Seventeen schools participated in the PETLL Pilot and were selected because they are representative of schools across the region. The intent of the research has been to identify strengths and areas for improvement in the Initiative design prior to expanding PETLL to a broader scale.

Figure 7.1 **PETLL PROGRAM EVALUATION PROCESS**
Making it Real; Making it Relevant



The goal of PETLL is to increase student achievement through an organized, sequential and perpetuating process that builds school staff capacity through professional growth.

PETLL outcomes should be consistent with what could reasonably be accomplished and not overly idealistic. Reasonable and realistic doesn't mean you

won't strive for more, but in terms of carrying out an evaluation the more clearly defined and measurable the outcome, the better. PETLL outcomes provide a foundation for all subsequent program implementation and evaluation activities, and each of the outcomes will need to be evaluated. Every school is unique. Each participating school must identify individual outcomes that flow from the process. The overarching PETLL outcome can be nothing less than increased student achievement and a secondary outcome is the undeniable growth in teacher/principal efficacy.

PETLL activities are the interventions and support that PETLL provides in order to bring about the intended outcomes. For the most part, program activities can be classified as both direct service and information that is provided to participants.

Most school districts and schools are routinely involved in data collection. Administrators tally average daily attendance (ADA) rates and maintain transcript data, including students' course enrollments and grades. It seems that all eyes are focused on State Assessment and EPAS scores. As a condition of receiving state or federal funds, our schools and districts collect information on participants in particular programs or activities. Administrators also rely on anecdotal information to assess informally the quality of teaching and learning at their site, and teachers and counselors use various assessment instruments for diagnosing individual students. Thus, school districts and schools collect a wide array of data. However, they do not typically use the data they collect in a systematic fashion to identify strengths and weaknesses at their sites and to develop improvement strategies.

One reason for the lack of data use is the perception that the data are being collected for someone else's purposes. There is no local ownership. Without taking steps to gather systematic, representative information, data collected in this way may lead to inappropriate conclusions and actions. This is one of the unique features of PETLL. Schools collect and own their data as they decide what the data reveals about teacher and student performance within the building. One focus of PETLL was to improve the school use of available evaluation results to encourage building the capacity of districts and schools for self-evaluation.

The goal of PETLL was not to identify new and more cumbersome forms of data to collect. Instead PETLL focused on what was already readily available and easily accessible. There has never been a shortage of data; the problem has been in how educators interpret the data. PETLL schools identify existing data sources and any new data sources that are most essential to describing identified outcomes, practices, and measures of success. Critical data sources for the PETLL Process are listed below:

Standardized Student Results

- (1) ACT
- (2) End of Course
- (3) School Data: Discovery Learning, Study Island, ETC.
- (4) School Growth Reports
- (5) School Gap Reports

Non-Academic Data

(1) Attendance: Teacher and Student

(2) Graduation Rates

(3) Failure Rates

(4) Drop Out Rates

Client Survey's

(1) Perception Surveys: Teacher and Student

(2) Efficacy Surveys: Teacher and Principal

PETLL Success Indicators act as the gauge of whether, and to what degree, PETLL is having its desired impact. PETLL progress needs to be examined in two distinct ways:

1. the quality of the program activities being delivered, (process indicators), and
2. the quality of the outcomes that the PETLL program is achieving. (outcome indicators).

Therefore, indicators must be developed to measure both of these types of program progress. *Process indicators* help track the progress that the PETLL program is making as schools work toward achieving the desired outcomes. This indicator comes primarily in the form of feedback from PETLL 30 day cycle visits. Process indicators often provide important feedback to program providers long before evidence outcomes are being reported. Outcome indicators provide the most compelling evidence that the program is making a difference in the day to day work of program participants.

Triangulation and Interpretation of Data:

Identification, collection, analysis and triangulation of data are a PETLL strategy for increasing the validity of evaluation of PETLL success findings. Typically, through triangulating we expect various data sources and methods to lead to a singular proposition about the process being studied.

PETLL researchers were challenged to identify quality primary data and to interpret what those data mean and what PETLL schools can learn from data interpretation. One key when analyzing PETLL data was to pull out information that was the most pertinent to the school's identified needs, information that could be highlighted and discussed, and information that supported student learning. Clearly conclusions must be justified and accurate. A single data source does not provide a complete picture. Instead, data triangulation is critical. With data triangulation conclusions were verified using several key data analysis findings. This builds credibility and makes the study's findings stronger. During the on-going data collection process researchers will build upon the hard (statistical data) and soft data (anecdotal records) already collected and use these data sources for analysis and decision making concerning program effectiveness.

Table 7.1 DATA SOURCES FOR ONGOING PETLL ANALYSIS

DATA SOURCE	DESCRIPTION	PETLL APPLICATION
K-Prep	The new assessment for grades 3-8 is a blended model built with norm-referenced test (NRT) and criterion-referenced test (CRT) items which consist of multiple-choice, extended-response, and short answer items.	Overall school achievement growth will be a source of information on individual school improvement. Combined PETLL school growth will be compared to the scores of the non-PETLL schools in the KVEC Region.
EPAS	EPAS consists of Explore-high school readiness examination in grade 8, Plan-a college readiness examination in grade 10 and the ACT college admissions and placement examination in grade 11. These three examinations — EXPLORE PLAN and ACT — comprise the Educational Planning and Assessment System (EPAS).	Overall EPAS school achievement scores (Plan, Explore, ACT) will be a source of information on individual school improvement. Combined PETLL school EPAS scores will be compared to the scores of the non-PETLL schools in the KVEC Region.
End of Course	Assessments for English II, Algebra II, Biology and US History administered throughout the year as students earn credit in each course.	Overall school achievement scores will be a source of information on individual school improvement. Combined PETLL school achievement scores will be compared to the scores of the non-PETLL schools in the KVEC Region.
School Student Performance Growth Report	Growth in reading and mathematics (percentage of students at typical or higher levels of growth)	Comparison of growth of PETLL schools to non-PETLL schools.

School Student Gap Report	Gap (percentage of proficient and distinguished) for the Non-Duplicated Gap Group for all five content areas- reading, mathematics, science, social studies and writing.)	Comparison of Gap of PETLL schools to non-PETLL Schools.
School Level Assessments	Local assessments used by schools and districts (Discovery Learning, Study Island, etc.).	Primarily for individual school analysis. Used as an additional verifying source in PETLL Schools.
Teacher Attendance	Month-by-Month Teacher Attendance.	Trend Data collected with expectations of discovering a declining pattern of teacher absence in PETLL schools.
Student Attendance	Student attendance rate provides the percent of attendance for all students and is collected from primary through grade twelve (12).	Trend Data collected with expectations of discovering a declining pattern of student absence in PETLL schools.
Graduation Rate	Graduation rate is the percentage of students entering a high school in the ninth grade that graduate in four years.	Trend Data collected with expectations of discovering increasing graduation rate in PETLL schools.
Retention Rate	The retention rate is the percent of students that are held back (retained) in the prior grade and is collected for grades four (4) through twelve (12).	Trend Data collected with expectations of declining percentage of students who are retained in grades 4-12 in PETLL Schools.
Drop Out Rate	The dropout rate is the percent of students that dropout of school and is collected for grades seven (7) through twelve (12).	Trend Data collected with expectations of establishing declining trends in the numbers of students dropping out of schools in grades 7-12 in PETLL Schools.
PETLL Teacher Perception Survey	A brief teacher perception survey given in PETLL schools.	The PETLL Perception survey is conducted prior to the first school visit by the PETLL

		team and every year thereafter early in the school year. Results are used for conversations regarding school wide leverage points.
PETLL Student Perception Survey	A brief student perception survey	The PETLL Perception survey is conducted prior to the first school visit by the PETLL team and every year thereafter early in the school year. Results are used for conversations regarding school wide leverage points.
The Teacher Sense of Efficacy Scale	Teachers' Sense of Efficacy is the beliefs in their capability to make a difference in student learning, to be able to get through even to students who are difficult or unmotivated. The Teacher Sense of Efficacy Scale asks teachers to assess their capability concerning instructional strategies, student engagement, and classroom management.	This teacher self-assessment will be taken twice yearly, at the beginning of the school year and again at the end of the school year to gage teacher Efficacy growth during the school's participation in the PETLL Program. Data will be collected and analyzed by KVEC PETLL Staff.
Principal Sense of Efficacy Scale	Principals' Self-Efficacy Beliefs are the beliefs in their capability to make a difference in the schools they lead, to effectively manage the challenges they face. The Principal Sense of Efficacy Scale asks principals to assess their capability concerning instructional leadership, management, and moral leadership.	This principal self-assessment will be taken twice yearly, at the beginning of the school year and again at the end of the school year to gage teacher Efficacy growth during the school's participation in the PETLL Program. Data will be collected and analyzed by KVEC PETLL Staff.

Drawing Conclusions on PETLL Success

The ongoing evaluation of PETLL will provide schools with trend data to determine whether improvement strategies are having an impact. PETLL Lead Teams from participating schools will meet periodically to review the indicator data; determine whether performance is improving; discuss reasons why improvement is or is not happening; and refine their indicators and improvement strategies. School and district leadership will choose how to share findings in a manner that leverages the greatest opportunity for school improvement success. No matter the specific dissemination strategies employed, participants in the program improvement process decide together how best to use the indicator information to bring about improved performance at their school.

PETLL's locally developed performance indicator system is a fairly unique strategy for establishing a data-based program improvement process in districts and schools. By encouraging local educators to articulate their goals and involving them in deciding how to measure their performance on the goals, the PETLL evaluation model ensures that these systems will be relevant to local educational objectives. After working through the process, educators should also become familiar with the many data sources available to them and begin to see the data's usefulness for answering a wide variety of questions about performance and effectiveness. The PETLL system is practical and feasible. All PETLL districts and schools have access

to meaningful data. Through the PETLL process participants learn how to use the data in meaningful ways that bring about sustained school improvement.

Table 7.2 illustrates a comparison of ACT scores for participating PETLL schools and a comparison group of non-PETLL schools identified by the Kentucky Department of Education’s Office of Assessment and Accountability. The comparison group was selected based on similarities with PETLL schools that included; socio economic status and student body size.

Table 7.2

ACT PETLL AND COMPARISION SCHOOL GROWTH SCORES			
YEAR	GROUP	COMPOSITE AVERAGE	GAIN/LOSS
2010/2011	PETLL PILOT SCHOOLS	17.67	
2011/2012	PETLL PILOT SCHOOLS	18.28	6.3
2010/2011	COMPARISION GROUP	18.01	
2011/2012	COMPARISION GROUP	17.99	-0.2

Table 7.3 illustrates PETLL Pilot schools College and Career Readiness performance over a three year period. Table 7 illustrates PETLL Pilot school attendance rates over the same three year period.

Table 7.3

PETLL PARTICIPANT SCHOOL COLLEGE AND CAREER READINESS				
DISTRICT	SCHOOL	2010	2011	2012
Floyd County	Allen Central High School	22	27.0	29.5
Floyd County	Betsy Layne High School	14	27.0	26.1
Floyd County	Prestonsburg High School	28	27.0	37.2
Floyd County	South Floyd High School	17	26.0	24.0
Jackson Independent	Jackson City School	45	54.0	65.0
Jenkins Independent	Jenkins Independent School	13	27.0	43.2
Lee County	Lee County High School	28	26.0	51.3
Magoffin County	Magoffin County High School	27	18.0	25.4
Paintsville Independent	Paintsville High School	64	54.0	71.0
Perry County	Buckhorn School	22	23.0	34.0
Perry County	Perry County Central High School	18	23.0	22.6
AVERAGE		27.09	30.18	39.03

Table 7.4

PETLL PARTICIPATING SCHOOL ATTENDANCE				
DISTRICT	SCHOOL	2010/11 Att %	2011/12 Att %	2012/13 Att %
Floyd County	Allen Central High School	92.5	93.20	94.2
Floyd County	Betsy Layne Elementary School	93.3	94.40	95.4
Floyd County	Betsy Layne High School	95.1	94.00	94.7
Floyd County	Prestonsburg High School	93.2	90.10	93.3
Floyd County	South Floyd High School	92.3	93.00	93.5
Jackson Independent	Jackson City School	93.6	94.3	94.60
Jenkins Independent	Jenkins Independent School	90.9	91.0	91.2
Lee County	Beattyville Elementary	93.4	94.5	94.3
Lee County	Lee County High School	87.4	90.52	90.95
Lee County	Lee County Middle School	91.0	93.0	91.55
Lee County	Southside Elementary School	90.5	92.3	93.0
Magoffin County	Herald Whitaker Middle School	88.8	90.5	90.9
Magoffin County	Magoffin County High School	86.8	89.6	89.9
Paintsville Independent	Paintsville Elementary School	93.8	94.0	93.8
Paintsville Independent	Paintsville High School	93.9	95.0	95.0
AVERAGE		91.77	92.63	93.09
<p>Student attendance indicates that eleven of the fifteen PETLL schools measured improved student attendance during the PETLL Implementation time period. (Two schools, Perry Central and Buckhorn entered the program late in 2012 and that attendance data was not calculated) Data was gathered from participating schools. (Data is lagged one year in the state of Kentucky)</p>				

Table 7.5 is a composite of PETLL Pilot school's response to the End of Year Efficacy Survey. According to Tschannen-Moran, Woolfolk, and Hoy (2001)

educator's sense of efficacy is the belief in their capability to make a difference in student learning, to be able to get through even to students who are difficult or unmotivated. The Teacher Sense of Efficacy Scale asks teachers to assess their capability concerning instructional strategies, student engagement, and classroom management. (p. 787).

Table 7.5

END OF YEAR ONE EDUCATOR EFFICACY MEASURE														
Scale: 1=None at All 2=Very Little 3=Some Degree 4=Quite a Bit 5=A Great Deal														
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Student Engagement					Instructional Strategies					Classroom Management				
Item #1					Item #7					Item #3				
0%	0%	67.7%	33.3%	0%	0%	0%	55.6%	33.3%	11.1%	0%	0%	44.4%	44.4%	11.1%
Item #2					Item #10					Item #5				
0%	11.1%	44.4%	44.4%	0%	0%	11.1%	44.4%	44.4%	0%	0%	0%	33.3%	66.7%	0%
Item #4					Item #11					Item #8				
0%	11.1%	55.6%	2.25%	11.1%	0%	0%	66.6%	44.4%	0%	0%	0%	33.6%	55.6%	11.1%
Item #6					Item #17					Item #13				
0%	0%	44%	44%	12%	0%	11.1%	55.6%	33.3%	0%	0%	0%	33.3%	66.7%	0%
Item #9					Item #18					Item #15				
0%	11.1%	55.6%	33.3%	0%	0%	0%	55.6%	44.6%	0%	0%	0%	11.1%	55.6%	0%
Item #12					Item #20					Item #16				
0%	0%	55.6%	33.3%	11.1%	0%	0%	77.8%	22.2%	0%	0%	11.1%	55.6%	33.3%	0%

Item #14					Item #23					Item #19				
0%	0%	77.8 %	22.2 %	0%	0%	55.5 %	33.3 %	11.1 %	0%	0%	0%	33.3 %	55.6 %	11.1 %
Item #16					Item #24					Item #21				
0%	55.5 %	33.3 %	11.1 %	0%	0%	11.1 %	67.7 %	22.2 %	0%	0%	11.1 %	55.6 %	33.3 %	0%
End of Year Efficacy Surveys: Adapted: Tschannen-Moran, M & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. Teaching and Teacher Education, 17, 783-805.														

After one year of implementation in the PETLL Initiative educators report;

- 0% reported no growth.
- Substantial growth in all three survey correlated factors: *Efficacy in Student Engagement*, *Efficacy in Instructional Practices*, and *Efficacy in Classroom Management*.
- The highest percentages of teacher growth were reported in level 3 (some degree) and level 4 (Quite a bit) on the growth continuum.

An analysis of the PETLL Initiative is unfolding as initial quantitative data sources in the form of state assessment, non-academic measures, and successful transition data results arrive in schools and districts. PETLL researchers are collecting both quantitative and qualitative data. Perhaps, at this early stage of data availability, the best indicator of success can be found in the qualitative data. Qualitative data includes virtually any information that can be captured that is not numerical in nature. Three major sources of quantitative data that substantiate PETLL achievement are end of the year teacher and principal efficacy surveys, case studies, and participant testimonials.

Case Studies

The PETLL Initiative recognizes that every school is as different as the individuals that frequent the hallways and classrooms on a daily basis. PETLL researchers do not advocate for a one-size-fits all approach to school improvement. While the process is uniform the school work may look very different from school to

school and district to district. One school might be focused on changing a toxic environment, another on improving pedagogy and professional growth, and yet another on building effective professional learning teams that provide personalized learning for students. A foundational component of PETLL is that the school stakeholders become authors of a school improvement process, and as such they take responsibility for implementation and monitoring of school improvement efforts.

Two qualitative case studies in two very different PETLL schools were conducted as a component of the Pilot. Although the schools are not identified by name, the evidence is factual and substantiated through documentation. Both schools were involved in the PETLL pilot during 2011/2012. The PETLL team leader has remained constant throughout the process and has maintained a data base of evidence to document growth in self-identified areas of need in each school.

Case Study of Two PETLL Schools:

School A: School A is a small K-5 rural school with 10 full time teachers and 200 students. School A has a principal, part-time counselor, librarian, physical education, art and music teacher. School A has identified a need to increase school achievement and the principal prides himself in being an instructional leader.

School B: School B is a large rural 9-12 high school with 73 full time teachers and 1,050 students, School B has a principal, 2 assistant principals, 3 counselors, 2 art teachers, chorus and band teachers, 2 librarians, and several special area support teachers. School B was identified by the state as a Priority School in 2011/2012 due

to low student achievement. The principal was removed and a new principal was hired in July 2012.

School A and School B have few commonalities except for being located in rural communities and socio economic conditions shared by both student bodies. They are in different school districts more than 50 miles apart. The common thread for both schools is the PETLL Process implemented during the 2011/2012 school year. Through the PETLL process staff at both schools have identified and actively worked to develop individual Artisan Teacher Themes while keeping a strong focus on working together on school wide high leverage areas that were determined by the staff.

School A: 2011/2012 Initial School PETLL Visit. Following is a brief snapshot of team findings.

- The school had a good collegial staff relationship and there were no obvious morale or culture issues.
- Teachers were unfamiliar with the Artisan Teaching Themes. None were identified.
- Teachers and student had a culture of respect and rapport
- Student achievement as reflected by state testing was not meeting standard.
- Only 15% of students were actively engaged in learning.
- Most teaching was teacher directed with little evidence of student engagement.

- There was little evidence of standards based teaching. Student friendly learning targets were posted in 10% of classrooms and were not referred to during the observations.
- Limited use of technology.
- Teacher questioning was limited to lower cognitive questions with teacher pre-determined answers. Questions were primarily rapid fire and with recitation style answers.
- Evidence of embedded formative assessments in most classrooms.
- Routines and procedures were in place.

School A: 2012/2013 Initial school visit and classroom observation summary.

One year later.

Teacher Talents Observed: 55% of staff were observed demonstrating the self-identified Artisan Teacher Themes from the teacher talent matrix.

Talents in Action: Examples of Artisan Teacher Themes observed during the visit.

- *Neural Downshifting:* Classroom was relaxed, students were working in groups and students were giving their own input and assisting others. Teachers contributed to making the environment a safe place to learn. It is ok, we will just erase and start over. Student enters late, I am glad you are here.
- *Personal Presence:* When a student got a wrong answer and the teacher made him feel comfortable by talking to him on a personal level. Teacher greeted

each child who entered the room. Teacher-student interaction is friendly and demonstrates respect and caring.

- *Delight*: Teacher and student had smiles on their faces. “They call these pony beads” Students laughed. Learning looks like fun.
- *Performance Feedback*: Shared a student's work at the end of conclusion of the lesson-questioned students orally: What if's. I like the way (Student) is helping out.
- *Enriched Environments*: Use of centers during math, use of manipulatives and Promethean Boards and other technologies. Student work posted.
- *Mental Models*: Pony beads, pipe cleaners, numbers. Draw numbers and count that number.

**Researchers did not expect to observe every teacher's identified Artisan Teacher Theme demonstrated in this brief observation.

1st 30 Days Plan: Evidence Observed

- Posters for the Areas: Study Island, Automaticity, and Accelerated Reading.
- Students writing in journals.
- Students working in centers during math. Part of the Singapore Curriculum program.
- Students doing an art project that related to the posted, “I can statement”
- Predominately general feedback given to students.

Leveraging strategies for improvement:

Student Engagement

76% of students observed were actively engaged.

3% of student observed were compliant

3% were passively engaged

3% were not engaged

Evidence of Student active engagement:

- Students raising hands and eager to answer questions
- Students at centers completing activities and helping each other
- Students at one center completed assignment and without being prodded retrieved a number puzzle.
- “Oh, I get it now!” “Ah-ha, so that is the way you do it!” “Awesome!”
- “I can count to 14, but not to 15”
- “I can answer”
- “I know that is a?”
- Students can explain clearing and concisely what they are learning.
- Effective grouping of students
- Varied instructional Materials and Resources
- Appropriate Structure and Pacing

Learning Targets:

- 85% of the classrooms had posted student friendly learning targets.
- 75% of teachers referenced the learning target during the observation.

- 57% of teachers used formative assessment to gauge students understanding to the learning target.
- 53% of students interviewed during the lesson could clearly articulate and demonstrate an understanding of the learning target.

Technology Integration:

- Document Camera: Modeled under the document camera-coloring 1, then 2, and 3. Students counted and added one more by linking cubes and coloring quantity. Student work shared using document camera. (Observed in several classrooms.
- Wide use of Promethean boards. Observer comment, “The Promethean board is being used for active student learning-actual instruction, and not as a glorified chalk board.”
- Use of personal response system (1 classroom)

Questioning and Discussion Techniques:

“Am I telling you something?” “Am I asking you a question?”

“What animals have we had?” You are going to try to think of an animal that starts with each letter of the alphabet. “Glad someone noticed this because it is a story within a story.” So...when they came along among the WART, what do you think?

“Now let’s talk about the story, who do you think she is telling the story for?”

(Students reply). “I think that too. P is trying to teach Edward a lesson, that if you love no one but yourself..... “

Exit Slips: (Observed in some but not all classrooms)

Daily Review Questions; “What did you learn today? “ What medium are you using today? Is your work two dimensional? “

Specific feedback:

- Lots of general praise, “Good Job” “That is exactly right:, “Excellent”
- Limited specific feedback

Routines and Procedures in Place

- Teacher says, “Class” --Students reply in unison, “YES, YES”
- Classroom rules posted in many rooms
- Use of popsicle sticks and other methods to call of students

School B: 2011/2012 Initial school PETLL visit. Following is a brief snapshot of team findings.

- Staff described their culture as toxic. There was a feeling of despair and hopelessness. Several staff members cried when discussing the school environment.
- Little evidence of teacher collaboration. Even with common planning most teachers worked and taught in isolation.
- Student learning targets were not posted. Lack of standards based instruction
- Teachers are unfamiliar with the Artisan teaching talent
- Teaching was primarily lecture

- Students in hall, smoke filled bathrooms, students seen frequently talking on cell phones.
- Lack of routine and procedure
- Formative assessment observed in limited classrooms
- Little evidence of successful classroom practices

School B: 2012/2013 school visit and classroom observation summary.

One year later.

Identified Teacher Talents:

In 50% of the classrooms the self-identified teacher talents were observed during classroom visits. Please note that it would be unrealistic to expect to see everyone's talent(s) demonstrated during this short visit.

Throughout the day observers frequently reported occasions where they had observed teachers with the Artisan Teacher Theme of *Personal Presence*. In fact, the comment was made that teachers almost seemed to share the talent throughout the school. Also observed were other Artisan Teacher Themes including *Clear Learning Goals, Stagecraft, Neural Downshifting, Chunking, Task Analysis, Practice, and Mental Models*.

Team findings (Collected comments from visiting team compiled during discussion period of school visit.)

- Students were very well behaved
- Teachers care about their students

- Schools collaborating with feeder schools
- Active PLCs whose focus is on school improvement
- Leadership that is focused on student outcomes
- Team teaching and collaboration
- Learning targets posted in many classrooms. Not consistently embedded in instruction.

What has changed since our last visit? (Collected comments from visiting team compiled during discussion period of school visit.)

- The feel (culture) “I felt it when I walked through the door.”
- “Welcoming/Inviting classrooms.”
- “Teachers monitoring the hallways”
- The feel of the school-“Teachers Teaching-Students Learning”
- A new positive “Can Do” attitude”
- “The school is smoke free- It is wonderful”
- “There is a more positive culture”
- “Teachers feel they have a plan in place for improvement”
- “We didn’t see a single cell phone/iPod in use”
- “I was amazed at the change. They are headed in the right direction!”
- “It did not feel like the same school”

Evidence of Improvement (Collected comments from visiting team compiled during discussion period of school visit.)

- Teacher comments about the improvement in school culture.
- Leaders who demonstrate a greater understanding of language and actions associated with instructional coaching.
- Lots of technology in use (Data projectors, flat screens televisions, document cameras, computer labs, etc.)
- Collaborative Planning
- Special Needs/Regular Education teacher in partnership
- Reading and math labs
- Credit Recovery
- Transitional Courses
- Additional counselor
- Postponing sexual involvement partnership with the local health department
- New alternative school housed in the school
- Human Resources officer for in school detention

Case Study Conclusions:

In one year PETLL researchers have witnessed tremendous improvement in both School A and School B. Both schools worked in their areas of greatest need and both achieved observable positive results. Educators in School A are learning to implement effective strategies and best practices throughout the school. Confirmation of their success have been observed and tracked in cyclical 30 days school visits. Educators in School B have made a noticeable cultural shift with staff moving form a

defeatist attitude to one of hope and optimism. There are areas of deficiencies that remain in the school, but one seemingly obvious conclusion is that the change in culture will provide improved learning opportunities and set the stage for significant growth in student achievement. Thirty day cyclical visits will continue to provide the staff with encouragement and validation. PETLL researchers are encouraged by the success of both case study schools and look forward to a second year of PETLL implementation that brings about accomplishments anticipated to exceed expectations.

Testimonials: Voices from the Field

Analysis of first year data would be incomplete if a few voices from the field were not included. Following are but a few examples of affirmations that are offered on a regular basis from educators working in PETLL pilot schools and districts. There is no greater validation of the PETLL system than the heartfelt testimonials of stakeholders who daily witness the positive outcomes of PETLL implementation. This is true authentication of the value of PETLL.

Our district's involvement in PETLL has raised the bar for everyone.

Teachers expect our leaders to be in their classrooms now and expect immediate feedback on how to improve. I've seen our principal grow more as an instructional leader during the past year's involvement than all the previous year's combined.

(Tim Spencer, Superintendent Jackson Independent Schools responding to the PETLL Pilot Year Exit Survey, May 2012)

Participating in PETLL has helped me to know the strengths and challenge areas of each member of my faculty. I can now differentiate support for them in ways that are meaningful to them and focused on student improvement. (Larry Begley, Principal Allen Central High School responding to the PETLL Pilot Year Exit Survey, May 2012)

Our Pilot Year in PETLL enabled our leadership team to be a part of a broader professional community focused on coaching teacher talent. Our conversations have changed significantly and I have seen a positive change in our learning culture as a result of our involvement. (Bernadette Carpenter, Instructional Supervisor Magoffin County Schools responding to the PETLL Pilot Year Exit Survey, May 2012)

I have learned so much about effective teaching from participating in the PETLL process. Words cannot express the value I place on the personal growth that I have experienced by volunteering to serve on a PETLL team. This is applied professional development at the highest level. Every time I participate in a team visit I am more convinced that I am the learner in this process and I can't wait to get home to share my learning experiences with my colleagues. (Samantha Burgett, Perry County teacher commenting to colleagues during a routine team visit September 2012)

Reference Lists

Executive Summary- Capstone Reference List

- Appalachian Regional Commission. (2012). Retrieved November 18, 2012, from www.ARC.gov.
www.arc.gov/research/mapsofappalachia.asp?MAP_ID=55.
- Barber, M., & Mourshed, M. (September 2007). How the world's best-performing school systems come out on top. www.mckinseysociety.com. Retrieved October 7, 2011, from www.mckinseysociety.com:
www.mckinsey.com/App_Media/Reports/SSO/Worlds_School_Systems_Final.pdf
- Boyd, V., & McGree, K. M. (1995). Leading change from the classroom: Teachers as leaders. *Issues about Change*, 4 (4). Austin, TX: Southwest Educational Development Laboratory.
- Buddin, R., & Zamarro, G. (2009). www.rand.org. Retrieved October 5, 2011, from www.rand.org: www.rand.org/pubs/reprints/2010/RAND_RP1410.pdf
- Carlson, B. (2009). Evaluation and the "Critical Friend" perspective. *Educational Research and Review* Vol 4 (3) pp 078-085
- Carnavale, A. Smith, N. & Strohl, J. (2010). Projections of Jobs and Education Requirements Through 2018. Georgetown College, Center on Education and the Workforce.
- Collins J. (2001) Good to Great: Why Some Companies Make the Leap . . . and Others Don't. New York, NY; Harper Business.

- Corcoran, T. & Goertz, M. (1995). Instructional capacity and high performance schools. *Educational Researcher*, 24 (9), 27-31.
- Costa, A. & Kallick, B. (1993). Through the lens of a critical friend: Ed. Leadership. Alexandria, Va: Association for Supervision and Curriculum Development.
- Danielson, C. (2007). *Enhancing professional practice: A framework for teaching, 2nd ed.* Alexandria, VA: Association for Supervision and Curriculum Development.
- Day, C. (2000). Beyond transformational leadership. *Educational Leadership*, 57(7), 56-59.
- DuPree, M. (2004). Leadership is an art. New York, NY: Doubleday, a division of Random House Inc.
- DuFour, R. & Berkey, T. (1995). The principal as staff developer. *Journal of Staff Development*, 16(4), 2-6.
- Elmore, R. (2003). *School reform from the inside out: Policy, practice, and performance.* Boston: Harvard Education Press.
- Feger, S., Woleck, K., & Hickman, P. (2004). How to develop a coaching eye. *Journal of Staff Development*, 25(2), 14-18.
- Fullan, M. (2011, May). *Education in Motion*. Retrieved August 17, 2011, from www.michaelfullan.ca: www.michaelfullan.ca.
- Fullan, M. (2010). *All systems go: The change imperative for whole system reform.* Thousand Oaks, CA: Corwin.

- Fullan, M. (2010). *The moral imperative realized*, Corwin & Ontario Principals Council. Thousand Oaks: Corwin Press.
- Fullan, M. (2006). *Turnaround Leadership*, The Jossey-Bass educational series Vol. 5. University of Michigan, Jossey-Bass.
- Fullan, M. & Germain, C.St. (2006). *Learning Places, A Field Guide for Improving The Context of Schooling*, Corwin Press.
- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). *Collective teacher efficacy: Its meaning, measure, and impact on student achievement*.
- Green, R. L. (2003). *Evaluation of school improvement in the Detroit Public Schools-phase 2 final report*. East Lansing, MI: Urban Affairs Program, Michigan State University.
- Guskey, T. R. (2000). *Evaluating Professional Development*. Thousand Oaks, CA: Corwin Press.
- Hall, G. & Hord, S. (2001). *Implementing change: Patterns, principles, and potholes*. Boston, MA: Allyn & Bacon.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to student achievement*. New York: Routledge
- Hord, S. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory, 18-19.
- Hoy, W. K. (2002). Faculty trust: A key to student achievement. *Journal of School Public Relations*, 23, (2), 88-103

- Hoy, W. K., Sweetland, S. R., & Smith, P. A. (2002). Toward an organizational model of achievement in high schools: The significance of collective efficacy. *Educational Administration Quarterly*, 38, 77-93.
- Joyce, B. & Showers, B. (2002). The coaching of teaching. *Educational Leadership*.
- Kannapel, P.J., & Clements, S.K. (2005). Inside the black box of high performing high poverty schools. Lexington, KY: The Prichard Committee for Academic Excellence.
- Kentucky Council on Postsecondary Education. (2012). www.cpe.gov. Retrieved September 22, 2012 from www.cpe.ky.gov/info/attainment/index.htm.
- Kentucky Department of Education. (2012). 704KAR 3:035 Section 1 (1) & Section (4) (2) PD Standards: Retrieved April 23, 2012 from <http://education.ky.gov/Pages/default.aspx>.
- Lambert, L. (1996). *Building leadership capacity in schools*. Alexandria, VA: ASCD.
- Leithwood, K. & Louis, K.S. (2012). *Linking Leadership to Student Learning*. Jossey-Bass.
- Loucks-Horsley, S., Love, N., Stiles, KE., Mundry S., Hewson, PW.(2003). *Designing Professional Development for Teachers of Science and Mathematics*. Corwin Press.
- Marzano, R.J., Walters, T., & McNulty, B.A. (2005). *School Leadership that works: From research to results*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Neufeld, B. & Roper, D. (2003). *Coaching: A Strategy for Developing Instructional Capacity: Promises & Practicalities*. Aspen Institute.
- Phillips, G. (2011, September 9). President, National Center for Improving School Culture. (J. Hawkins, Interviewer)
- Pink, D. (2009). *Drive: The surprising truth about what motivates us*. New York: Penquin.
- Protheroe, N. (2008). *Teacher Efficacy, What it is and does it matter*.
www.NAESP.org May/June 2008. Retrieved July 15, 2012 from
www.naesp.org/resources/1/principal/2008/m-jp42.pdf
- Reeves, D. (2009). *Leading change in your school: How to conquer myths, build commitment, and get results*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Rivkin, S.F., Hanusheck, E.A & Kain, J.F. (2005). Teachers, schools and academic achievement. *Econometrica* , 73 (2), 417-458. Retrieved September 19, 2011, from Stanford Website:
<http://hanushek.stanford.edu/sites/default/files/publications/Rivkin%2BHanushek%2BKain%202005%20Ecta%2073%282%29.pdf>.
- Schmoker, M. (2006). *Results Now: How we can achieve unprecedented improvements in teaching and learning*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Sergiovanni, T. (1994). *Building community in schools*. San Francisco, CA: Jossey-Bass Publishers.

Sparks, D. (1984). Staff Development and school improvement: An interview with Earnest Boyer. *Journal of Staff Development*, 32-39.

TELL Kentucky Research Brief, (2011). Retrieved June 12, 2011, from:
www.2011.tellkentucky.org.

Tschannen-Moran, B., & Twchannen-Moran, M. (2010). Evocative coaching: Transforming schools one conversation at a time. San Francisco: Jossey-Bass.

Tschannen-Moran, M & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.

U.S. Census Bureau. (2010). *State median family income by family size*. Retrieved from <http://www.census.gov/hhes/www/income/statemedfaminc.html>

Wong K., & Nicotera A. (2003). Enhancing teacher quality: peer coaching as a professional developmental strategy. A preliminary synthesis of literature. *Publication Series No. 5. Vanderbilt University*. Retrieved on December 14, 2008.

Wright, S., Horn, S. & Sanders, W. (1997). Teacher and Classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 56-67

Appendices Reference List

Fullan, M. (2010). *All systems go: The change imperative for whole system reform*. Thousand Oaks, CA: Corwin.

Knoster, T. (1991) Presentation at TASH Conference, Washington, D.C.)

Danielson, C. (2007). *Enhancing professional practice: A framework for teaching*.

Alexandria, VA: Association for Supervision and Curriculum Development.

Tschannen-Moran, M. & Gareis, C. (2004). Principals' sense of efficacy: Assessing a promising construct. *Journal of Educational Administration, 42*, 573-585.

Tschannen-Moran, M & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.

Secondary Reference List

23 Artisan Teacher Themes

*Adapted from the Rutherford Learning Group's Developing the Artisan Teacher,
for use in PETLL©*

Clear Learning Goals

Clare, L., Lindon, D. E., Phil, J. D., Woods, R.T., Whitaker, R.M., Evans, S. J., & Rugg, R. D. (2010). Goal-oriented cognitive rehabilitation for people with disease: A single-blind randomized controlled trial of clinical efficacy. *American Journal of Geriatric Psychiatry, 18*(10), 928-939.

doi:10.1097/JGP.0b013e3181d5792a

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969–1980. *Psychological Bulletin, 90*(1), 125-152.

doi:10.1037/0033-2909.90.1.125

Page-Voth, V., & Graham, S. (1999). Effects of goal setting and strategy use on the writing performance and self-efficacy of students with writing and learning

- problems. *Journal of Educational Psychology*, 39(2), doi:10.1037/0022-0663.91.2.230
- Simon, B., & Taylor, J. (2009). What is the value of course specific learning goals? *Journal of College Science Teaching*, 39(2), 52-57.
- Bloom, B. S. (1956) *Taxonomy of educational objectives: The classification of educational goals; Handbook I: Cognitive domain*. New York: Longmans, Green.
- Kryza, K., Duncan, A., & Stephens, S. J. (2010). *Differentiation for real classrooms: Making it simple, making it work*. Thousand Oaks, CA: Corwin Press.
- Marzano, R. J. (2009) *Designing & teaching learning goals & objectives*. Bloomington, IN: Marzano Research Laboratory.
- Marzano, R. J. *The art and science of teaching a comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Moss, C. M., & Brookhart, S. M. (2009). *Advancing formative assessment in every classroom: A guide for instructional leaders*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L. (2008). The thought-filled curriculum. *Educational Leadership*, 65(5), 20-24.
- Giunta, J. P. (2010). Designing games that really teach. *T + D*, 64(6), 76-77.

- Jones, K. A., Vermette, P.J. & Jones, J. L. (2009). An integration of “backwards planning” unit design with the two-step lesson planning framework. *Education, 130*(2), 357-360.
- Kelly, L. P. (1980). The role of learning objectives under the academic big top. *Journal of Developmental & Remedial Education, 4*(1), 22-23.
- Krathwohl, D. (2002). A revision of bloom's taxonomy: An overview. *Theory into Practice, 41*(4), 212-18. doi:10.1207/s15430421tip4104_2
- Phelps, M. (2010). Real-time teaching and learning. *Kappa Delta Pi Record, 46*(3), 132-35. doi:10.1080/00228958.2010.10516711
- Pitts, G. S. (1987). Breathe O₂ into your mathematics program - Promote openness and ownership. *Teaching Children Mathematics, 3*(9), 496-98.

Congruency

- Der-Thanq, C., Hung, D., & Wang, Y. (2007). Educational design as a quest for congruence: The need for alternative learning design tools. *British Journal of Educational Technology, 38*(5), 876-884. doi:10.1111/j.1467-8535.2006.00675.x
- Rich, H. L., & Bush, A. J. (1978). The effect of congruent teacher-student characteristics on instructional outcomes. *American Education Research Journal, 15*(3), 451-457. doi:10.3102/00028312015003451
- Thomas, A .K., & McDaniel, M. A. (2007). The negative cascade of incongruent generative study-test processing in memory and metacomprehension. *Memory and Cognition, 35*(4), 668-678.

- Wetzel, D. K., & Buchi, K. (2000). Using a structural model to diagnose organizations and develop congruent interventions. *Organization Development Journal*, 18(4), 9-20.
- Baines, L., & Kunkel, A. J. (2010). *Going bohemian: How to teach writing like you mean it*. Newark, DE: International Reading Association.
- Hunter, M. C. (1994). *Enhancing Teaching*. New York: Macmillan College Publishing.
- Tucker, N. D., & Stronge, J. H. (2005). *Linking teacher evaluation and student learning*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Ball, A. L., & Washburn, S. G. (2001) Teaching students to think: Practical applications of Bloom's Taxonomy. *The Agricultural Education Magazine*, 74(3), 16-17.
- Drum, R. L., & Petty, W. G. (1999). Teaching the values of coins. *Teaching Children Mathematics*, 5(5), 264-68.
- Kitchen, R. S., & Wilson, L. D. (2004). Lessons learned from students about assessment and instruction. *Teaching Children Mathematics*, 10(8), 394-399.
- Trader, M. C. (1980). A checklist for teaching to an objective. *Educational Technology*, 20, 36-40.

Task Analysis

- Browder, D. M., Trela, K., & Jimenez, B. (2007). Training teachers to follow a task analysis to engage middle school students with moderate and severe

- developmental disabilities in grade-appropriate literature. *Focus on Autism and Other Developmental Disabilities*, 22(4), 206-214.
doi:10.1177/10883576070220040301
- Fastenmeier, W., & Gstalter, H. (2007). Driving task analysis as a tool in traffic safety research and practice. *Safety Science*, 45(9), 952-979.
- Grote, I., Rosales, J., & Baer, D. M. (1996). A task analysis of the shift from teacher instructions to self-instructions in performing an in-common task. *Journal of Experimental Child Psychology*, 63(2), 339-357. doi:10.1006/jecp.1996.0053
- Sherman, T. M., & Wildman, T. M. (1980, April). Linking task analysis with student learning. Paper presented at the *Annual Convention of the Association for Educational Communications and Technology*, Denver, CO. Retrieved from ERIC database. (ED195229)
- Crandall, B., Klein, G. A. & Hoffman, R. R. (2006). *Working minds: A practitioner's guide to cognitive task analysis*. Cambridge, MA: Massachusetts Institute of Technology
- Downey, C. J. (2009). *50 Ways to close the achievement gap*. Thousand Oaks, CA: Corwin Press.
- Ellis, R. (2010). *Task-based language learning and teaching*. New York: Oxford University Press.
- Hunter, M. C. (1994). *Enhancing teaching*. New York: Macmillan College Publishing.

- Jonassen, D. H., Tessmer, M. & Hannum, W. H. (1999). *Task analysis methods for instructional design*. Mahwah, NJ: L. Erlbaum Associates.
- Schraagen, J. M., Chipman, S. F. & Shalin, V. L. (2000). *Cognitive task analysis*. Mahwah, NJ: L. Erlbaum Associates.
- Carter, M. & Kemp, C. (1996). Strategies for task analysis in special education. *Educational Psychology, 16*(2), 155-70. doi:10.1080/0144341960160205
- Newhall, P. W. (2010, February 8). Teaching time management to students with learning disabilities. *LD OnLine*, Retrieved from http://www.ldonline.org/article/Teaching_Time_Management_to_Students_with_Learning_Disabilities
- Militello, L. G. & Hutton, R. J. B. (1998). Applied cognitive task analysis (ACTA): A practitioner's toolkit for understanding cognitive task demands. *Ergonomics, 41*(11), 1618-1641.
- Olsen, J. K. (2009). Being deliberate about concept development: Effectively moving students from experience to understanding. *Science and Children, 46*(6), 51-55.

Diagnosis

- Chu, H., Hwang, G., & Huang, Y. (2010). An enhanced learning diagnosis model based on concept-effect relationships with multiple knowledge levels. *Innovations in Education and Teaching International, 47*(1), 53-67. doi:10.1080/14703290903525846

- Hailikari, T., Katajavuori, N., & Lindblom-Ylänne, S. (2008). The relevance of prior knowledge in learning and instructional design. *American Journal of Pharmaceutical Education*, 72(5), 113-116. doi:10.5688/aj7205113
- Oberg, C. (2010). Guiding classroom instruction through performance assessment. *Online Journal of Case Studies in Accreditation and Assessment*, 1, 1-11.
Retrieved from: <http://www.aabri.com/manuscripts/09257.pdf>
- Wu, Y. (2010). Applying learning diagnosis diagram in computer aided instructions: Research, practice and evaluation. *International Journal of Distance Education Technologies*, 8(2), 28-42. doi:10.4018/jdet.2010040103
- Zydney, J. M., Deihl, L., Grincewicz, A., Jones, P., & Hasselbring, T. S. (2010). Empowering learners to choose the difficulty level of problems based on their learning needs. *Journal of Systemics, Cybernetics and Informatics*, 8(4), 8-13.
- Downey, C. J. (2009). *50 Ways to close the achievement gap*. Thousand Oaks, CA: Corwin Press.
- Ellis, A. K. (2001). *Teaching, learning, and assessment together: The reflective classroom*. Larchmont, NY: Eye on Education.
- Kozulin, A., Gindis, B., Ageyev, V. S., & Miller, S. M. (Eds.). (2003) *Vygotsky's educational theory in cultural context*. Cambridge, UK: Cambridge University Press.
- Tuttle, H. G (2009). *Formative assessment responding to your students*. Larchmont, NY: Eye on Education.

Ash, D., & Levitt, K. (2003). Working within the zone of proximal development.

Journal of Science Teacher Education, 4(1), 1-313.

Buchanan, E. A. (1999). Assessment measures: Pre-tests for successful distance

teaching and learning? *Online Journal of Distance Learning Administration*,

2(4). Retrieved from

<http://www.westga.edu/~distance/ojdla/winter24/buchanan24.html><<http://www.westga.edu/~distance/buchanan24.html>

Bunce, G. (2003). Educational implications of Vygotsky's Zone of Proximal

Development on collaborative work in the classroom. Retrieved from

<http://www.guybunce.co.uk/writings/academic/vygotsky-and-the-classroom.pdf>

Theobald, J. T., & Alexander, J. E. (1977). An auditory cloze procedure for assessing the difficulty level of teacher instructional talk in the intermediate grades.

Elementary School Journal, 77(5), 388-94.

Tomlinson, C. A. (2007). Learning to love assessment. *Educational Leadership*,

65(4), 8-13.

Overt Responses

Barch, D. M., Sabbb, F. W., Carter, C. S., Braver, T. S., Noll, D. C., & Cohen, J. D.

(1999). Overt verbal responding during fMRI scanning: Empirical

investigations of problems and potential solutions. *NeuroImage*, 10(6), 642-

657. doi:10.1006/nimg.1999.0500

- Knapp, F. A., & Desrochers, M. N. (2009). An experimental evaluation of the instructional effectiveness of a student response system: A comparison with constructed overt responding. *International Journal of Teaching and Learning in Higher Education, 21*(1), 36-46.
- Miller, M., & Malott, R. W. (1997). The importance of overt responding in programmed instruction even with added incentives for learning. *Journal of Behavioral Education, 7*(4), 497-503. doi:10.1023/A:1022811503326
- Salemi, M. K. (2009). Clickenomics: Using a classroom response system to increase student engagement in a large-enrollment, principles of economics course. *Journal of Economic Education, 40*(4), 385-404.
- Barkley, E. F. (2010). *Student engagement techniques a handbook for college faculty*. San Francisco, CA: Jossey-Bass.
- Harris, B. (2011). *Battling boredom: 99 strategies to spark student engagement*. Larchmont, NY: Eye on Education.
- Hunter, R., & Hunter, M. C. (2004) *Madeline Hunter's mastery teaching: Increasing instructional effectiveness in elementary and secondary schools*. Thousand Oaks, CA: Corwin Press.
- Stolovitch, H. D., & Keeps, E. J. (2005). *Telling ain't training*. Alexandria, VA: American Society for Training and Development Press.
- Adams, S. (2011). Quick before it dries: Setting the pattern for active participation.
Retrieved from

<http://www1.umn.edu/ohr/teachlearn/tutorials/active/resources/quick/index.html>

Heward, W. L. (2004). Want to improve the effectiveness of your lectures? Try guided notes. *Talking About Teaching*. Retrieved from <http://ucat.osu.edu/dosomethinggreat/heward.html>

Koltz, M. S., & Snyder, W. R. (1982). Student problem solving during general chemistry lectures. *Journal of Chemical Education*, 59(9), 717-719.
doi:10.1021/ed059p717

Sime, M., & Boyce, G. (1969). Overt responses, knowledge of results and learning. *Innovations in Education & Training International*, 6(1), 12-19.
doi:10.1080/1355800690060103

Wolff, P., & Levin, J. R. (1972). The role of overt activity in children's imagery production. *Child Development*, 43(2), 537-547. doi:10.2307/1127554

Mid-Course Correction

Young, V. M. & Kim, D. H. (2010). Using assessments for instructional improvement: A literature review. *Education Policy Analysis Archives*, 18(19), 1-39.

Ruiz-Primo, M. A. (2011). Informal formative assessment: The role of instructional dialogues in assessing students' learning. *Studies in Educational Evaluation*, 37(1), 15-24. doi:10.1016/j.stueduc.2011.04.003

- Yabuki, Y., & MacGregor, J. F. (1997). Product quality control in semibatch reactors using midcourse correction policies. *Industrial Engineering Chemical Research*, 36(4), 1268-1275. doi:10.1021/ie960536m
- Davis, B. G. (2009). *Tools for teaching* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Fisher, D., & Frey, N. (2007). *Checking for understanding: Formative assessment techniques for your classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Popham, W. J. (2011). *Transformative assessment in action: An inside look at applying the process*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Reeves, D. B. (2004). *Accountability in action: A blueprint for learning organizations*. (2nd ed.). Englewood, CO: Advanced Learning Press.
- Stiggins, R. J., Arter, J. A., Chappuis, J., & Chappius, S. (2009). *Classroom assessment for student learning: Doing it right - using it well*. Portland, OR: Assessment Training Institute.
- Adams, J. (2011, February 27). Mid-course feedback and corrections. Retrieved from <http://www.montana.edu/teachlearn/Papers/TLC-mid-course-correction.pdf>
- Britton, T. (2011). Using formative and alternative assessments to support instruction and measure student learning. *Science Scope*, 34(5), 6-21.
- Dirksen, D. J. (2011). Hitting the reset button: Using formative assessment to guide instruction. *Phi Delta Kappan*, 92(7), 26-31.

Rauschenbach, J. (1994). Checking for student understanding - Four techniques. *The*

Journal of Physical Education, Recreation & Dance, 65(4), 60-63.

Wiliam, D., Lee, C., Harrison, C. & Black, P. (2004). Teachers developing

assessment for learning: Impact on student achievement. *Assessment in*

Education: Principles, Policy & Practice, 11(1), 49-65.

doi:10.1080/0969594042000208994

Conscious Attention

- Carrasco, M., & McElree, B. (2001). Covert attention accelerates the rate of visual information processing. *Proceedings of the National Academy of Sciences of the United States of America*, 98(9), 5363-5367. doi:10.1073/pnas.081074098
- Dye, M. W. G., Green, C. S., & Bavelier, D. (2009). The development of attention skills in action video game players. *Neuropsychologia*, 47(8-9), 1780-1789. doi:10.1016/j.neuropsychologia.2009.02.002
- Maljkovic, V., & Martini, P. (2005). Short-term memory for scenes with affective content. *Journal of Vision*, 5(3), 215-229. doi:10.1167/5.3.6
- Maringelli, F., & Umiltà, C. (1998). The control of the attentional focus. *European Journal of Cognitive Psychology*, 10(3), 225-246.
- Cornish, K., Wilding, J., & Grant, C. (2006). Deconstructing working memory in developmental disorders of attention. In S.J. Pickering (Ed.), *Working memory and education* (pp. 157-188). London: Academic Press.
- Cowan, N. (1997). *Attention and memory an integrated framework*. New York: Oxford University Press.
- Gagne, E. D., Yekovich, C. W., & Yekovich, F. R. (1997). *The cognitive psychology of school learning* (2nd ed.). Boston, MA: Allyn & Bacon, Inc.
- Loisette, A. (2005). *Assimilative memory or, how to attend and never forget*. New York: Cosimo, Inc.

- Styles, E. A. (2006). *The psychology of attention* (2nd ed.). New York: Psychology Press.
- Rief, S. F. (2008). *The ADD/ADHD checklist: An easy reference for parents and teachers* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Willis, J. (2006). *Research-based strategies to ignite student learning: Insights from a neurologist and classroom teacher*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Becker, M. W. (2009). Panic search, fear produces efficient visual search for nonthreatening objects. *Psychological Science*, 20(4), 435-437.
doi:10.1111/j.1467-9280.2009.02303.x
- Graham, S., & Golan, S. (1991). Motivational influences on cognition: Task involvement, ego involvement, and depth of information processing. *Journal of Educational Psychology*, 83(2), 187-194. doi:10.1037/0022-0663.83.2.187
- Hayden, T. (2001, March 5). Anatomy of a punch line. *U.S. News & World Report*, 53. Retrieved from
http://www.usnews.com/usnews/culture/articles/010305/archive_002573.htm
- Miller, G. A. (1994). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 343-355. doi:10.1037//0033-295X.101.2.343
- Posner, M. I., & Petersen, S. E. (2012). The attention system of the human brain: 20 years after. *Annual Review of Neuroscience*, 35, 73-89. doi:10.1146/annurev-neuro-062111-150525

Sylwester, R., & Cho, J. (1992, December/1993, January). What brain research says about paying attention. *Students at Risk*, 50(4), 71-75.

Willis, J. (2010). Want children to “pay attention”? Make their brains curious! *Psychology Today*. Retrieved from <http://www.psychologytoday.com/blog/radical-teaching/201005/want-children-pay-attention-make-their-brains-curious>

Wyatt, K. (2009, March 7). No chairs: Students 'get the wiggles out' on exercise balls. *USAToday.com*. Retrieved from http://www.usatoday.com/news/education/2009-03-07-class-chairs_N.htm

Chunking

Buschke, H., (1976). Learning is organized by chunking. *Journal of Verbal Learning and Verbal Behavior*, 15(3), 313-324. doi:10.1016/0022-5371(76)90028-1

Gobet, F., & Simon, H. A. (1988). Expert chess memory: Revisiting the chunking hypothesis. *Memory*, 6(3), 225-255.

Godøy, R. I. (2009). Chunking sound for musical analysis. In S. Ystad, R. Kronland-Martinet, & K. Jensen (Eds.), *Computer Music Modeling and Retrieval. Genesis of Meaning in Sound and Music* (pp. 67-80). New York: Springer.

Mathy, F., & Feldman, J. (2012). What's magic about magic numbers? Chunking and data compression in short-term memory. *Cognition*, 122(3), 346-362. doi:10.1016/j.cognition.2011.11.003

Cowan, N. (2005). *Working memory capacity*. New York: Psychology Press.

- Dehn, M. J. (2008). *Working memory and academic learning: Assessment and intervention*. New York: John Wiley & Sons.
- Jimenez, R. (2009). *3-Minute e-learning: Rapid learning and applications, amazingly lower cost and faster speed of delivery*. Los Angeles, CA: Monogotari.
- Smith, D. J. (1997). *Chunking and cognitive efficiency: Some lessons from the history of military signalling*. Cardiff, UK: Institute of Higher Education School of Environmental & Human Sciences.
- Smith, R. M. (2008). *Conquering the content: A step-by-step guide to online course design*. San Francisco, CA: Jossey-Bass.
- Terrance, H. S. (2002). The comparative psychology of chunking. In S. B. Fountain, M. D. Bunsey, J. H. Danks, & M. K. McBeath (Eds.), *Animal cognition and sequential behavior: Behavioral, biological, and computational perspective* (pp. 23-55). New York: Springer.
- Buschke, H. (1976). Learning is organized by chunking, *Journal of Verbal Learning and Verbal Behavior*, 15(3), 313-324. doi:10.1016/0022-5371(76)90028-1
- D'Souza, S. (2012). Why chunking down increases your expert status. [Web log post]. Retrieved from <http://www.psychotactics.com/blog/infoproducts-chunking-down-expert-status/>
- Gobet, F., & Simon, H. A. (1998). Pattern recognition makes search possible: Comments on Holding (1992). *Psychological Research*, 61(3), 204-08.

Johnson, N. F. (1970). The role of chunking and organization in the process of recall.

The Psychology of Learning and Motivation, 4, 171-247. doi:10.1016/S0079-7421(08)604326

Scheuer, M. A. (2011). Evaluating book apps for children: pacing and chunking (part

4 in a mini-series). [Web log post]. Retrieved from

<http://greatkidbooks.blogspot.com/2011/10/evaluating-book-apps-for-children.html>

Connection

Connor-Greene, P. A. (2000). Making connections: Evaluating the effectiveness of

journal writing in enhancing student learning. *Teaching of Psychology*, 27(1), 44-46. doi:10.1207/S15328023TOP2701_10

Howe, M., Wimmer, M. C., Gagnon, N., & Plumpton, S. (2009). An associative-

activation theory of children's and adults' memory illusions. *Journal of Memory and Language*, 60(2), 229-251. doi:10.1016/j.jml.2008.10.002

Kole, J. A., & Healy, A. F. (2007). Using prior knowledge to minimize interference

when learning large amounts of information. *Memory Cognition*, 35(1), 124-137. doi:10.3758/BF03195949

Lampinen, J. M., Meier, C. R., Arnal, J. D. & Leding, J. K (2005). Compelling

untruths: Content borrowing and vivid false memories. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 31(5), 954-63.

doi:10.1037/0278-7393.31.5.954

- Silverman, L. H. (1997). Personalizing the past: A review of literature with implications for historical interpretation. *Journal of Interpretation Research*, 2(1), 1-12.
- Wisniewski, E. J. (1995). Prior knowledge and functionally relevant features in concept learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 21(2), 449-468. doi:10.1037//0278-7393.21.2.449
- Caine, R. N., & Caine, G. (1991) *Making connections: Teaching and the human brain*. Alexandria, MD: Association for Supervision and Curriculum Development.
- Morrell, E. (2004). *Linking literacy and popular culture: Finding connections for lifelong learning*. Norwood, MA: Christopher-Gordon Publishers, Inc.
- Parks, S., & Black, H. (1992). *Organizing thinking: Book 1: Graphic organizers*. Pacific Grove, CA: Critical Thinking & Software.
- Tileston, D. E. W. (2010) *Ten best teaching practices: How brain research, learning styles, and standards define teaching competencies* (3rd ed.). Thousand Oaks, CA: Corwin Press
- Bain, R. (2010) "I gotta learn all that stuff?" "Well, I have to teach it all!": Managing the laments of world history teachers. *Social Studies Review*, 49(1), 30-38.
- Chi, M. T. H., & Ceci, S. J. (1987). Content knowledge: Its role, representation, and restructuring in memory development. *Advances in Child Development and Behavior*, 20, 91-141. doi:10.1016/S0065-2407(08)60401-2

Correia, M. G. & Bleicher, R. E. (2008). Making connections to teach reflection.

Michigan Journal of Community Service Learning, 14(2), 41-49.

Dilek, D. (2009). The reconstruction of the past through images: An iconographic analysis on the historical imagination usage skills of primary school pupils.

Educational Sciences: Theory and Practice, 9(2), 665-689.

Kusnick, J. (2002). Growing pebbles and conceptual prisms - Understanding the source of student misconceptions about rock formation. *Journal of Geoscience*

Education, 50(1), 31-39.

McLaughling, B. (1992). Myths and misconceptions about second language learning:

What every teacher needs to unlearn. Retrieved from

<http://www.usc.edu/dept/education/CMMR/FullText/McLaughlinMyths.pdf>

Practice

Holland, G. A. (1953). The effects of a change from distributed to massed responses.

Journal of Comparative and Physiological Psychology, 46(4), 267-270.

doi:10.1037/h0062421

Metalis, S. A. (1985). Effects of massed versus distributed practice on acquisition of

video game skill. *Perceptual and Motor Skills, 61(2)*, 457-458.

doi:10.2466/pms.1985.61.2.457

Nash, C. S., Sproule, J., & Horton, P. (2011). Excellence in coaching: The art and

skill of elite practitioners. *Research Quarterly for Exercise and Sport, 82(2)*,

229-238. doi:10.5641/027013611X13119541883744

- Rohrer, D., & Taylor, K. (2006). The effects of overlearning and distributed practice on the retention of mathematics knowledge. *Applied Cognitive Psychology, 20*(9), 1209–1224. doi:10.1002/acp.1266
- Seabrook, R., Brown, G. D. A., & Solity, J. E. (2005). Distributed and massed practice: From laboratory to classroom. *Applied Cognitive Psychology, 19*(1), 107-122. doi:10.1002/acp.1066
- Topping, K. J., Samuels, J., & Paul, T. (2007). Does practice make perfect? Independent reading quantity, quality and student achievement. *Learning and Instruction, 17*(3), 253-264. doi:10.1016/j.learninstruc.2007.02.002
- Browne, S; Clarke, D., Henson, P., Hristofski, F., & Jeffreys, V. (2010). *PDHPE application and inquiry: HSC course*. Australia: Oxford University Press.
- Hopper, C. H. (2010). *Practicing college learning strategies* (5th ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Schmidt, R. A. (1991). *Motor learning & performance: From principles to practice*. Champaign, IL: Human Kinetics Publishers.
- Sousa, D. A. (2001). *How the brain learns: A classroom teacher's guide*. Thousand Oaks, CA: Corwin Press.
- Wong, L. (2008). *Essential study skills* (6th ed.). Boston: Houghton Mifflin Harcourt.

- Dempster, F. N. (1988) The spacing effect: A case study in the failure to apply the results of psychological research. *American Psychologist*, 43(8), 627-34.
doi:10.1037/0003-066X.43.8.627
- Ericsson, K. A. (2004). Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. *Academic Medicine*, 79(Supplement), 70-81. doi:10.1097/00001888-200410001-00022
- Hammel, B. (1989). *A compendium of practice methods and their application to the bassoon*. (Doctoral dissertation, Florida State University). Retrieved from <http://www.people.vcu.edu/~bhammel/main/treatise/Bruce%20Hammel%20treatise.pdf>
- Murry, S. R., & Udderman, B. E. (2003). Massed versus distributed practice: Which is better? *CAHPERD: California Association for Health, Physical Education, Recreation and Dance Journal*, 28(1), 19-22.
- Roediger III, H. L. & Karpicke, J. D. (2002). The power of testing memory: Basic research and implications for educational practice. *Perspectives on Psychological Science*, 1(3), 181-210.
- Willingham, D. T. (2002). How we learn: Ask the cognitive scientist. *American Educator*, 26(2), 37-39, 47.

Personal Relevance

- Dabbagh, N. (1996). *Creating personal relevance through adapting an educational task, situationally, to a learner's individual interests*. Retrieved from ERIC database. (ED397787)
- Liberman, A., & Chaiken, S. (1996). The direct effect of personal relevance on attitudes. *Personality and Social Psychology Bulletin*, 22(3), 269-279.
doi:10.1177/0146167296223005
- Lyons, I. M., Mattarella-Micke, A., Cieslak, M., Nusbaum, H. C., Small, S. L., & Beilock, S. L. (2010) The role of personal experience in the neural processing of action-related language. *Brain and Language*, 112(3) 214-22.
doi:10.1016/j.bandl.2009.05.006
- Radio Ad Effectiveness Lab, Inc. (2003). Personal relevance, personal connections; How radio ads affect consumers. Retrieved from
<http://www.radioadlab.org/studyDocs/relevanceFull.pdf>
- Turk, D. J., van Bussel, K., Brebner, J., Toma, A., Krigolson, O., & Handy, T. (2011). When "It" becomes "Mine": Attentional biases triggered by object ownership. *Journal of Cognitive Neuroscience*, 23(12), 3725-3733.
doi:10.1162/jocn_a_00101
- Daggett, W. R., & Nussbaum, P. D. (2008). *What brain research teaches about rigor, relevance, and relationships: And what it teaches about keeping your own brain healthy*. Rexford, NY: International Center for Leadership in Education.
- Manners, T. (2008). *Relevance: Making stuff that matters*. New York: Penguin Group.

- Committee on Increasing High School Students' Engagement and Motivation to Learn, National Research Council. (2003) *Engaging schools: Fostering high school students' motivation to learn*. Washington, DC: The National Academies Press.
- Maasz, J. & Schloeglmann, W. (Eds.). (2009). *Beliefs and attitudes in mathematics education: New research results*. Netherlands: Sense Publishers.
- Willis, J. (2007). *Brain-friendly strategies for the inclusion classroom: Insights from a neurologist and classroom teacher*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Bernard, S. (2010, December 1). Science shows making lessons relevant really matters. Retrieved from <http://www.edutopia.org/neuroscience-brain-based-learning-relevance-improves-engagement>
- Mandler, D., Mamlok-Naaman, R., Blonder, R., Yayon, M., & Hofstein, A. (2012). High-school chemistry teaching through environmentally oriented curricula. *Chemistry Education Research and Practice*, 13(2), 80-92.
doi:10.1039/C1RP90071D
- Rankins-Robertson, S., Cahill, L., Roen, D., & Glau, G. R. (2010). Expanding definitions of academic writing: Family history writing in the basic writing classroom and beyond. *Journal of Basic Writing (CUNY)*, 29(1), 56-77.
- Van Lancker, D. (1991). Personal relevance and the human right hemisphere. *Brain and Cognition*, 17(1), 64-92. doi:10.1016/0278-2626(91)90067-I

- VanSickle, R. L. (1990). The personal relevance of the social studies. *Social Education*, 54(1), 23-27.
- Yager, R. E. (1989). A rationale for using personal relevance as a science curriculum focus in schools. *School Science and Mathematics*, 89(2), 144-156.
doi:10.1111/j.1949-8594.1989.tb11902.x

Locale Memory

- Barsalou, L. W. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences*, 22(4), 577-660. doi:10.1017/S0140525X99002149
- Dere, E., Kart-Teke, E., Huston, J. P., & De Souza Silva, M. A. (2006). The case for episodic memory in animals. *Neuroscience & Biobehavioral Reviews*, 30(8), 1206-1224. doi:10.1016/j.neubiorev.2006.09.005
- Eichenbaum, H. (2010). Memory systems. *Wiley Interdisciplinary Reviews: Cognitive Science*, 1(4), 478-490. doi:10.1002/wcs.49
- Eichenbaum, H., Schoenbaum, G., Young, B., & Bunsey, M. (1996). Functional organization of the hippocampal memory system. *PNAS: Proceedings of the National Academy of Sciences*, 93(24), 13500-13507.
doi:10.1073/pnas.93.24.13500
- Caine, R. N., & Caine, G. (2011). *Natural learning for a connected world: Education, technology and the human brain*. New York: Teachers College Press.
- Foer, J. (2011). *Moonwalking with Einstein: The art and science of remembering everything*. New York: Penguin Group.

- Gilbert, A. G. (1976). *Teaching the three Rs through movement experiences: A handbook for teachers*. New York: Macmillan Publishing Company.
- Sousa, D. A. (2006). *How the brain learns*. Corwin Press.
- Burg, J. J., & Luttringhaus, K. (2006). Entertaining with science, educating with dance. *Computers in Entertainment*, 4(2), 7. doi:10.1145/1129006.1129018
- Fahey, J. A., & De Los Santos, G. (2002). Memory improvement and research related to the science of memory. *Education-Indianapolis then Chula Vista*, 123(2), 380-385.
- Knapp, C. E. (1992). Thinking in outdoor inquiry. *ERIC Clearinghouse on Rural Education and Small Schools*. Retrieved from ERIC database. (ED348198)
- Mathison, C., Wachowiak, S., & Feldman, L. (2007). School in the park: Bridging formal and informal learning environments. *Childhood Education*, 83(4), 206-210.
- Randall, C. C. (1996). *Haptic history: Teaching A.P. U.S. history through kinesthetic learning and material culture*. Retrieved from ERIC database. (ED423152)
- Smith, G. A. (2002). Place-based education: Learning to be where we are. *Phi Delta Kappan*, 83(8), 584-594.

Mental Models

- Algozzine, B., & Douville, P. (2004). Use mental imagery across the curriculum. *Preventing School Failure: Alternative Education for Children and Youth*. 49(1), 36-39. doi:10.3200/PSFL.49.1.36

- Bartel, C. A., & Garud, R. (2009). The role of narratives in sustaining organizational innovation. *Organization Science*, *20*(1), 107-117.
doi:10.1287/orsc.1080.0372
- Dilber, R., & Bahattin, D. (2008). Effectiveness of analogy on students' success and elimination of misconception. *Latin-American Journal of Physics Education*, *2*(3), 174-183.
- Gobert, J., & Clement, J. (1999). Effects of student-generated diagrams versus student-generated summaries on conceptual understanding of causal and dynamic knowledge in plate tectonics. *Journal of Research in Science Teaching*, *36*(1), 39-53. doi:10.1002/(SICI)1098-2736(199901)36:1<39::AID-TEA4>3.3.CO;2-9
- Mayer, R. E., & Anderson, R. B. (1992). The instructive animation: Helping students build connections between words and pictures in multimedia learning. *Journal of Educational Psychology*, *84*(4), 444-452. doi:10.1037//0022-0663.84.4.444
- Suh, J., & Moyer, P.S. (2007). Developing students' representational fluency using virtual and physical algebra balances. *Journal of Computers in Mathematics and Science Teaching*, *26*(2), 155-173.
- Baines, L. A. (2008). *Teacher's guide to multisensory learning: Improving literacy by engaging the senses*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Johnson-Laird, P. (1983). *Mental models*. Cambridge, MA: Harvard University Press.

- Marzano, R.J., Pickering, D., & Pollock, J.E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Payne, R.K. *Understanding learning: The how, the why, the what*. Highlands, TX: Aha! Process.
- Pink, D. H.(2006). *A whole new mind: Why right-brainers will rule the future*. New York: Penguin Group.
- Wolfe, P. (2001). *Brain matters: Translating research into classroom practice*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L. (2008). The thought-filled curriculum. *Educational Leadership*, 65(5), 20-24.
- Eldon, D. (2012, July 25). Lyrical learning: Why it works. *Lyrical Learning*. Retrieved from <http://www.lyricallearning.com/why.html>
- Fahey, J. A., & De Los Santos, G. (2002). Memory improvement and research related to the science of memory. *Education (Chula Vista)*, 123(2), 380-385.
- Glynn, S. (2007). The teaching-with-analogies model. *Science and Children*, 44(8), 52-55.
- Jones, B. F., Pierce, J., & Hunter, B. (1988). Teaching students to construct graphic representations. *Educational Leadership*, 46(4), 20-25.
- Snowden, D. (1999). Story telling: An old skill in a new context. *Business Information Review*, 16(1), 30-37 doi:10.1177/0266382994237045.

First Time Learning

- Anderson, N.H., (1965). Primacy effects in personality impression formation using a generalized order effect paradigm. *Journal of Personality and Social Psychology*, 2(1), 1-9. doi:10.1037/h0021966
- Castro, C.A. & Larsen, T. (1992). Primacy and recency effects in nonhuman primates. *Journal of Experimental Psychology: Animal Behavior Processes*, 18(4), 335-340. doi:10.1037//0097-7403.18.4.335
- Digirolamo, G. J., & Hintzman, D. L. (1997). First impressions are lasting impressions: A primacy effect in memory for repetitions. *Psychonomic Bulletin and Review*, 4(1), 121-124. doi:10.3758/BF03210784
- Garskof, B. E., Bryan, T.M. (1966). Unlearning as a function of degree of original learning and retention test. *Psychonomic Science*, 6(8), 391-392.
- Simmons, R. (1988). Patterns of misunderstanding: An integrative model for science, math, and programming. *Review of Educational Research*, 58(4), 303-326.
- Horn, G. (1985). *Memory, imprinting, and the brain: An inquiry into mechanisms*. Oxford: Clarendon Press.
- Lorenz, K. (1971). *Studies in animal and human behaviour, Volume 1*. Cambridge, MA: Harvard University Press.
- McClelland, J. L., & Siegler, R.S. (2011). *Mechanisms of cognitive development: Behavioral and neural perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.

- Miller, R. M. (2003). *Imprint training of the newborn foal: A swift, effective method for permanently shaping a horse's lifetime behavior*. Colorado Springs, CO: Western Horseman.
- Montangero, J., & Maurice-Naville, D. (1997). *Piaget, or the advance of knowledge*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Nierenberg, G. I. (1996). *Do it right the first time: A short guide to learning from your most memorable errors, mistakes, and blunders*. New York: John Wiley and Sons, Inc.
- Sluckin, W. (2007). *Imprinting and early learning* (2nd ed.). Piscataway, NJ: Transaction Publishers.
- Cardoso, S.H., & Sabbatini, R. M. E. (2001, November 4). Learning who is your mother -The behavior of imprinting. *Brain and Mind Electronic Magazine on Neuroscience, 14*. Retrieved from <http://www.cerebromente.org.br/n14/experimento/lorenz/index-lorenz.html>
- Eick, C. J., Ware, F. N. & Williams, P. G. (2003). Coteaching in a science methods course: A situated learning model of becoming a teacher. *Journal of Teacher Education, 54*(1), 74-85. doi:10.1177/0022487102238659
- Fogleman, S. L. (2012, July 31). Effective training. *AgManager.info*. Retrieved from http://www.agmanager.info/hr/management/Effective_Training.pdf
- Grotzer, T. A., & Bell, B. (1999). Negotiating the funnel: Guiding students toward understanding elusive generative concepts. *The Project Zero Classroom:*

Views on Understanding. Cambridge, MA: Fellows and Trustees of Harvard College.

McWilliam, E. L. (2005). Unlearning pedagogy. *Journal of Learning Design*, 1(1), 1-11.

Neural Downshifting

Dickey, M. D. (2005). Engaging by design: How engagement strategies in popular computer and video games can inform instructional design. *Educational Technology Research and Development*, 53(2), 67-83.

doi:10.1007/BF02504866

Gallagher, M., & Holland, P. C. (1994). The amygdala complex: Multiple roles in associative learning and attention. *Proceedings of the National Academy of Sciences*, 91(25), 11771-11776. doi:10.1073/pnas.91.25.11771

Lewis, M., Hitchcock, D. F., & Sullivan, M. W. (2004). Physiological and emotional reactivity to learning and frustration. *Infancy*, 6(1), 121-143.

doi:10.1207/s15327078in0601_6

McGaugh, J. L., Cahill, L., & Roozendaal, B. (1996). Involvement of the amygdala in memory storage: Interaction with other brain systems. *Proceedings of the National Academy of Sciences*, 93(24), 13508-13514.

doi:10.1073/pnas.93.24.13508

Pichon, S., de Gelder, B., & Grèzes, J. (2012). Threat prompts defensive brain responses independently of attentional control. *Cerebral Cortex*, 22(2), 274-285. doi:10.1093/cercor/bhr060

- Shackman, A. J., Maxwell, J. S., McMenamain, B. W., Greischar, L. L., & Davidson, R. J. (2011). Stress potentiates early and attenuates late stages of visual processing. *The Journal of Neuroscience*, *31*(3), 1156-1161.
doi:10.1523/JNEUROSCI.3384-10.2011
- Esquith, R. (2007). *Teach like your hair's on fire: The methods and madness inside room 56*. New York: Viking Press.
- Page, R. M., & Page, T. S. (2010). *Promoting health and emotional well-being in your classroom*. Sudbury, MA: Jones and Bartlett Learning.
- Sapolsky, R. M. (2004). *Why zebras don't get ulcers: The acclaimed guide to stress, stress-related diseases, and coping-Now revised and updated*. New York: Holt Paperbacks.
- van den Herik, H. J., Iida, H., & Heinz, E. A. (Eds.). (2003). *Advances in computer games: many games, many challenges* (Vol. 135). New York: Springer.
- Cahill, L. (2003). Similar neural mechanisms for emotion-induced memory impairment and enhancement. *Proceedings of the National Academy of Sciences*, *100*(23), 13123-13124. doi:10.1073/pnas.2335833100
- Medina, J. (2012, August 2). Brain rules for meetings. *Brain Rules*. [Web log post]. Retrieved from <http://brainrules.blogspot.com>.
- Reynolds, T M. (2011). Foster children: A hidden group. *International Journal of Business and Social Science*, *2*(1), 46-50.
- Willis, J. (2012, August 3). Neuroscience insights from video game & drug addiction. *Radical Teaching*. [Web log post]. Retrieved from

<http://www.psychologytoday.com/blog/radical-teaching/201110/neuroscience-insights-video-game-drug-addiction>

Enriched Environments

Levykh, M. G. (2008). The affective establishment and maintenance of Vygotsky's Zone of Proximal Development. *Educational Theory*, 58(1), 83-101.

doi:10.1111/j.1741-5446.2007.00277.x

Mantzicopoulos, P. (2005). Conflictual relationships between kindergarten children and their teachers: associations with child and classroom context variables.

Journal of School Psychology, 43(5), 425-42. doi:[10.1016/j.jsp.2005.09.004](https://doi.org/10.1016/j.jsp.2005.09.004)

Scoffham, S., & Barnes, J. (December 12, 2011). Happiness matters: Towards a pedagogy of happiness and well-being. *Curriculum Journal*, 22(4), 535- 548.

doi:10.1080/09585176.2011.627214

van Pragg, H., Kemermann, G., & Gage, F. H., (December 2000). Neural consequences of environmental enrichment. *Nature Reviews Neuroscience*, 1, 191-198. doi:10.1038/35044558

Clawson, J. G. & Conner, M. (Eds.). (2004). *Creating a learning culture: Strategy, technology, and practice*. New York: Cambridge University Press.

Diamond, M. (1999). *Magic trees of the mind: How to nurture your child's intelligence, creativity, and healthy emotions from birth through adolescence*.

New York: Plume Books.

Jensen, E. (2006). *Enriching the brain: How to maximize every learner's potential*.

San Francisco, CA: Jossey-Bass.

- Zull, J.E. (2002). *The art of changing the brain: Enriching the practice of teaching by exploring the biology of learning*. Sterling, VA: Stylus Publishing, LLC.
- Earle, H. A. (2003) Building a workplace of choice: Using the work environment to attract and retain top talent, *Journal of Facilities Management*, 2(3), 244-257.
doi:[10.1108/14725960410808230](https://doi.org/10.1108/14725960410808230)
- Hebert, E. A. (1998). Design matters: How school environment affects children. *Educational Leadership*, 56(1), 69-79.
- James, D. (2010). A need for humor in online courses. *College Teaching*, 52(3), 93-120. doi:[10.3200/CTCH.52.3.93-120](https://doi.org/10.3200/CTCH.52.3.93-120)
- Kotler, P. (1973-1974, Winter). Atmospherics as a marketing tool. *Journal of Retailing*, 49(4), 48-64.
- Sutliff, M., Higginson, J., & Allstot, S. (2008). Building a positive learning environment for students: Advice to beginning teachers. *Strategies: A Journal for Physical and Sport Educators*, 22(1), 31-33.

Success

- Cooper, J. E., Horn, S., & Strahan, D. B. (2005). "If only they would do their homework:" Promoting self-regulation in high school English classes. *High School Journal*, 88(3), 10-26. doi:[10.1353/hsj.2005.0001](https://doi.org/10.1353/hsj.2005.0001)
- Engin, A. O. (2009). Second language learning success and motivation. *Social Behavior and Personality: An International Journal*, 37(8), 1035-1041.
doi:[10.2224/sbp.2009.37.8.1035](https://doi.org/10.2224/sbp.2009.37.8.1035)

- Seifert, T. (2004). Understanding student motivation. *Educational Research, 46*(2), 137-149. doi:10.1080/0013188042000222421
- Salomon, G. (1984). Television is "easy" and print is "tough": The differential investment of mental effort in learning as a function of perceptions and attributions. *Journal of Educational Psychology, 76*(4), 647-658. doi:10.1037/0022-0663.76.4.647
- Duhigg, C. (2012). *The power of habit: Why we do what we do, and how to change*. New York: Random House.
- Dweck, C. S. (2009). *Mindset, The new psychology of success*. New York: Ballantine Books.
- Jensen, E. (2005). *Teaching with the brain in mind*. (2nd ed.). Alexandria, VA: Association for Supervision & Curriculum Development.
- Mendler, A. N. (2000). *Motivating students who don't care: Successful techniques for educators*. Bloomington, IN: National Educational Service.
- Purkey, W. W. & Novak, J. M. (1996). *Inviting school success: A self-concept approach to teaching, learning, and democratic practice*. (3rd ed.). Belmont, CA: Wadsworth Publishing.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261-271. doi:10.1037/0022-0663.84.3.261
- Goerg, S. J., Kube, S. & Zultan, R. (2010). Treating equals unequally: Incentives in teams, workers' motivation, and production technology. *Journal of Labor Economics, 28*(4), 747-772. doi:10.1086/653487

- Keller, J. M. (1987). Strategies for stimulating the motivation to learn. *Performance and Instruction*, 26(8), 1-7. doi:10.1002/pfi.4160260802
- Larkin, M. J. (2001). Providing support for student independence through scaffolded instruction. *Teaching Exceptional Children*, 34(1), 30-34.
- Shuell, T. J. (1988). The role of the student in learning from instruction. *Contemporary Educational Psychology*, 13(3), 276-295. doi:10.1016/0361-476X(88)90027-6
- Willis, J. (2010). Inoculate against boredom: The arts in school to prevent dropping out-physically or virtually. *Radical Teaching*. [Web log post]. Retrieved from <http://www.psychologytoday.com/blog/radical-teaching/201012/inoculate-against-boredom>
- Linnenbrink, E. A. & Pintrich, P. R. (2002). Motivation as an enabler for academic success. *School Psychology Review*, 31(3), 313-327.

Performance Feedback

- Bangert-Drowns, R. L., Kulik, C. C., Kulik, J. A., & Morgan, M. T. (1991). The instructional effect of feedback in test-like events. *Review of Educational Research*, 61(2), 213-238. doi:10.3102/00346543061002213
- Ferguson, P. (2011). Student perceptions of quality feedback in teacher education. *Assessment & Evaluation in Higher Education*, 36(1), 51-62. doi:10.1080/02602930903197883
- Finn, B., & Metcalfe, J. (2010). Scaffolding feedback to maximize long-term error correction. *Memory & Cognition*, 38(7), 951-961. doi:10.3758/MC.38.7.951

- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 181-112. doi:10.3102/003465430298487
- Lieberman, D. A., Vogel, A. C., & Nisbet J. (2008). Why do the effects of delaying reinforcement in animals and delaying feedback in humans differ? A working-memory analysis. *Quarterly Journal of Experimental Psychology*, 61(2), 194-202. doi:10.1080/17470210701557506
- Brookhart, S. M. (2009). *How to give effective feedback to your students*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Chappuis, J. (2009). *Seven strategies of assessment for learning*. Boston, MA: Allyn & Bacon.
- Marzano, R. J., Pickering, D., & Pollock, J. E. (2004). *Classroom instruction that works, Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Schmidt, R. A., & Lee, T. D. (2007). *Motor control and learning, a behavioral emphasis*. (4th ed.). Champaign, IL: Human Kinetics Publishers.
- Weitzel, S. (2000). *Feedback that works; How to build and deliver your message*. Greensboro, NC: Center for Creative Leadership.
- Bowman, Jr., R. F. (1982). A 'Pac-Man' theory of motivation: Tactical implications for classroom instruction. *Educational Technology*, 22 (9), 14-16.
- Lorenzet, S. J., Cook, R. G., & Ozeki, C. (2006). Improving performance in very small firms through effective assessment and feedback, *Education + Training*, 48(8/9), 568-583. doi:10.1108/00400910610710010

- Nawazl, N., Jahanian, A., & Manzoor, S. W. (2012). Critical elements of the constructive performance. *European Journal of Business and Management*, 4(7), 76-84.
- Parson, M. (2001, January 1). Enthusiasm and feedback: A winning combination! *PE Central*. Retrieved from <http://www.pecentral.org/climate/monicaparsonarticle.html>.
- Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18(2), 119-144. doi:10.1007/BF00117714
- The Highland Curriculum for Excellence. (2001). "How am I doing?" - Assessment and feedback to learners. Retrieved from http://www.hvlc.org.uk/ace/aifl/docs/B1/How_am_I_doing.pdf
- Stagecraft**
- Gelula, M. H. (1997). Effective lecture presentation skills. *Surgical Neurology*, 47(2), 201-204. doi:10.1016/S0090-3019(96)00344-8
- Javidi, M. M., Downs, V. C., & Nussbaum, J. F. (1988). A comparative analysis of teachers' use of dramatic style behaviors at higher and secondary educational levels. *Communication Education*, 37(4), 278-288.
- Lance, T. S. (2012). *Using cultural products to teach onomatopoeia in Japanese as a foreign language (JFL) classrooms*. (Master's thesis, California State University). Retrieved from <http://hdl.handle.net/10211.4/463>

- Nunes, M. A. S., Dihl, L. L., Fraga, L. M., Woszezenki, C. R., Oliveira, L., Francisco, D. J., & Notargiacomo, M. D. G. (2010). Animated pedagogical agent in the intelligent virtual teaching environment. *Digital Education Review, 4*, 53-61.
- Pineau, E. L. (1994). Teaching is performance: Reconceptualizing a problematic metaphor. *American Educational Research Journal, 31*(1), 3-25.
doi:10.3102/00028312031001003
- Allen, R. (2008). *Green light classrooms: Teaching techniques that accelerate learning*. Thousand Oaks, CA: Corwin Press.
- Cohen, R. (2007). *Acting one* (5th ed.). New York: McGraw Hill Education.
- Gillard, M. (1996). *Storyteller, storyteacher: Discovering the power of storytelling for teaching and living*. York, ME: Stenhouse Publishers.
- Hake, H. V. (1958). *Here's how!: A basic stagecraft book*. New York: Samuel French, Inc.
- Heppner, F. (2007). *Teaching the large college class: A guidebook for instructors with multitudes*. San Francisco, CA: Jossey-Bass.
- Johnson, B., & McElroy, T. M. (2010). *The edutainer: Connecting the art and science of teaching*. Lanham, MD: Rowman & Littlefield Education.
- Lowman, J. (1995). *Mastering the techniques of teaching* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Spolin, V. (1986). *Theater games for the classroom: A teacher's handbook*. Evanston, IL: Northwestern University Press.

- Ready, T. (2000). *Grammar wars: 179 Games and improvs for learning language arts*. Downers Grove, IL:Meriwether Publisher.
- Tauber, R. T., & Mester, C. S. (2007). *Acting lessons for teachers: Using performance skills in the classroom* (Vol. 38). Westport, CT: Praeger Publishers.
- Timpson, W. M., & Burgoyne, S. (2002). *Teaching & performing ideas for energizing your classes*. Madison, WI: Atwood Publishing.
- Astrachan, O. (1998). Concrete teaching: Hooks and props as instructional technology. *ACM SIGCSE Bulletin*, 30(3), 21-24. doi:10.1145/290320.283003
- Dawe, H. A. (1984). Teaching: A performing art. *Phi Delta Kappan*, 65(8), 548-552.
- Engvall, C. (2008, July 13). Stage craft: Taking cues from theater class to help make math and science fun. *Edutopia.org*. Retrieved from <http://www.edutopia.org/math-science-emotional-impact>
- Hathaway, P. (n.d.). Using props in presentations. *SpeakerNet News Compilations*. Retrieved from <http://www.speakernetnews.com/post/props.html>
- Renée, C. (2011, July 31). Why language teachers should teach with props. [Web log post]. Retrieved from <http://ideasforfrenchclass.blogspot.com/2011/07/why-language-teachers-should-teach-with.html>
- Rubin, L. (1983). Artistry in teaching. *Educational Leadership*, 40(4), 44-9.
- Speaker, S. L. (1995). Getting engaged: Using the time machine to teach history. *The History Teacher*, 28(4), 513-522. doi:10.2307/494639

Travers, R. M. W. (1979). Training the teacher as a performing artist. *Contemporary Education*, 51(1), 14-18.

Complimentary Elements

Badger, R., & White, G. (2000). A process genre approach to teaching writing. *ELT Journal*, 54(2), 153-160. doi:10.1093/elt/54.2.153

Kirsh, D. (1995, July). Complementary strategies: Why we use our hands when we think. In J. Moore, & J. Lehman (Eds.) *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society* (pp. 212-217). Mahwah, NJ: Lawrence Erlbaum Associates.

Van Merriënboer, J. J., Kester, L., & Paas, F. (2006). Teaching complex rather than simple tasks: Balancing intrinsic and germane load to enhance transfer of learning. *Applied Cognitive Psychology*, 20(3), 343-352.
doi:10.1002/acp.1250

Vare, P., & Scott, W. (2007). Learning for a change exploring the relationship between education and sustainable development. *Journal of Education for Sustainable Development*, 1(2), 191-198. doi:10.1177/097340820700100209

Wills, S., Ip, A. & Bunnett, A. (2000). Complementary pedagogical strategies for online design. In R. Sims, M. O'Reilly & S. Sawkins (Eds.), Learning to choose - Choosing to learning. *Proceedings of the 17th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE)* (pp. 405-414). Lismore, NSW Australia: Southern Cross University Press.

- Bell, S. (2004). *Elements of visual design in the landscape*. New York: Routledge
- Bahuchet, S., Hladik, C. M., Hladik, A., & Dounias, E. (1990). Agricultural strategies as complementary activities to hunting and fishing. In *Food and Nutrition in the African Rain Forest* (pp.31-34). France: UNESCO
- Carlson, J. S., & Levin, J. R. (2011). *Instructional strategies for improving students' learning: focus on early reading and mathematics*. Charlotte, NC: Information Age Publishing, Inc.
- Cole, R. W. (2001). *More strategies for educating everybody's children*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Lewith, G. T, Jonas, W. B., & Walach, H. (Eds.). (2003). *Clinical research in complementary therapies* (2nd ed.). Amsterdam: Churchill Livingstone Elsevier.
- Kelso, J. A. S., & Engström, D. A. (2006). *The complementary nature*. Cambridge, MA: The MIT Press.
- Itten, J. (1970). *The elements of color* (Vol. 4). New York: John Wiley & Sons
- Silver, H. F., Strong, R. W., & Perini, M. J. (2007). *The strategic teacher: Selecting the right research-based strategy for every lesson*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Delbanco, T. L. (1992). Enriching the doctor-patient relationship by inviting the patient's perspective. *Annals of internal medicine*, 116(5), 414-418.

- Doczi, G. (1986). Seen and unseen symmetries: A picture essay. *Computers & Mathematics with Applications*, 12(1), 39-62. doi:10.1016/0898-1221(86)90138-0
- Lipton, P. A., & Eichenbaum, H. (2008). Complementary roles of hippocampus and medial entorhinal cortex in episodic memory. *Neural Plasticity*, 2008, 1-8. doi:10.1155/2008/258467
- Purao, S. (1998). Hyper-link teaching and intelligent slides: Complementary strategies to foster active learning. *Journal of Education for MIS*, 5(1), 63-78.
- Wei-Ming, W. (n.d.). Yin Yang and Dao. Retrieved from <http://www.butte.edu/~wmwu/Shared%20Thoughts/Yin%20Yang%20and%20Dao.html>

Time and Timing

- Frijda, N. H. (1987). Emotion, cognitive structure, and action tendency. *Cognition and Emotion*, 1(2), 115-143. doi:10.1080/02699938708408043
- Madsen, C. K., Standley, J. M., & Cassidy, J. W. (1989). Demonstration and recognition of high and low contrasts in teacher intensity. *Journal of Research in Music Education*, 37(2), 85-92. doi:10.2307/3344700
- Sanford, J. P., & Evertson, C. M. (1983). Time use and activities in junior high classes. *The Journal of Educational Research*, 76(3), 140-147.
- Tong, A.K.Y. (2001). Linking and timing information presentation in multimedia educational systems. *Journal of Educational Multimedia and Hypermedia*, 10(2), 185-203

- Allen, S. R. (2007). *Predicting performance in sport using a portable cognitive assessment device*. Boston: Boston University.
- Dale Carnegie Training. (2011). *Stand and deliver: How to become a masterful communicator and public speaker*. London: Simon and Schuster
- Jensen, E. (Ed.). (2008). *Super teaching: Over 1000 practical strategies*. Thousand Oaks, CA: Corwin Press.
- Gordon, B. (2005). *Business and sales humor writing and delivery skills guidebook*. Los Angeles, CA: University of Health Care.
- Kelly, L. E., Kelly, L., & Melograno, V. (2004). *Developing the physical education curriculum: An achievement-based approach*. Champaign, IL: Human Kinetics Publishers.
- Russell, J., & Russell, L. (2006). *Change basics*. Alexandria, VA: American Society for Training and Development.
- Sharma, P. L. (2006). *Learning readiness*. New Delhi: Sarup & Sons
- Smith, T. E., & Knapp, C. E. (Eds.). (2011). *Sourcebook of experiential education: Key thinkers and their contributions*. Taylor & Francis e-Library.
- Arlin, M., & Westbury, I. (1976). The leveling effect of teacher pacing on science content mastery. *Journal of Research in Science Teaching*, 13(3), 213-219.
doi:10.1002/tea.3660130304
- Barr, R. (1975). How children are taught to read: Grouping and pacing. *The School Review*, 83(3), 479-498.

- Gerner, M. (1981). The brain and behavior: Casting light into the "black-box". *Psychological Reports*, 49(2), 511-518. doi:10.2466/pr0.1981.49.2.511
- Gundersen, G., & Williams, J. M. (1998). Rehearsal pacing of expert middle school, high school, and university choral and instrumental conductors. *Texas Music Educators Association*, 33-38.
- Horn, B. J. (1990). Facilitating self care practices in the elderly. *Home Health Care Services Quarterly*, 11(1-2), 1-8.
- Milani, M. (n.d.). Slow and fast dogs: The canine sense of time. Retrieved from <http://www.mmilani.com/canine-timing.html>
- Morrison, J. E., & Fletcher, J. D. (2002). *Cognitive readiness* (No. IDA-P-3735). Alexandria, VA: Institute for Defense Analyses. Retrieved from Defense Technical Information Center: <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA417618>
- Vacca, R. T. (1977). Readiness to read content area assignments. *Journal of Reading*, 20(5) 387-392.

Personal Presence

- Beebe, S. A. (1980, November). *The role of nonverbal communication in education: Research and theoretical perspectives*. Paper presented at the Annual Meeting of the Speech Communication Association, New York, NY.
- Hart, R. (2007). *Act like a teacher: Teaching as a performing art* Available from ProQuest Dissertation and Theses database. (UMI No. AAT 3275803)

- Meijer, P. C., Korthagen, F. A. J., & Vasalos, A. (2009). Supporting presence in teacher education: The connection between the personal and professional aspects of teaching. *Teaching and Teacher Education, 25*, 297–308.
- Özmen, K. S. Acting and teacher education: being model for identity development. *Turkish Online Journal of Qualitative Inquiry, 2*(2). 36-49.
- Tartwijk, J. V., Brekelmans, M., Wubbels, T., Fisher, D. L., & Fraser, B. J. (1998). Students' perceptions of teacher interpersonal style: The front of the classroom as the teacher's stage. *Teaching and Teacher Education, 14*(6), 607-617.
- Booher, D. (2011). *Creating personal presence: Look, talk, think, and act like a leader*. San Francisco, CA: Berrett-Koehler Publishers.
- Esquith, R. (2007). *Teach like your hair's on fire: The methods and madness inside room 56*. New York: Viking Press.
- Fairhurst, A. M., & Fairhurst, L. L. (1995). *Effective teaching, effective learning: Making the personality connection in your classroom*. Palo Alto, CA: Davies-Black Publishing
- Fried, R. L. (2001). *The passionate teacher: A practical guide*. Boston, MA: Beacon Press.
- Grasha, A. F. (1996). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Alliance Publishers.
- Gruwell, E. (2007). *Teach with your heart: Lessons I learned from the freedom writers*. New York: Crown Publishing Group.

- Littauer, F. (1992). *Personality plus*. Grand Rapids, MI: Revell.
- Parini, J. (2005). *The art of teaching*. New York: Oxford University Press.
- Rodgers, C., & Scott, K. (2008). The development of the personal self and professional identity in learning to teach. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre & K. E. Demers (Eds.), *Handbook of research on teacher education: Enduring questions and changing contexts* (pp. 732–755). New York: Routledge.
- Sjodin, T. L. (2001). *New sales speak: The 9 biggest sales presentation mistakes & how to avoid them*. New York: Wiley.
- Stanislavski, C. (1989). *An actor prepares* (E.R. Hapgood, Trans.). New York: Routledge.
- Banner Jr., J. M., & Cannon, H. C. (1997). The personal qualities of teaching what teachers do cannot be distinguished from who they are. *Change: The Magazine of Higher Learning*, 29(6), 40-43.
doi:10.1080/00091389709602345
- Bernstein-Yamashiro, B. (2004). Learning relationships: Teacher-student connections, learning, and identity in high school. *New Directions for Youth Development*, 2004(103), 55-70. doi:10.1002/yd.91
- Brigham, F. J., Scruggs, T. E., & Mastropieri, M. A. (1992). Teacher enthusiasm in learning disabilities classrooms: Effects on learning and behavior. *Learning Disabilities Research and Practice*, 7, 68-73.

- Bilgrave, D. P., & Deluty, R. H. (2004). Stanislavski's acting method and control theory: commonalities across time, place, and field. *Social Behavior & Personality: An International Journal*, 32(4), 329-340.
- Fox, A., & Schaefer, C. (1995) Undergraduate students' perceptions of an academic climate for caring. *Psychological Reports*, 6(3c), 1283-1287.
doi:10.2466/pr0.1995.76.3c.1283
- Griggs, T. (2001). Teaching as acting: Considering acting as epistemology and its use in teaching and teacher preparation. *Teacher Education Quarterly*, 28(2), 23-37.
- Nias, J. (1987). Teaching and the self. *Cambridge Journal of Education*, 17(3), 178-185. doi:10.1080/0305764870170313
- Sandoval, V. A., & Adams, S. H. (2001). Subtle skills for building rapport. *FBI Law Enforcement Bulletin*, 70(8), 1-9.
- Slekar, T. D. (2006). Preaching history in a social studies methods course: A portrait of practice. *Theory & Research in Social Education*, 34(2), 241-258.
doi:10.1080/00933104.2006.10473306
- Strean, W. B. (2008). Evolving toward laughter in learning. *Collected Essays on Learning and Teaching*, 1, 75-79.

Delight

- Hamann, S. B., Ely, T. D., Grafton, S. T., & Kilts, C. D. (1999). Amygdala activity related to enhanced memory for pleasant and aversive stimuli. *Nature Neuroscience*, 2(3), 289-293. doi:10.1038/6404

- Jordan, P. W. (1998). Human factors for pleasure in product use. *Applied Ergonomics*, 29(1), 25-33. doi:10.1016/S0003-6870(97)00022-7
- Kirchhoff, B. A., Wagner, A. D., Maril, A., & Stern, C. E. (2000). Prefrontal-temporal circuitry for episodic encoding and subsequent memory. *The Journal of Neuroscience*, 20(16), 6173-6180.
- Lepper, M. R., & Cordova, D. I. (1992). A desire to be taught: Instructional consequences of intrinsic motivation. *Motivation and Emotion*, 16(3), 187-208. doi:10.1007/BF00991651
- Ludden, G. D., Schifferstein, H. N., & Hekkert, P. (2007). Surprising the senses. *The Senses and Society*, 2(3), 353-359.
- Madrigal, R., Bee, C., Chen, J., & LaBarge, M. (2011). The effect of suspense on enjoyment following a desirable outcome: The mediating role of relief. *Media Psychology*, 14(3), 259-288. doi:10.1080/15213269.2011.596469
- Nagengast, S. L., Baun, M. M., Megel, M., & Michael Leibowitz, J. (1997). The effects of the presence of a companion animal on physiological arousal and behavioral distress in children during a physical examination. *Journal of Pediatric Nursing*, 12(6), 323-330.
- Burke, H., & Smith, C. (Eds.). (2007). *Archaeology to delight and instruct: Active learning in the university classroom* (Vol. 49). Walnut Creek, CA: Left Coast Press, Inc.

- Kretchmar, R. S. (2005). Teaching games for understanding and the delights of human activity. In L. Griffin, & J. Butler (Eds.), *Teaching games for understanding: Theory, research, and practice*, 199-212. Champaign, IL: Human Kinetics Publishers
- Norman, D. A. (2003). *Emotional design: Why we love (or hate) everyday things*. New York: Basic books.
- Sawyer, W. W. (2007). *Mathematician's delight*. Mineola, NY: Dover Publications
- Starko, A. J. (2009). *Creativity in the classroom: Schools of curious delight*. New York: Routledge.
- Steele, C. (2008). *What if...?: Questions to delight and inspire children*. Mustang, OK: Tate Publishing.
- Cain, M. (2007). Redefining the 'other': Teaching delight in cultural variety. *Journal for Music-in-Education*, 1, 35-39.
- Dukes, C., & Koch, K. (2012). Crafting a delightful experience: Teaching interaction design to teens. *Interactions*, 19(2), 46-50. doi:10.1145/2090150.2090162
- Johnson, D. R. (1973). The element of surprise: An effective classroom technique. *The Mathematics Teacher*, 66(1), 13-16.
- King, M. J. (1995). *Instruction and delight: Some observations for museums*. Retrieved from ERIC database. (ED423164)
- Puca, M., & Schmalt, H. (1999). Task enjoyment: A mediator between achievement motives and performance. *Motivation and Emotion*, 23(1), 15-29.

- Malone, T.W. (1980). *What makes things fun to learn? A study of intrinsically motivating computer games*. (ReportCIS-7). Palo Alto, CA: Xerox Palo Alto Research Center.
- Muldner, K., Burleson, W., & VanLehn, K. (2010). "Yes!": Using tutor and sensor data to predict moments of delight during instructional activities. *User Modeling, Adaptation, and Personalization*, 6075, 159-170.
- Radder, L. (1998) Stakeholder delight: The next step in TQM. *The TQM Magazine*, 10(4), 276-280 doi:10.1108/09544789810222630.
- Weymouth, B. E. (1938). Delight, and more, in singing. *The Modern Language Journal*, 23(1), 9-12. Doi:10.1111/j.1540-4781.1938.tb02786.x
- Alexander, C., Ishakawa, S., Fiksdahl-King, I., & Shlomo, S. (1977). *A Pattern Language: Towns, Buildings, Construction* Berkely, CA: Center for Environmental Structure
- Ali, R.J., Kor, L.K. (2007). Association between brain hemisphericity, learning styles, and confidence in using graphics calculator for mathematics. *Eurasia Journal of Mathematics, Science, and Technology*, 3(2), 127-131.
- Anderson, J.R. (2000). *Learning and Memory: An integrated approach*. New York, New York: John Wiley and Sons.
- Arcavi, A. (1994). Symbol sense: Informal sense making in formal mathematics. *For the Learning of Mathematics*, 14(3), 24-35.
- Arlin, M. (1984). Time, Equality, and Mastery Learning. *Review of Educational Research*, 54(1), 65-86.

- Ashcraft, M. (1994). *Human Memory and Cognition*. New York, New York: HarperCollins.
- Atkinson, R. and Shifflin, R. (1971). The Control of Short Term Memory. *Scientific American*, 224, 82-90.
- Awh, E., Jonides, J. & Reuter-Lorenz, P. (1998). Rehearsal in Spatial Working Memory. *Journal of Experimental Psychology: Human Perception and Performance*, Vol. 24, No. 3, 780-790.
- Baddeley, A. (1986). *Working Memory*. Oxford, England: Clarendon Press.
- Baker, K.R. (1974). *Introduction to Sequencing and Scheduling*. New York, NY: John Wiley and Sons.
- Bartlett, F.C. (1932). *Remembering: A Study in Experimental and Social Psychology*. Cambridge, England: Cambridge University Press.
- Bateson, G. (1980). *Mind and Nature: A Necessary Unity*. New York, NY: Bantam Books.
- Bateson, P. (2003). The promise of behavioural biology. *Animal Behavior*, 65, 11-17.
- Bhattacharya, K., & Han, S. (2001). *Piaget and cognitive development*. In M. Orey (Ed.), *Emerging perspectives on learning, teaching, and technology*. Retrieved 1/6/13, from <http://projects.coe.uga.edu/epltt/>.
- Bjork, R.A. & Richardson-Klavhen, A. (1989). *On the puzzling relationship between environmental context and human memory*. *Current Issues in Cognitive Processes*. Hillsdale, NJ: Earlbaum.

- Black, P. & William, D. (1998). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 80, 139-144.
- Bloom, B. (1956). *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook I: Cognitive Domain*. New York, NY: Longman.
- Boyle, J.R., & Weishaar, M. (1997). The effects of expert-generated versus student-generated cognitive organizers on the reading comprehension of students with learning disabilities. *Learning Disabilities Research and Practice*, 12(4), 228-235.
- Bransford, J. (1979). *Human Cognition: Learning, Understanding, and Remembering*. Belmont, CA: Wadsworth.
- Bransford, J. D., Brown, A. L., & Cocking, R. (2000). *How People Learn, Brain, Mind, Experience, and School*. Washington, DC: National Academy Press.
- Brophy, J. (1987). Synthesis of research on strategies for motivating students to learn. *Educational Leadership*, 45(2), 40-48.
- Buckingham, M. & Clifton, D. (2001). *Now discover your strengths*. New York, NY: Free Press.
- Cahill, L., Gorski, L., & Le, K. (2003). Enhanced human memory consolidation with post-learning stress: Interaction with the degree of arousal at encoding. *Learning & Memory*, 10, 270-274.

- Caine, N. & Caine, G. (1991). *Making Connections: Teaching and the Human Brain*. pp.126-145. Alexandria, VA: ASCD.
- Caine, R. N. & Caine, G.(1994). *Making Connections: Teaching and the Human Brain*. Menlo Park, CA: Addison-Wesley Publishing Company.
- Carroll, J.B. (1963). A Model of School Learning. *Teachers College Record*, 64, 723-733.
- Carroll, J.B. (1989). The Carroll Model: A 25 Year Retrospective and Prospective View. *Education Researcher*, 18(1), 26-31.
- Ciofalo, J.F. & Wylie, E.C. (2006). Using diagnostic classroom assessment: One question at a time. *Teachers College Record*, Date published: January 10, 2006. <http://www.tcrecord.org/Home.asp> ID Number: 12285, Date Accessed: 12/30/12.
- Cohen, N.J. & Eichenbaum, H. (1993). *Memory, Amnesia, and the Hippocampal System*. Cambridge, MA: MIT Press.
- Cory, G. & Gardner, R. (2002). *The Evolutionary Neuroethology of Paul MacLean*. Westport, CT: Praeger Publishers.
- Covey, S. (1989). *The 7 Habits of Highly Effective People*. New York, NY: Free Press.
- Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York, NY: HarperCollins.
- Cummings, C. (1992). *Managing to Teach*. Edmonds, WA: Teaching Inc.

- D'Archembeau, A., Comblain, C. & Van der Linden, M. (2002). Phenomenal characteristics of autobiographical memories for positive, negative, and neutral events. *Applied Cognitive Psychology*, 17 (3), 281-294.
- Damasio, A. (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*. New York, NY: G.P. Putnam & Sons.
- Diamond, M. (1984). *Enriching Heredity*. New York, New York: Free Press.
- Diamond, M., Johnson, R. Ingham, C. (1971). Brain plasticity induced by environment and pregnancy. *Neuroscience*, 2, 171-178.
- Doyle, A.C. (1930). *A Study in Scarlet, The Complete Sherlock Holmes*. New York, NY: Doubleday.
- Dunn, J. L., Alderfer, J., & Lehman, P. (2001). *National Geographic Field Guide to the Birds of Eastern North America*. Washington DC: National Geographic Press
- Dwyer, C. (2008). *The future of assessment: shaping teaching and learning*. New York, NY: Erlbaum.
- Ericsson, K. (2007). Deliberate Practice and the Modifiability of Body and Mind: Toward a Science of the Structure and Acquisition of Expert and Elite Performance. *International Journal of Sport Psychology*, 38, 4-34.
- Ericsson, K. (2009). Toward a Science of Exceptional Achievement: Attaining Superior Performance through Deliberate Practice. *Annals of New York Academy of Science*, 1172, 199-217.

- Fausey, C. M., (2010). *Constructing agency: the role of language*. *Frontiers in Cultural Psychology*, Vol. 1, article 162, published online.
- Fieldbook for Boys and Men*. (1967). Boy Scouts of America. Garden City, NY: Doubleday
- Fletcher, P.C., et al. (2001). Responses of human frontal cortex to surprising events are predicted by formal associative learning theory. *Nature Neuroscience*, 4, 1043-1048.
- Gagne, R.M. (1963). Military Training and the Principles of Learning. *American Psychologist*, 83-91.
- Gagne, R.M., Briggs, L.J., & Wagner, W.W. (1992). *The principles of instructional design*. Ft. Worth, TX: Harcourt Brace Jovanovich College Publishers.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York, NY: Basic Books.
- Gardner, H. and Hatch, T. (1989). Multiple Intelligences Go to School: Educational Implications of the Theory of Multiple Intelligences. *Educational Researcher*, 18(8), 4-9.
- Garrison, C., & Ehringhaus, M. (2007). Formative and summative assessments in the classroom. Retrieved from <http://www.amle.org/Publications/WebExclusive/Assessment/tabid/1120/Default.aspx>.
- Ghazanfar, A., & Schroeder, C.E. (2006). Is neocortex essentially multisensory? *Trends in Cognitive Science*, 10, 278-285.

- Gullicksen, H. (1936). The relationship between degree of original learning and degree of transfer. *Psychometrika*, 1(1), 37-43.
- Gutierrez, R. & Slavin, R. (1991). *Achievement effects of the non-graded elementary school: A retrospective review*. Baltimore, MD: Johns Hopkins University.
- Hart, L. (1983). *Human Brain and Human Learning*. White Plains, NY: Longman, Inc.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77, 81-112.
- Hebb, D.O. (1949). *The organization of behavior*. New York, NY: John Wiley & Sons.
- Heritage, M. (2010). *Formative Assessment: Making it happen in the classroom*. Thousand Oaks, CA: Corwin Press.
- Heritage, M., Kim, J., Vendlinski, T, & Herman, J. (2009). From evidence to action: A seamless process in formative assessment? *Educational Measurement: Issues and Practice*, 28(3), 24-31.
- Hess, E. (1973). *Imprinting: early experience and the developmental psychobiology of attachment*. New York, NY: Van Nostrand Reinhold Company.
- Hunter, M. (1982). *Mastery Teaching*. El Segundo, CA: TIP Publications.
- Hunter, M. (1988). Quote from a live presentation. Raleigh, NC.
- Hunter, M. (1994). *Enhancing Teaching*. New York, NY: Macmillan College Publishing.

- Huttenlocher, P. (2002). *Neural Plasticity: The Effects of Environment on the Development of the Cerebral Cortex*. Cambridge, MA: Harvard University Press.
- Hyerle, D. (1996). *Visual tools for transforming information into knowledge*. Thousand Oaks, CA: Corwin Press.
- Jenson, E. (1998). *Teaching with the brain in mind*. Alexandria, VA: ASCD.
- Jenson, E. (2008). *Brain Based Learning: The New Paradigm of Teaching*. Thousand Oaks, CA: Corwin Press.
- Johnston, J., Markel, G. & Haley-Oliphant, A. (1987). What Research Says about Questioning in the Classroom. *Middle School Journal*, 18, 29-33.
- Jonassen, D., Tessmer, M. & Hannum, W. (1999). *Task Analysis Methods for Instructional Design*. Mahwah, NJ: Erlbaum.
- Joyce, B., & Showers, B. (2002). *Student Achievement through Staff Development*. Alexandria, VA: ASCD
- Karweit, N. (1987). *Implications of time on task research for classroom practice*. Washington, DC: U.S. Department of Education.
- Kaufeldt, M. (1999). *Begin with the brain: Orchestrating the learner centered classroom*. Tucson, AZ: Zephyr Press.
- Kohn, A. (1993). *Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes*. Boston, MA: Houghton Mifflin.
- Kohn, A. (1999). *Punished by Rewards*. Boston, MA: Houghton Mifflin.
- Kohn, A. (2006). *The Homework Myth*. Cambridge, MA: Da Capo Press.

- Landauer, T. & Bjork, R. (1978). *Optimal rehearsal patterns in name learning*. In M. Gruneberg, P.E. Morris, & R.N. Sykes (Eds.), *Practical Aspects of Memory* (pp.625-632). London: Academic Press.
- Larkin, J., Mcdermott, J., Simon, D.P., & Simon, H.A. (1980). *Expert and novice performance in solving physics problems*. *Science*. Vol. 208, 1335-1342.
- Larkin, J.H., & Simon, H.A. (1987). Why a diagram is (sometimes) worth ten thousand words. *Cognitive Science*, 11, 65-69.
- LeDoux, J. (1996). *The Emotional Brain*. New York, NY: Simon & Shuster.
- LeDoux, J. (2003). *The Synaptic Self: How our Brains Become Who we Are*. New York, NY: Penguin.
- Lewis, P.A. & Critchley, H.D. (2003). Mood-dependent memory. *Trends in Cognitive Sciences*, 7 (9).
- Loucks-Horsley, S., Stiles, K., Mundry, S., Love, N. & Hewson, P. (1998). *Designing professional development for teachers of science and mathematics*. Thousand Oaks, CA: Corwin Press.
- MacLean, P. (1978). A Mind of Three Minds: Educating the Triune Brain. *The 77th Yearbook of the National Society for the Study of Education*, pp. 308-342. Chicago, IL: University of Chicago Press.
- Mager, R. (1984). *Goal Analysis*. Belmont, CA: Lake Publishing Company.
- Martin, L., & Clore, G.L. (2001). *Theories of mood and cognition: A user's guidebook*. Mahwah, NJ: Erlbaum.

- Marzano, R.J. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: ASCD.
- Marzano, R.J., Pickering, D.J., & Pollock, J.E. (2001). *Classroom instruction that works: Research based strategies for increasing student achievement*. Alexandria, VA: ASCD.
- Mastropieri, M.A., & Scruggs, T.E. (1998). Constructing more meaningful relationships in the classroom: Mnemonic research into practice. *Learning Disabilities Research and Practice, 13*, 138-145.
- McCarthy, B. (1987). *The 4mat system: Teaching to learning styles with right/left mode techniques*. Barrington, IL: EXCEL.
- McLeod, S. (2007). *Carl Rogers*. Retrieved from <http://www.simplypsychology.org.carl-rogers.html>.
- Miller, G.A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review, 63*, 81-97.
- Milne, L.J., & Milne, M. (1980). *National Audubon Society Field Guide to Insects and Spiders North America*. New York, NY: Chanticleer Press
- National Education Commission on Time and Learning. (1994). *Prisoners of Time*. Washington, DC: U.S. Government Printing Office.
- Nummela, R.M., & Rosengren, T.M. (1986). What's Happening in Student's Brains may Redefine Teaching. *Educational Leadership, 43*, 49-53.
- O'Keefe, J. & Nadal, L. (1978). *The Hippocampus as a Cognitive Map*. Oxford: Clarendon Press.

- Orey, M. (2001). *Information Processing*. In M. Orey (Ed.), *Emerging Perspectives on Learning, Teaching, and Technology*. Retrieved Dec., 2012 from <http://projects.coe.uga.edu/epltt/>
- Pao, Y. (1991). *Adaptive pattern recognition and neural networks*. Reading, MA: Addison-Wesley Publishing Company.
- Payne, R. (1995). *A Framework for Understanding Poverty*. Highlands, TX: RFT
- Pekrun, R. (1992). The Impact of Emotions on Learning and Achievement: Towards a Theory of Cognitive/Motivational Mediators. *Applied Psychology*, 41, 39-376.
- Pinker, S. (2002). *The Blank Slate: The Modern Denial of Human Nature*. New York, NY: Viking.
- Popham, J. (2011). *Transformative Assessment in Action*. Alexandria, VA: ASCD.
- Prater, M.A. (1992). Increasing time on task in the classroom: Suggestions for improving the amount of time learners spend in on-task behaviors. *Intervention in School and Clinic*, 28(1), 22-27.
- Raaijmakers, J. and Shifflin, R. (1981). Search of Associative Memory. *Psychological Review*, 88, 93-104.
- Reeves, A. (2011). *Where Great Teaching Begins: Planning for Student Thinking and Learning*. Alexandria, VA: ASCD.
- Reiner, A. (1990). The Triune Brain in Evolution: Role in Paleocerebral Functions. *Science*, 250, pp. 303-305.

- Rogers, K. (1978). *The Gambler*. Written by Don Schlitz, performed by Kenny Rogers. Released by United Artists in 1978.
- Rosenfeld, I. (1988). *The Invention of Memory*. New York, NY: Basic Books.
- Rozenzweig, M., Bennett, E. (1996). Psychobiology of Plasticity: Effects of Training and Experience on Brain and Behavior. *Behavioral Brain Research*, 78: 57-65.
- Rumelhart, D. & McClelland, J. (Eds.). (1986). *Parallel Distributed Processing: Explorations in the Microstructure of Cognition*. Cambridge, MA: MIT Press.
- Schlechty, P. (2011). *Engaging Students: The Next Level of Working on the Work*. San Francisco, CA: Jossey Bass.
- Senge, P.M., Kleiner, A., Roberts, C., Ross, R.B., & Smith, B.J. (1994). *The Fifth Discipline Fieldbook*. Garden City, NY: Doubleday
- Shea, D. (2009, February 11). Diane Sawyer Reports On Appalachian Poverty. *The Huffington Post*. Retrieved from http://www.huffingtonpost.com/2009/02/11/diane-sawyer-reports-on-a_n_166041.html
- Shepard, A., Slayton, D., & Barbee, J. (1994). *Moonshot: The Inside Story of America's Race to the Moon*. Atlanta, GA: Turner Publishing.
- Sime, M. and Boyce, G. (1969). Overt Responses, Knowledge of Results and Learning. *Programmed Learning and Educational Technology*, 6(1), 12-19.
- Skinner, B.F. (1937). Two types of conditioned reflex: A response to Konorski and Miller. *The Journal of General Psychology*, 16, 272-279

- Sluckin, W. (1965). *Imprinting and early learning*. Chicago, IL: Aldine Publishing Company.
- Smith, S. (1979). Remembering In and Out of Context. *Journal of Experimental Psychology: Human Learning and Memory*, 15, 460-471.
- Sousa, D. (2011). *How the brain learns*. Thousand Oaks, CA: Corwin Press.
- Sousa, D. A. (1995). *How the brain learns*. Reston, VA: NASSP.
- Sparks, D.& Hirsh, S. (1997). *A New Vision for Staff Development*. Alexandria, VA: ASCD
- Springer, S.P., & Deutsch, G. (1993). *Left brain, right brain*. New York, NY: W.H. Freeman.
- St. Pierre, B. (1996). *A Perfect Glass of Wine*. Raincoast Books., Vancouver, BC.
- Stevenson, H. & Stigler, J. (1992). *The learning gap: Why our schools are failing and what we can learn from Japanese and Chinese education*. New York, NY: Summit Books.
- Sylwester, R. & Choo, J. (1992). What Brain Research Says about Paying Attention. *Educational Leadership*, 50, 71-75.
- Sylwester, R. (1995). *A Celebration of Neurons: An Educator's Guide to the Human Brain*. Alexandria, VA: ASCD.
- Thomas, H.R., Matthews, C.T., & Ward, J.G. (1986). Learning Curve Models of Construction Productivity. *ASCE Journal of Construction Engineering and Management*. Vol. 112, No. 2, June, 1986, pp. 245-258.

- Tigner, R. (1999). Putting Memory Research to Good Use. *College Teaching*, 47, 149-152.
- Tse, D., Langston, R.F., Kakeyama, M., Bethus, I., Spooner, P.A., Wood, E.R., Witter, M.P., & Morris, R.G.M. (2007). Schemas and Memory Consolidation. *Science*, 316, 76-82. DOI: 10.1126/science.1135935.
- Van Praag, H., Kempermann, G., Gage, F. (2000). Neural consequences of environmental enrichment. *Neuroscience*. 1, 191-198.
- Vygotski, L. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.
- Vygotski, L. (1986). *Thought and Language*. Cambridge, MA: Harvard University Press.
- Walberg, H.J. (1988). Synthesis of research of time and learning. *Educational Leadership*, 45(6), 76-85.
- Walberg, H.J. (1991a). *Extended learning time*. Washington, DC: U.S. Department of Education.
- Walsh, J.A. (1977). *The effects of degree of original learning of a gross motor task on inter-task transfer of learning*. Beaverton, OR: Microform publications.
- William, D., & Thompson, M. (2007). *Integrating assessment with instruction: What will it take to make it work?* In C.A. Dwyer (Ed.), *The future of assessment: Shaping teaching and learning*. (pp. 53-82). Mahwah, NJ: Erlbaum.
- Wolfe, P. (2010). *Brain Matters: Translating research into classroom practice*. 2nd ed. Alexandria, VA: ASCD.

VITA**Jeffery C. Hawkins****Date of Birth:** March 18, 1960**Place of Birth:** Alexandria, Virginia**EDUCATION**

May, 1982 Bachelor of Science, Business and Communications
 Georgetown College
 Georgetown, Kentucky

May, 1988 Bachelor of Arts, English
 Clinch Valley College
 Wise, Virginia

May, 1997 Master of Education
 Morehead State University
 Morehead, Kentucky

Pending Doctor in Educational Leadership
 Morehead State University
 Morehead, KY

PROFESSIONAL EXPERIENCES

2002 – Present Executive Director
 Kentucky Valley Educational Cooperative
 Hazard, Kentucky

2000 – 2002 Adult Education Regional Director
 Kentucky Valley Educational Cooperative
 Hazard, Kentucky

1998 – 2000 Instructional Supervisor
 Pikeville Independent Schools
 Pikeville, Kentucky

1995 – 1998 Distinguished Educator
 Kentucky Department of Education
 Frankfort, Kentucky

- 1994 – 1995 Secondary English/Literature Teacher
Letcher County Board of Education
Whitesburg, Kentucky
- 1992 – 1994 AVID Coordinator and ESS Consultant
Kentucky Department of Education
Frankfort, Kentucky
- 1988 – 1992 Secondary English/Literature Teacher
Letcher County Board of Education
Whitesburg, Kentucky
- 1988 – 1996 Director, Appalachian Media Institute
Appalshop, Inc.
Whitesburg, Kentucky
- 1982 – 1988 Development Director, Roadside Theater
Appalshop, Inc.
Whitesburg, Kentucky

PUBLICATIONS

- Hawkins, J., & Wagner, C. (2008, Fall). School Culture Assessment: Training for Facilitators. *Kentucky School Leader*, pp. 19-20.

VITA**Henry L. Webb****ADDRESS:**

106 North Front Avenue
Floyd County Schools, Superintendent
Prestonsburg, Kentucky 41653
henry.webb@floyd.kyschools.us

Phone: 606-886-2354
Fax: 606-886-4532
E-mail:

DATE OF BIRTH: November 01, 1971

LOCATION OF BIRTH: Indiana

EDUCATION:

1994	Bachelor of Arts Morehead State University Morehead, KY
1997	Master of Education University of Louisville Louisville, KY
2004	Master of Arts Morehead State University Morehead, KY
Pending	Doctor in Educational Leadership Morehead State University Morehead, KY

PROFESSIONAL EXPERIENCES:

2007– Present	Superintendent Floyd County Schools
---------------	--

	Prestonsburg, KY
2004– 2007	Director of Instruction Floyd County Schools Prestonsburg, KY
2007- 2012	Adjunct Instructor, Morehead State University Morehead State University Morehead, KY
1999-2004	Principal, South Floyd High School Floyd County Schools Hi Hat, KY
1998-1999	Social Studies/Physical Education Teacher Floyd County Schools Prestonsburg, KY
1995-1998	Teacher of the Visually Impaired Floyd County Schools Prestonsburg, KY
2010-Present	Committee Member Local Superintendents Advisory Council
2010-Present	Committee Member Superintendents Advisory Council
2012-13	Chairperson Kentucky Educational Development Cooperative
2011-Present	Board member Floyd County Chamber of Commerce
2010-11	Chairperson Kentucky Valley Educational Copperative
2009-2012	Board of Trustees Alice Lloyd College
2009	Principal Redesign Committee Educational Professional Standards Board

Present Membership
 KASA, AASA, KEA

HONORS:

2011 Superintendent of the Year
 KY Association of Pupil Transportation (KAPT)

2011 Floyd Countian of the Year
 Floyd County Chamber of Commerce
 Prestonsburg, KY

2008 Partner in Education
 Floyd County Chamber of Commerce
 Prestonsburg, KY

2003 Hall of Fame Inductee
 Alice Lloyd College
 Pippa Passes, KY

1993 NAIA All American
 Alice Lloyd College
 Pippa Passes, KY