Pennsylvania Educational Leadership

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A Matched Comparison Study of the Impact of School-Wide Positive Behavioral Interventions and Supports on Academic Growth

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It is well-established that implementing School-Wide Positive Behavioral Interventions and Supports (SWPBIS) is associated with improved behavioral outcomes for students. SWPBIS is also associated with improved achievement outcomes, but little research has investigated the relationship between SWPBIS and student academic growth. This study examined the effect of SWPBIS on mathematics and reading achievement and growth as measured by the Pennsylvania System of School Assessment (PSSA) and Pennsylvania Value-Added Assessment System (PVAAS), respectively. Specifically, the sample consisted of 13 SWPBIS schools and 13 matched comparison non-SWPBIS schools. Academic achievement outcomes on the PSSA mathematics and reading assessments were compared between the two groups at times 1 and 2 while academic growth outcomes as measured by the PVAAS were assessed at time 2. No statistically significant differences were found with regard to student academic achievement or academic growth when the SWPBIS and non-SWPBIS groups were compared to one another at time 2. When examined independently, only the SWPBIS group demonstrated statistically significant improvement on the PSSA reading assessment from time 1 to time 2.

Frequently occurring classroom discipline problems can interfere with the learning of all students in the classroom, impede academic engagement, and result in loss of classroom instruction time (Arnold, 1997; Reinke, Splett, Robeson, & Offutt, 2008). Effective school-wide behavioral intervention and prevention practices are critical in establishing and ensuring academic success (Luiselli, Putnam, Handler, & Feinberg, 2005). School-Wide Positive Behavioral Interventions and Supports (SWPBIS) is a school-wide approach that improves the school environment by creating enhanced systems and procedures to support and encourage socially desirable student and teacher behaviors (Barrett, Bradshaw, & Lewis-Palmer, 2008). Positive environments are formed through identifying common behavioral expectations that are valued by the school and can be applied to all students (McKevitt & Braaksma, 2008). SWPBIS has been shown to improve a number of important educational outcomes, including decreases in problematic behavior, office discipline referrals (ODRs), suspensions, and expulsions (Barrett et al., 2008; Nelson, Martella, & Marchand-Martella, 2002; Sprague & Nishioka, 2004; Vincent & Tobin, 2011). Additionally, SWPBIS has been linked to improved school climate, organizational health, and teacher self-efficacy (Bradshaw,

Koth, Bevans, Ialongo, & Leaf, 2008; Bradshaw, Koth, Thornton, & Leaf, 2009; Ross & Horner, 2007). SWPBIS can be implemented with high fidelity and is associated with financial gains for school systems (Blonigen et al., 2008; Scott & Barrett, 2004). The implementation of SWPBIS is also associated with increased time in instruction (Scott & Barrett, 2004).

Academic Impact of SWPBIS

In addition to the many promising documented outcomes of SWPBIS, researchers are also beginning to demonstrate a positive link between SWPBIS and academic improvement. In fact, improvements in student academic outcomes were reported in a five-year, longitudinal, experimental design of SWPBIS in 37 Maryland elementary schools (Bradshaw, Mitchell, & Leaf, 2010). Specifically, the 37 schools involved in that study were matched on selected baseline demographic data, including percentage of students receiving free and reduced-price meals, total school enrollment, student-to-teacher ratio, special education students, race, student mobility, suspension, mathematics performance, and reading performance. Twenty-one of the schools were randomized to the SWPBIS condition, and 16 were assigned to non-SWPBIS control condition. The degree of implementation of SWPBIS was formally monitored using discipline standard protocols. Results confirmed that fifth-grade students in the SWPBIS schools evidenced greater gains in mathematics as measured by the Maryland state achievement tests when compared to fifth-grade peers in non-SWPBIS schools.

Horner et al. (2009) conducted an experimental design of SWPBIS effects on achievement in K-5 elementary schools in Illinois and Hawaii. Thirty schools in each state were randomly assigned to the SWPBIS group or the non-SWPBIS group, and degree of implementation was assessed at all time points. The SWPBIS group received training and technical support the first year of the study, while the non-SWPBIS group received training one year later. The researchers used state standardized tests to assess reading achievement, with the annual percentage of third graders in each condition meeting or exceeding state standards serving as the outcome measure. Findings revealed a statistically significant difference between the SWPBIS and non-SWPBIS treatment groups at the second year of implementation, with more students in the treatment group meeting or exceeding state reading achievement standards.

Another research study that assessed the academic impact of SWPBIS when compared to matched comparison schools was conducted by Nelson et al. (2002). Specifically, academic achievement scores of students within a school district in the Pacific Northwest were analyzed. Seven schools within the school district were selected, and SWPBIS schools were matched to non-SWPBIS schools. All students were administered the district's standardized, norm-referenced tests measuring academic achievement. Data from two years prior to the implementation of SWPBIS and for two years following implementation were analyzed. Student performance in reading, language arts, spelling, science, and social studies improved significantly from pre-test to post-test in SWPBIS schools when compared to non-SWPBIS schools.

Other researchers have compared selected SWPBIS schools' mathematics and reading achievement scores to state average achievement scores to assess academic impact. For example, Childs, Kincaid, and George (2010) examined the impact of SWPBIS on academic achievement in Florida schools. The researchers analyzed standardized state reading assessment data in schools

trained in universal SWPBIS for students in elementary, middle, and high schools. They found that Florida schools that were implementing universal SWPBIS from 2004 to 2007 demonstrated a higher percentage of students who were reading at proficient levels when compared to the state average. In fact, SWPBIS schools achieved 62.7% proficiency on the reading segment, as opposed to the statewide average of 55.7%.

Additional studies that consider the relationship between high fidelity SWPBIS and academic achievement have been published, but they did not use a control group with which to compare performance in treatment schools. These findings, although less generalizable, are still important in establishing the link between SWPBIS and academic improvements. Sadler and Sugai (2009) examined the development and implementation of SWPBIS in an Oregon school district that had implemented the organizational framework for 10 years. Their findings indicated an increase in the percentage of students who obtained early reading benchmarks as measured by the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002). Additionally, Simonsen et al. (2012) evaluated the impact of SWPBIS on student achievement for 428 SWPBIS schools within 125 Illinois school districts. The researchers found that student performance on the state test in reading improved significantly over the course of the study (2000-2008), and student achievement on state mathematics tests increased over time. A study conducted by Luiselli et al. (2005) found that academic performance improved following the implementation of SWPBIS at an urban elementary school in the Midwest. Similarly, Lassen, Steele, and Sailor (2006) examined the academic impact of SWPBIS in a middle school and found that standardized test scores in mathematics and reading increased significantly over the three-year study period. Additionally, research studies conducted by McIntosh, Chard, Boland, Horner, and Good (2006) and Muscott, Mann, and LeBrun (2008) indicated significant educational gains following the implementation of SWPBIS.

All the aforementioned studies are critical in demonstrating the academic impact of SWPBIS. As previously noted, however, few studies included a control group when examining the academic impact of SWPBIS. Those that did yielded promising results. Of those studies that employed a control group, two significant limitations are noted. First, not all studies used a validated measure to assess the degree of implementation of SWPBIS. What is more notable, however, is that none of the previous studies considered academic growth data as an outcome measure. Specifically, these studies measured academic growth using cross-sectional data, an analysis that is methodologically and statistically unsound (Gall, Gall, & Borg, 2003).

Using cross-sectional data to estimate academic growth is questionable for two main reasons. First, cross-sectional data come from different cohorts of students. Thus, interpretations of cross-sectional reviews are not as clear as those made from inferential statistics in which complete longitudinal data from the same students are available. Second, longitudinally analyzing data assumes that the dependent variable is measured precisely the same way at multiple points in time. Such is not the case with state accountability tests, given that the tests often change slightly from one year to the next, and the quality of state assessment varies widely across the country (Kingsbury, Olson, Cronin, Hauser, & Houser, 2003). Therefore, longitudinally analyzing cross-sectional academic data is methodologically and statistically problematic.

Some states, including the state in which the present study was conducted, minimize the risks with longitudinally interpreting cross-sectional data via statistical growth modeling of academic data. Academic growth data in Pennsylvania are a statistical analysis of yearly achievement data. A significant benefit of the usage of growth data to analyze important educational outcomes is that data from the same cohorts of students are analyzed over time. Doing so mitigates the effects of measuring different groups of students across multiple years. Additionally, it eliminates the effect of test variation from year to year.

SWPBIS in Pennsylvania

SWPBIS in Pennsylvania was initiated by the Pennsylvania Department of Education (PDE) and Bureau of Special Education (BSE) in 2007. Pennsylvania launched this initiative under the guidance of the National Center on Positive Behavioral Interventions and Supports (PBIS). The initial SWPBIS training began in the summer of 2007 with 33 selected schools, which have received continuous training and assistance from Pennsylvania Training and Technical Assistance Network (PaTTAN) and Intermediate Unit (IU) consultants (Runge, Staszkiewicz, McFall, & Hall, 2014). These schools were selected based on location as there was an attempt to obtain a sample of rural, suburban, and urban schools in all areas of the state (western, central, and eastern). Additionally, elementary, middle, and high school representative samples were selected.

It is important to note that SWPBIS is not a specific model; it is a compilation of empirically supported, systems-level, and effective practices. This organizational framework is implemented across the entire school and includes all students and all settings. As supported by SWPBIS literature, these features were critical in implementing SWPBIS in schools in Pennsylvania: establishment of a local implementation team, continuous self-assessment and data-based decision making, evaluation and integration of multiple behavior-related initiatives, and a long-term commitment (Sugai, 2008). In schools implementing SWPBIS, all students received tier 1 (primary or universal) support, which consists of teaching social skills, removing triggers that may precede undesirable behaviors, and arranging the environment to facilitate teaching and practicing of desired behaviors (Sugai, Horner, & Lewis, 2009). Furthermore, prevention occurred at the tier 1 level by exposing all students to an instructionally oriented approach to behavior support. Once students were taught the expectations, they were frequently reinforced by positive acknowledgment for exhibiting the expected behavior. All schools in Pennsylvania that were analyzed at the time of this study were approved for implementation of SWPBIS at tier 1.

It is important to note that, as the need increases, support for students moves through three tiers, resulting in increasingly intensive interventions to target their skill deficits. Interventions are provided in a fluid manner. Secondary interventions (tier 2) focus on students who are not responding to primary prevention efforts while tertiary interventions (tier 3) are the most intensive and provide a system of supports to students whose behaviors are not responsive to primary and secondary level interventions (Sugai et al., 2008). These supports are individualized, require a substantial degree of time and resources, and involve frequent progress monitoring.

Academic Achievement and Growth in Pennsylvania

The Pennsylvania State System of Assessment (PSSA) is the state's No Child Left Behind accountability assessment. The PSSA is a standards-based, criterion-referenced assessment that measures student achievement performance in reading, mathematics, writing, and science. Students' performance on the PSSA is reported in four different categories: Advanced, Proficient, Basic, and Below Basic. While the PSSA is important for assessing student achievement at a particular point in time, like most other state accountability measures, it is statistically inappropriate to make longitudinal comparisons of results for multiple reasons. PSSA data do not provide a measure of student progress. Furthermore, PSSA data cannot be used to assess the same cohort of students over time.

Since PSSA data cannot be used to assess students' attainment of mathematics and reading skills over time, growth was measured at time 2 through the examination of building-level Pennsylvania Value-Added Assessment System (PVAAS) scores. PVAAS is a statistical analysis of PSSA reading and mathematics assessment data. PVAAS data provide a longitudinal view of academic effects and can be examined to determine the amount of growth cohorts of students have made in a year as well as project future academic growth (Pennsylvania Department of Education, 2015).

PVAAS uses a Repeated Measures Analysis of Variance (ANOVA-RM) model for analyzing growth in reading and mathematics for students in grades 3-8. ANOVA-RM is used to analyze a student's multiple prior test scores to estimate the student's future performance. These data are reported using normal curve equivalents (NCEs) and provide districts with both individual student and aggregated scores. PVAAS allows for comparing actual performance on the PSSA reading and mathematics assessments to a growth standard, which is the difference in the NCEs from one year to the next. Analysis of Variance (ANOVA) is typically used when calculating future student performance (Wright, White, Sanders, & Rivers, 2010). This study only used ANOVA-RM PVAAS growth model data. The Average Growth Index (AGI), which is a measure of student progress and is based on the growth measure over the tested grades in a school, was used to compare growth between SWPBIS and non-SWPBIS schools. The AGI is based on a confidence interval to account for standard error and ensures a meaningful comparison across schools in Pennsylvania; AGI was used in this analysis to account for the relative effectiveness of the schools. This index is based on the average growth across tested grade levels divided by its standard error. If the AGI $= 0$, the average achieving student met the standard for academic growth. Similarly, if the AGI > 0, then the average achieving student exceeded the standard. If the AGI < 0, then the average achieving student did not meet the standard. The AGI is reflective of overall school growth (SAS Institute, Inc., 2011). Wright (2004) notes that Pennsylvania's PVAAS model is statistically superior to other, simpler growth models that are used in other states. Pennsylvania's model eliminates testing bias by statistically analyzing PSSA mathematics and reading data. It is important to note that PVAAS data were not publicly available for individual students or grades and are not available for this study's baseline, time 1. Therefore, only time 2 PVAAS data were analyzed.

In summary, none of the reviewed studies provides a longitudinal view of SWPBIS's effects on academic growth. In the context of school reform, significant changes cannot be expected

within the first year, and outcomes over multiple years need to be examined. However, there are many difficulties in the usage of cross-sectional data for longitudinal analysis, including different cohorts of students and test variation from year to year. In Pennsylvania, PVAAS data circumvent these problems by analyzing academic data over multiple years for the same student to provide a more methodologically and statistically sound measure of academic growth.

Method

Sample

The sample analyzed was comprised of 26 schools, 13 SWPBIS and 13 non-SWPBIS elementary schools in Pennsylvania. All schools involved in Pennsylvania's initial SWPBIS program were named publicly on the Pennsylvania Positive Behavior Support website.[1] Although 33 schools were implementing SWPBIS in the Commonwealth, PSSA data for only 28 schools could be obtained. The five schools for which no standardized PSSA data could be obtained were excluded from the study. Schools without PSSA data included buildings in which the PSSA was not administered (e.g., K-2). Due to an insufficient number of middle and high schools in the SWPBIS cohort, only the 18 elementary schools of the remaining 28 schools were selected for analysis. Of these 18 schools, 16 superintendents consented to release degree of implementation data. Furthermore, only 13 of those 16 schools possessed sufficient data to be included in the analysis since three of the schools were missing some degree of implementation data. For the SWPBIS schools, the degree of implementation of SWPBIS was measured via the use of the School-wide Evaluation Tool (SET; Sugai, Lewis-Palmer, Todd, & Horner, 2005), The School-wide Benchmarks of Quality (BoQ; Kincaid, Childs, & George, 2005), and The Effective Behavior Support: Team Implementation Checklist (TIC; Sugai, Horner, & Lewis-Palmer, 2002). These measures were used, typically, in the spring of each academic year. The TIC was used in 2007-2008 while the BoQ was used annually beginning in 2008-2009. Most schools had one SET completed between the 2008-2009 and 2010-2011 academic years for additional validation of the TIC and/or BoQ.

The SWPBIS schools were matched to non-SWPBIS schools based on these demographic characteristics: size, socioeconomic status, racial composition, proportion of English Language Learners (ELLs), and special education population. This matching was performed due to convenience of publicly available demographic data on each school, the extant literature on the contribution of school demographic variables to academic performance, and similar practices employed in previous research (e.g., Bradshaw et al., 2010). More specifically, demographic data from 2010-2011 PSSA/PVAAS reporting, including socioeconomic status, racial composition, ELLs, and special education population for 15 of the 18 SWPBIS elementary schools were obtained on the publicly available PVAAS website (Pennsylvania Department of Education, 2012). The name of each school was entered under the school search application on the PVAAS website, and the demographic data for each school was shown. After the demographic information was obtained for each of the 15 K-5 and K-6 SWPBIS schools, non-SWPBIS schools were selected through a matching process. More specifically, the demographic data were entered individually for each of the 15 K-5 and K-6 elementary SWPBIS schools. Next, a search was done to determine if any non-SWPBIS schools would matched the control schools exactly. When an exact match was not made,

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[1] See PAPBS.org.

ranges of numbers were entered. These ranges were as close to the target percentage as possible for each demographic variable. However, data for three of the 18 SWPBIS schools, specifically the K-4 schools, were unable to be obtained through the PVAAS reporting website. As a result, demographic information for these three schools was obtained from the Pennsylvania Department of Education (PDE) Adequate Yearly Progress (AYP) website (Pennsylvania Department of Education, 2012). School demographic information on this website was also reported as percent tested economically disadvantaged, minority, limited English proficiency, and special education. Elementary K-4 level schools were located by manually searching through many school districts' demographic data on the PDE AYP website. Schools were selected that closely matched on the aforementioned school demographic information. Finally, total school size, including the number of students per school, was located for all SWPBIS and non-SWPBIS schools on the Great Schools website.[2] Each SWPBIS school was matched to five non-SWPBIS comparison schools.

Pair-wise matching of schools was performed to control for the potential effect of building-level demographic variables on achievement scores. As demonstrated in Table 1, all demographic data, with the exception of school size, were located on the PDE PVAAS website (Pennsylvania Department of Education, 2015) and were reported as percent of students tested at the building level.

Table 1
Demographic Characteristics of Matched SWPBIS and Non-SWPBIS Schools

	M	*SD*	Range	Skewness	Kurtosis
SWPBIS (*N* = 13)					
School Size	512.69	248.01	198 - 898	0.23	-1.65
% Econ. Dis.	47.62	19.16	6 - 83	-0.36	1.15
% Minority	32.15	26.03	3 - 77	0.61	-1.14
% ELL	4.00	5.50	0 - 15	1.30	0.07
% in Special Ed.	13.54	5.06	4 - 19	-0.57	-1.16
Non-SWPBIS (*N* = 13)					
School Size	452.31	177.16	235 - 860	0.90	0.91
% Econ. Dis.	43.31	19.35	11 - 81	0.32	-0.24
% Minority	27.00	22.13	0 - 69	0.68	-0.72
% ELL	4.54	6.24	0 - 17	1.20	-0.13
% in Special Ed.	13.69	4.29	7 - 20	-0.10	-1.39

Note. SWPBIS = School-Wide Positive Behavioral Interventions and Supports; Econ. Dis. = Economically Disadvantaged; ELL = English Language Learners; Special Ed. = Special Education.

For the non-SWPBIS schools, 90 school principals whose schools were selected based on the aforementioned matching process were mailed a copy of the BoQ (Kincaid et al., 2005). Since the BoQ was designed to be completed through a team consensus, the results of this principal-only BoQ administration should be interpreted with caution and could potentially have compromised

[2] See GreatSchools.org.

the validity of the total score. The BoQ was used to assess degree of SWPBIS implementation in spring 2012 for the non-SWPBIS schools. Despite the fact that the BoQ was administered in spring 2012 for the non-SWPBIS schools, it is deemed a reliable estimate of the level of implementation of SWPBIS at time 2 (spring 2011).

Eighteen non-SWPBIS school principals returned a completed BoQ. Of these 18 non-SWPBIS schools, one was excluded when its matched comparison SWPBIS school was removed from the analysis due to a lack of degree of implementation data. Additionally, four non-SWPBIS schools were excluded because their respective principals self-reported full implementation of SWPBIS on the BoQ. Specifically non-SWPBIS schools with BoQ total scores higher than 69 out of 100 points were considered to be fully implementing per the scoring criteria of the instrument. These four schools were excluded from the analysis due to fidelity data that suggested that they were not suitable controls. A total of 13 non-SWPBIS schools were selected based on return of the BoQ and meeting the aforementioned demographic data matching criteria. As a result of the selection and matching process, only data from the SWPBIS schools that were categorized as fully implementing and the schools that were not denoted as fully implementing SWPBIS were analyzed.

The fidelity measures for all SWPBIS schools were completed independently of and prior to this study. They were administered at specific times during the course of the year (fall 2007 and each subsequent spring) by trained external consultants whom PDE assigned to each of those schools. For the purposes of this study, only fall 2007 TIC and spring 2011 SET, BoQ, or TIC data were analyzed, as demonstrated by Table 2. The fall 2007 assessment period corresponds to time 1 in this study. The spring 2011 administration of these degree of implementation measures corresponds to time 2 (SWPBIS schools) in this study.

Table 2

SWPBIS and Non-SWPBIS Degree of Implementation Data for Matched Schools

	N	*M*	*SD*	Range	Skewness	Kurtosis
SWPBIS						
Time 1						
TIC	9	67.33	27.50	6 - 94	-1.55	2.56
Time 2						
SET	1	86.25				
BoQ	11	89.30	7.26	79 - 99	-0.19	-1.69
TIC	3	86.33	12.09	77 - 100	1.41	n/a
Non-SWPBIS						
Time 2						
BoQ	13	54.38	13.17	30 - 69	-0.52	-0.54

Note. SWPBIS = School-Wide Positive Behavioral Interventions and Supports. Following the summer 2007 training, degree of implementation data were not available for four SWPBIS schools. These schools were denoted as not implementing SWPBIS at time 1 based on anecdotal reports from schools and collaborating consultants. $n = 13$ SWPBIS schools; $n = 13$ non-SWPBIS schools. *M, SD,* and Range are reported as percentages.

Mathematics and reading PVAAS Average Growth Index (AGI) academic growth data were not available for two of the 13 schools. These two schools served children in grades K-4 and did not have PVAAS data, because PVAAS requires multiple years of student-level PSSA data to compute AGI. As a result, only 11 SWPBIS and non-SWPBIS schools PVAAS AGI academic growth data were used in the analysis.

Measurement

Archival, aggregated PSSA and PVAAS mathematics and reading achievement data were used in the analysis. Specifically, publicly available, archival mathematics and reading PSSA data from selected SWPBIS and non-SWPBIS elementary schools for the 2006-2007 (time 1) and 2010-2011 (time 2) school years were reviewed. PDE publicly reported PVAAS data starting in 2009, thus these data were only available for time 2 (2010-2011 school year). According to the Data Recognition Corporation (DRC, 2010), both mathematics and reading test retest reliability for the PSSA is excellent, $r = 0.93$. Additionally, mathematics and reading same-subject correlations convergent validity is moderate for the PSSA (same-subject correlations 0.70 - 0.90 for mathematics and 0.60 - 0.80 for reading). High correlations were noted between the PSSA and SAT, indicating adequate predictive validity ($r = 0.87$ for mathematics and $r = 0.78$ for reading). Although no specific measures of the validity of the PVAAS were found, this model has support in the statistical literature (Wright et al., 2010).

For the purposes of this study, percentages of students performing in the four PSSA reporting categories for achievement (i.e., Below Basic, Basic, Proficient, and Advanced) were collapsed into two broad reporting categories to assess achievement. Specifically, for both mathematics and reading PSSA, the school-level percentages of students scoring within the Advanced and Proficient ranges were combined into one broad category: Advanced and Proficient. Similarly, for both mathematics and reading PSSAs, the school-level data for students performing within the Basic and Below Basic categories were combined into another broad category: Basic and Below Basic. The collapsing of performance levels was performed for two primary reasons. First, too few students performing at the extremes (Below Basic and Advanced) undermines the integrity of data analyses with such small sample sizes. Additionally, for national accountability purposes, academic performance is dichotomized into the percentage of students who pass or fail the state test.

PVAAS mathematics and reading AGI scores at time 2 were used as measures of student academic growth. The AGI scores reported at the building-level are reflective of overall student growth. This AGI is based on the average growth across tested grade levels divided by its standard error. For example, if the AGI = 0 is interpreted to mean that, on average, students met the standard for annual academic growth. However, if the AGI > 0, then, the students exceeded the annual growth standard. If the AGI < 0, then, on average, students did not meet the annual growth standard (SAS Institute, Inc., 2011).

To summarize, academic achievement was measured by the percentage of students in 13 SWPBIS and 13 non-SWPBIS schools classified as Advanced and Proficient or Basic and Below Basic on the PSSA mathematics and reading at times 1 and 2. Mathematics and reading academic

growth were assessed through the examination of PVAAS AGI scores at time 2 for 11 SWPBIS schools and 11 non-SWPBIS schools.

Table 3
Descriptive Statistics for Performance on PSSA Mathematics for SWPBIS and Non-SWPBIS Schools

	N	*M*	*SD*	Range	Skewness	Kurtosis
SWPBIS						
Advanced + Proficient Time 1	13	77.6	11.4	54.4 - 95.4	-0.32	-0.42
Basic + Below Basic Time 1	13	22.4	11.4	4.6 - 43.6	0.32	-0.40
Advanced + Proficient Time 2	13	85.0	6.7	75.0 - 98.7	0.53	0.06
Basic + Below Basic Time 2	13	15.0	6.7	1.4 - 25.0	-0.52	0.04
Non-SWPBIS						
Advanced + Proficient Time 1	13	80.4	7.5	68.0 - 89.7	-0.27	-1.27
Basic + Below Basic Time 1	13	19.6	7.5	10.4 - 32.1	0.27	-1.26
Advanced + Proficient Time 2	13	84.9	8.9	65.1 - 94.6	-0.96	0.40
Basic + Below Basic Time 2	13	15.1	8.9	5.4 - 34.9	0.96	0.38

Note. PSSA = Pennsylvania System of School Assessment; SWPBIS = School-Wide Positive Behavioral Interventions and Supports; Math = Mathematics. *M, SD,* and Range are reported as percentages.

Table 4
Descriptive Statistics for Performance on PSSA Reading for SWPBIS and Non-SWPBIS Schools

	N	*M*	*SD*	Range	Skewness	Kurtosis
SWPBIS						
Advanced + Proficient Time 1	13	69.9	12.50	50.0 - 91.1	-0.05	-0.75
Basic + Below Basic Time 1	13	30.1	12.51	8.9 - 50.0	0.05	-0.75
Advanced + Proficient Time 2	13	74.6	11.08	54.9 - 97.0	0.03	0.60
Basic + Below Basic Time 2	13	25.4	11.10	3.0 - 45.0	-0.03	0.58
Non-SWPBIS						
Advanced + Proficient Time 1	13	70.4	9.44	55.8 - 83.7	0.15	-1.55
Basic + Below Basic Time 1	13	29.7	9.45	16.3 - 44.3	-0.14	-1.54
Advanced + Proficient Time 2	13	75.6	10.64	56.3 - 91.3	-0.51	-0.69
Basic + Below Basic Time 2	13	24.4	10.64	8.8 - 43.7	0.52	-0.67

Note. PSSA = Pennsylvania System of School Assessment; SWPBIS = School-Wide Positive Behavioral Interventions and Supports; Math = Mathematics. *M, SD,* and Range are reported as percentages.

Table 5

Descriptive Statistics for PVAAS Mathematics and Reading for SWPBIS and Non-SWPBIS Schools

	N	*M*	*SD*	Range	Skewness	Kurtosis
SWPBIS						
Math PVAAS AGI	11	2.72	3.59	-3.6 - 8.7	-0.17	-0.34
Reading PVAAS AGI	11	1.50	4.25	-8.0 - 7.1	-0.94	1.34
Non-SWPBIS						
Math PVAAS AGI	11	1.09	3.21	-4.6 - 6.1	-0.17	-0.64
Reading PVAAS AGI	11	0.78	2.07	-2.0 - 4.4	0.37	-0.27

Note. PVAAS = Pennsylvania Value-Added Assessment System; SWPBIS = School-Wide Positive Behavioral Interventions and Supports; AGI = Average Growth Index; Math = Mathematics.

Results

An independent-samples t test examining the percentage of students performing in the Advanced and Proficient ranges on PSSA mathematics in SWPBIS schools compared to students in control schools at time 1 yielded insignificant results, $t(24) = -0.73$, $p = 0.48$. Therefore, SWPBIS and non-SWPBIS matched comparison control schools had similar performance levels on PSSA mathematics at time 1. Results of the paired-samples t tests indicate significant growth in school-level PSSA mathematics performance for both groups from time 1 to time 2, SWPBIS schools, $t(12)$ = -3.45, $p = 0.003$ and non-SWPBIS schools, $t(12) = -2.10$, $p = 0.040$. These results indicate that significant changes in the percentage of students achieving Advanced or Proficient performance on PSSA mathematics were observed from time 1 to time 2 for both SWPBIS and non-SWPBIS schools . Independent-samples t tests were then conducted to compare the mean percentage change from time 1 to time 2 (time 2-time 1) for PSSA mathematics in SWPBIS schools to the mean percentage change across the same time period in non-SWPBIS schools. These findings were not statistically significant, $t(24) = .95$, $p = 0.35$. So, as shown in Table 6, while SWPBIS and non-SWPBIS schools significantly improved their PSSA mathematics performance across time, neither group's change over time was stronger than the other.

An independent-samples t test was used to determine if there was a statistically significant difference between the percentage of students scoring within the Advanced and Proficient ranges on the PSSA reading assessments in the SWPBIS schools and the corresponding percentages in non-SWPBIS schools at time 1 (2007). Results yielded no significant differences in the percentage of students scoring within the Advanced and Proficient ranges for SWPBIS and non-SWPBIS schools, $t(24) = -0.12$, $p = 0.91$. Next, results of the paired-samples t tests indicated significant improvement in school-level PSSA reading performance for SWPBIS schools only. Specifically, the percentage of students who scored in the Advanced and Proficient ranges on the PSSA reading from time 1 to time 2 increased significantly for the SWPBIS schools, $t(12) = -2.88$, $p = 0.01$ but not for non-SWPBIS schools, $t(12) = -1.99$, $p = 0.07$. These data suggest that SWPBIS schools demonstrated a statistically significant improvement in PSSA reading across time while a similar trend was not observed in the non-SWPBIS cohort. Since both groups demonstrated similar

performance on time 1 PSSA reading, independent-samples *t* tests were conducted to analyze the mean percentage change from time 1 to time 2 (time 2-time 1) for PSSA reading in SWPBIS schools and non-SWPBIS schools. Specifically, this independent-samples *t* test compared how much the percentage of students scoring within the Advanced and Proficient ranges on the PSSA reading assessments in SWPBIS schools and non-SWPBIS schools changed from time 1 to time 2. Resulted indicated there were no significant differences in percentage change in Advanced and Proficient PSSA reading percentage scores for SWPBIS and non-SWPBIS $t(24) = -.15$, $p = 0.88$. So while SWPBIS schools observed a significant improvement in PSSA reading scores across time, the percentage change was comparable to non-SWPBIS schools.

Table 6

Percentages of Students by PSSA Mathematics Proficiency Category in SWPBIS and Non-SWPBIS Schools from Time 1 to Time 2

	M	*SD*	*SEM*	*t*	*p*
SWPBIS Schools				±3.45	0.003
Advanced + Proficient Time 1	77.65	11.38	3.16		
Advanced + Proficient Time 2	85.04	6.73	1.87		
Basic + Below Basic Time 1	22.35	11.37	3.15		
Basic + Below Basic Time 2	14.96	6.71	1.86		
Non-SWPBIS Schools				±2.10	0.040
Advanced + Proficient Time 1	80.39	7.51	2.08		
Advanced + Proficient Time 2	84.90	8.89	2.46		
Basic + Below Basic Time 1	19.61	7.52	2.08		
Basic + Below Basic Time 2	15.11	8.90	2.47		

Note. PSSA = Pennsylvania System of School Assessment; SWPBIS = School-Wide Positive Behavioral Interventions and Supports. *M, SD,* and *SEM* are reported as percentages. *N* = 13; *df* = 12.

As previously noted, estimated changes in percentages of students achieving Advanced or Proficient status on the PSSA are methodologically and statistically tenuous given that such analyses use cross-sectional data in a longitudinal manner. Extant literature, however, employs such practices despite these limitations (e.g. Bradshaw et al., 2010; Horner et al., 2009). As explicated earlier, growth modeling (Wright et al., 2010) provides an advantage to the previous analyses because the PSSA performance of student cohort groups are regressed across time to provide a psychometrically-superior measure of academic growth. Independent-samples *t* tests were used to assess mean differences between SWPBIS and non-SWPBIS schools on PVAAS AGI mathematics and reading scores at time 2 to analyze student growth. Although the mean AGI scores were greater for the SWPBIS schools, there was no significant difference in PVAAS mathematics AGI scores for 11 SWPBIS schools compared to 11 non-SWPBIS schools at time 2, $t(20) = 1.12$, $p = 0.28$. Similarly, as demonstrated in Table 8, there was no significant difference in

PVAAS reading AGI scores between SWPBIS and non-SWPBIS schools at time 2, $t(20) = 0.50$, $p = 0.62$.

Table 7

Percentages of Students by PSSA Reading Proficiency Category in SWPBIS and Non-SWPBIS Schools from Time 1 to Time 2

	M	*SD*	*SEM*	*t*	*p*
SWPBIS Schools				±2.88	0.01
Advanced + Proficient Time 1	69.89	12.51	3.47		
Advanced + Proficient Time 2	74.62	11.08	3.07		
Basic + Below Basic Time 1	30.11	12.52	3.47		
Basic + Below Basic Time 2	25.37	11.10	3.07		
Non-SWPBIS Schools				±2.00	0.07
Advanced + Proficient Time 1	70.39	9.43	2.61		
Advanced + Proficient Time 2	75.58	10.64	2.95		
Basic + Below Basic Time 1	29.66	9.44	2.62		
Basic + Below Basic Time 2	24.40	10.64	2.95		

Note. PSSA = Pennsylvania System of School Assessment; SWPBIS = School-Wide Positive Behavioral Interventions and Supports. M, SD, and SEM are reported as percentages. N = 13; df = 12.

Table 8

Comparison of the Mathematics and Reading PVAAS AGI Scores Between SWPBIS and Non-SWPBIS Schools

	M	*SD*	*SEM*	*t*	*p*
Mathematics PVAAS				1.12	0.28
SWPBIS	2.72	3.59	1.08		
Non-SWPBIS	1.09	3.21	0.97		
Reading PVAAS				0.50	0.62
SWPBIS	1.50	4.25	1.30		
Non-SWPBIS	0.78	2.07	0.62		

Note. PVAAS = Pennsylvania Value Added Assessment System; SWPBIS = School-Wide Positive Behavioral Interventions and Supports. N = 11; df = 20.

Discussion

The academic achievement and growth of cohorts of schools following the implementation of SWPBIS was analyzed as part of this study. When the SWPBIS and non-SWPBIS groups were compared independently of each other, the SWPBIS group made statistically significant gains in both PSSA mathematics and reading percentage scores from time 1 to time 2. Furthermore, no

statistically significant gains were noted for the non-SWPBIS schools in reading. Both the SWPBIS and non-SWPBIS groups made significant gains in mathematics when analyzed independently from time 1 to time 2.

When compared independently of each other, SWPBIS and non-SWPBIS schools both observed significant changes in PSSA mathematics across a four-year interval of time. Results further indicated that the changes across time were similar in magnitude for both SWPBIS and non-SWPBIS schools. Slightly different findings were observed for PSSA reading. SWPBIS schools observed a significant improvement in PSSA reading across a four-year period, but non-SWPBIS did not enjoy the same level of improvement. In fact, a non-significant change in PSSA reading was found for the non-SWPBIS schools. Analyses of growth models of student performance across time indicated that cohorts of students from SWPBIS and non-SWPBIS schools had comparable levels of positive growth in both mathematics and reading.

It is critical that practitioners implement established and evidence-based practices that focus on behavior prevention and intervention. There are many established positive outcomes (e.g., reduction in ODRs, improvements in school climate and teacher efficacy, and increased instructional time) associated with the implementation of SWPBIS, and researchers are increasingly establishing the important educational benefits of SWPBIS. Despite these promising findings, it is important to note that SWPBIS does not have the research base to conclude that the organizational framework alone yields improved academic outcomes. Although it is likely that SWPBIS improves educational outcomes through improving climate, increasing time on task, and decreasing behavioral problems, more research is needed.

This study adds to the research base of academic impact of SWPBIS in several important ways. One significant element of this study is the use of a matched comparison non-SWPBIS group. Although many studies reviewed did use a control group, just as many did not. An additional imperative feature of this study design is that degree of implementation of SWPBIS was assessed for both SWPBIS and non-SWPBIS schools. Although several of the research studies reviewed did use a measure of implementation, several did not. Evaluating fidelity ensured that schools in the research group were implementing SWPBIS and that schools in the non-SWPBIS were not. Most importantly, this study was the only research to our knowledge that assessed student academic growth data. This facet of the study is critical, since it mitigated the effects of different cohorts of students that are a common and real criticism of analyzing longitudinal state accountability data.

There are several limitations to this study. One important limitation is that there may have been other systems-level educational or social programs implemented in both SWPBIS and non-SWPBIS schools that could have impacted student academic outcomes. Additionally, the sample size was relatively small, therefore making it difficult to generalize the results to the larger population. Although a matched comparison group was integral to this study, no true control group was used. As noted previously, the results of the BoQ for the non-SWPBIS schools should be interpreted with some caution, as it is meant to be completed by a school team, rather than an individual team member. It is recommended that future researchers assess student outcomes through curriculum-based measurements (CBMs) in addition to state-mandated assessments to more accurately measure small increments of academic growth as well as attainment of basic

mathematics and reading skills. A study that would compare students' rate of improvement as assessed by CBMs in mathematics and particularly reading between SWPBIS and non-SWPBIS schools would be very informative. Lastly, and most importantly, a much larger-scale study that uses a SWPBIS and a non-SWPBIS matched comparison or control group and analyzes growth data in addition to achievement data is needed.

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A Recipe for Student Achievement: Alaska Style

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A group of undergraduate prospective teachers from Pennsylvania and their professor journeyed to Bush Alaska village schools and observed standards-based student evaluation. This system is compared and contrasted to student evaluation processes in Pennsylvania. A brief examination of the historical roots of providing public education to these two disparate geographic areas, including their differential environmental and cultural milieus, helps to explain the evolution of how each evaluates student performance. While a broad adoption of standards-based evaluation might not be practical in Pennsylvania, the strength of this approach is that it encourages students to be responsible for their own learning and is particularly appropriate for coursework that requires sequential mastery of content. Thus, some limited application of a standards-based evaluation approach might be worth considering for Pennsylvania students.

Most children in the United States attend public schools. Approximately 98,328 public schools operate in the United States, educating 49.5 million students (U.S. Department of Education, 2013). Due to the current emphasis on test scores, benchmarks, and the Common Core, it might be assumed that all public schools in the United States structure their performance assessment levels in the same way, but at least for a very small population in Bush Alaska, the standards-based education assessment system differentiates its schools from counterparts in the "lower 48" states.

In March 2013, a unique experience for pre-service teacher candidates from Kutztown University presented itself. These students were able to visit schools and communities in Bush Alaska, remote areas that do not have road systems connecting them to another city (Johnson, 1996). Bush Alaska is an extremely rural area of the United States where even other Alaskans rarely venture. Everything beyond the road systems of Alaska is considered the Bush, although there are a few exceptions of rural areas to which you can drive (Wohlforth, 2008). As prospective teachers who were preparing for certification in the commonwealth of Pennsylvania, the travel experience to Bush Alaska schools provided an on-site opportunity to compare a standards-based system with the system of achievement evaluation more typically found in lower 48 school districts, including in Pennsylvania. This journey also presented a chance to introduce these students to rudimentary qualitative research methods, including semi-structured observations and interviews (Johnson, 2010), through which they could make such comparisons. The data they collected through these methods formed the basis for their own reflective essays.

Using data derived from content analysis (Johnson, 2010) of the students' reflective essays along with data from the author's own semi-structured observations and interviews (Johnson, 2010), this article examines the current Pennsylvania process for measuring educational achievement and Alaska's standards-based educational system. The reasons behind the standards-based movement in Bush Alaska are considered, including how the unique culture, environment, and educational history all play a role in shaping the approach school districts in Bush Alaska use to measure student progress. Through this examination, both commonalities and differences became apparent; findings presented here form a basis for recommending to the Pennsylvania public education system some consideration of Bush Alaska's alternative approach.

A Brief History of Education in Pennsylvania

As one of the original 13 colonies, Pennsylvania, under the advocacy of William Penn, was an early leader in what was to become the U.S. public education system. "Faithful stewards of Penn's legacy recognized that education was essential to the economic progress and liberty of conscience associated with this 'best poor man's country'" (Downey, 2011). While the efforts of Penn and his followers were focused on providing education in home settings and/or through religious institutions, fellow Pennsylvanian Benjamin Franklin is credited with furthering the concept of providing education through public institutions. With his encouragement, public schools were established in Philadelphia and surrounding areas (Downey, 2011).

Moreover, throughout the 1800s, Pennsylvania became known for its educational prowess at the college level with private institutions, such as the University of Pennsylvania, Dickinson College, and the University of Pittsburgh,[1] all leading the way in medicine, science, and art. This wave of premier education, combining religion and liberal core subjects, continued until the mid-1800s when the era of public education from Kindergarten through grade 12 (K-12) arrived. From this point on, Pennsylvania's education was affiliated with government, no longer restricted to private schools (Downey, 2011).

The State Board of Education introduced outcomes-based education in Pennsylvania in 1992. The idea was to replace rigid adherence to the traditional school calendar with a set of performance capabilities that students had to achieve during a given academic year. Outcomes-based education is an approach to education through which decisions regarding curriculum are driven by the exit learning outcomes that students should display (Davis, 2003). Some positives that came from this move were self-directed learning, flexibility, and accountability. However, the lack of open-ended tasks and inhibition to learn by discovery ultimately led to adoption of the Pennsylvania Department of Education's (PDE) Standards Aligned System in 2004 and Common Core standards in 2010.

Common Core in Pennsylvania

Currently, Pennsylvania follows the federal Common Core State Standards Initiative in educating its school children. The Common Core was adopted in Pennsylvania on July 2, 2010, and has been implemented during the 2013 and 2014 academic years. Forty-five states, the District of Columbia, four territories, and the Department of Defense Education Activity have adopted

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[1] The University of Pittsburgh became a state-related institution in the 1960s.

the Common Core (U.S. Department of Education, 2013). The Common Core State Standards strive to achieve a consistent and clear vision of what students are expected to know academically and a vision regarding what parents and teachers can do to assist in the process. The standards are designed to be robust and relevant to the real world, reflecting the knowledge which young people need for success in college and careers (PDE, 2014c). The goal of these standards is to fully prepare states for successful engagement in the global economy of the future.

Pennsylvania specifically created its own Common Core standards in the content areas of mathematics and English language arts. More recently, a draft set of Pennsylvania (PA) Common Core standards was created. "These new standards mirror the content and rigor of Common Core, but reflect the organization and design of the PA Academic Standards" (Central York School District, n.d.). There are also "anchors" that align to the standards and allow for areas of assessment. Assessment anchors are used to align curriculum, instruction, and assessment practices across the entire commonwealth. The PDE first released the assessment anchors for mathematics and reading in the spring of 2004 (PDE, 2014c).

The major assessment tool used across the commonwealth to test students' knowledge is the Pennsylvania System of School Assessment. "The annual Pennsylvania System of School Assessment (PSSA) is a standards-based, criterion-referenced assessment used to measure a student's attainment of the academic standards while also determining the degree to which school programs enable students to attain proficiency of the standards" (PDE, 2014b). This testing is administered annually, in different grades for different content areas. Reading and math content areas are tested from third to eighth grades yearly and in eleventh grade; writing is tested in fifth, eighth, and eleventh grades; and science is assessed in fourth, eighth, and eleventh grades (PDE, 2014b). The scores which are rendered are used in two different manners. The individual student scores are provided only to the student's school, which may use them to identify students in need. The cumulative school score is used to give information on the curriculum and instruction used at that school as a means for improvement, if necessary, and future planning.

A new wave of testing called Keystone Exams is in the process of implementation as one component of Pennsylvania's new system of high school graduation requirements. Keystone Exams will help school districts guide students toward meeting state standards. The Keystone Exams serve two purposes: (1) high school accountability assessments for federal and state purposes, and (2) high school graduation requirements for students beginning with the class of 2017 (PDE, 2014a).

A Brief History of Alaska Education

Over the past century, education in Alaska has changed drastically. From the time of the arrival of Russian fur traders in the late 1700s through the early 1900s, the relationship between most of the native people of Alaska and formal schooling may be characterized as two mutually independent systems with little, if any, contact (i.e., indigenous knowledge system vs. formal education system). School-based education was reserved primarily for the immigrant population at that time (Barnhardt, 2006).

From the 1900s to the 1950s, native Alaskan exposure to formal education was largely through boarding schools, some of which were church affiliated. The goal of these schools was

to Westernize native students, although many retained their native language and understanding of culture (Barnhardt, 2006).

In the 1960s, most formal educational decisions were made outside the native communities, resulting in the establishment of elementary schools and a mandated high school curriculum. In 1976, the federal and state educational systems were dismantled, and in their place over 20 new school districts were created to operate the schools in rural communities. For the first time, native educators were able give their opinion and help close the gap between Western and native practices (Barnhardt, 2006). The Alaska Rural Systemic Initiative (AKRSI) was created to demonstrate that native and Western knowledge can come together to effectively educate the students in this rural environment. Thus, cultural elements such as basket making and dances were infused into the academic curriculum (Barnhardt, 2006).

Alaska Standards-Based Education

Along with efforts to merge cultural elements into school curriculum, a Standards-based evaluation system was created with the goal to offer rural native Alaskan students a beneficial education with greater opportunities for future careers. Alaskans came together to create content standards—broad statements of what Alaskan students should know and be able to do—in 10 core subject areas: English/language arts, mathematics, science, geography, government and citizenship, history, skills for a healthy life, the arts, world languages, and technology (Alaska Department of Education & Early Development, 2015).

This method of education has allowed community elders and native teachers to contribute cultural history as a key part of the educational curriculum. In 1998, cultural standards were created for the standards-based curriculum. A key principle in the cultural standards for students is that "[c]ulturally-knowledgeable students are well grounded in the cultural heritage and traditions of their community," and this and other principles are infused into the curriculum to ensure the development of well-rounded students (Alaska Native Knowledge Network, 1998, p. 5).

Comparing Educational Strategies for Performance Assessment in Pennsylvania and Alaska

When comparing Alaska's standards-based education approach to Pennsylvania's performance assessment system, stark differences become apparent. Alaska and Pennsylvania both desire for their schools to create life-long learners, yet the methods to achieve this goal diverge. Different student population sizes in both individual classrooms and schools in general play a huge role in the variations in the two systems. In 2011-2012, the average Pennsylvania class size for self-contained elementary schools was estimated to be over 27 students, while in Alaska for this same period there was an average of 13.4 students in self contained elementary classrooms (National Center for Education Statistics, 2012).

In many rural Alaskan schools there are not separate classrooms for every grade level. One teacher may instruct multiple grades in the same room, with learners at different stages in every grade. From our conversations with faculty members whom we visited in Bush Alaska, multiple grades in one room can make teaching a challenge and might be a contributing factor to the 30-40% annual teacher turnover rate in Alaska (Barnhardt, 2006). According to the National Center

for Education, the average national turnover for rate for teachers is 17%, and in urban school districts the rate jumps to 20% (Kopkowski, 2008). Thus, Alaska's turnover rate clearly exceeds those in the lower 48 states. Other factors such as climate and cultural differences might also contribute to Alaska's higher teacher turnover rate (Hill & Hirshberg, 2006).

Teachers in a standards-based system are accountable for all their students, no matter their level. Thematic units and personal education plans help teachers to manage their classrooms, but differentiated instruction is key. An example from a rural Alaska district school website stated, "An elementary math class may only have seven students but those students will most likely be spread out over two or three math levels and be moving at a different pace" (Lake and Peninsula School District, n.d.). Teachers in Alaska create individual lesson plans for each student's needs. During an observation of an elementary school math lesson in Bush Alaska, the children were sitting together at a table, using geometric shapes. Some of the students were learning the names of the shapes while others were counting the sides and measuring the angles. Each student appeared to be fully engaged, yet each was on a different academic level. A similar observation in a Pennsylvania classroom would be uncommon. Although differentiated instruction occurs in both systems, in Pennsylvania it is done as *part* of the teaching style while in Alaska it *is* the teaching style.

Another aspect to consider when comparing these education systems is social promotion, "where students are allowed to continue to pass through school with their peers without satisfying academic requirements or meeting performance indicators at key grades" (U.S. Department of Education, 1999, p. 4). Could this practice happen in Alaska's standards-based system? Most teachers we posed this question to in Alaska stated "It would be unlikely". Students must pass the standard on which they are working before they may move onto the next section within their grade, let alone into an entirely different grade. "Research indicates, and common sense confirms, that passing students onto the next grade when they are unprepared neither increases student achievement nor properly prepares students for college and future employment" (U.S. Department of Education, 1999, p.1). Social promotion often occurs in states that are looking to avoid remediation and would rather have the student move on "socially" with peers than stay in a grade and relearn content that will be beneficial to their future (U.S. Department of Education, 1999).

The unique classroom size and overall differentiation within Bush Alaska schools allow students to work at their own best pace and level of learning. The idea of socially promoting a student onto the next grade is uncommon in this context. The pressure to move a student along diminishes when everyone is working at his or her own learning pace. Under this system, a student's chronological age or grade descriptor is less relevant, while meeting prescribed standards is key to student advancement.

Transient students often pose problems in terms of academic progress, but in Bush Alaska the standards-based system works to minimize the disruption of moving from one school to another. For instance, an Alaskan teacher stated during our observations, "It is not uncommon for a student to live with their grandparents for an extended stay." When a student transfers from one school to another for this or any other reason, the expected standards apply at both locations, and the student must complete each standard with at least 80% accuracy. Thus, since students are accountable for certain standards in each grade level, they can pick up where they left off when they move from

one district to another. Often in the lower 48 states, including Pennsylvania, when students move from school to school, this type of consistency is not present. While the nascent Common Core initiative might address this type of shortcoming at some point and to some extent, Bush Alaska's standards-based approach has already demonstrated an effective means to keep transient students on track.

Bush Alaska's standards-based system also provides the flexibility to offer vocational education to students. For example, every student who lives in Bush Alaska has the chance to travel outside of his or her village to learn a trade through the Career Technical Education program. Participating students can earn college credit and use vocational skills in their village when they return. While undertaking vocational education away from home, these students are able to work at their own pace on academic subjects because of the established standards that exist in each knowledge area—a way of learning markedly different from traditional public education.

No evaluation approach is perfect, including the standards-based approach. From our observations and the comments of the faculty members with whom we visited, this system works best for those students who are motivated to learn and are willing to put in effort. However, students who lack internal motivation struggle to achieve standards and benchmarks. While standards-based education recognizes individual uniqueness by providing opportunities to pass content areas at a pace chosen by the student, these learning differences, including those attributable to lack of motivation, have a large effect on speed and movement of students through the Bush Alaska school system.

In comparison to most lower 48 public systems, where classes move on in a more formally paced fashion, standards-based students are accountable for knowing their content, no matter what time or personal pace is set. In fact, as one Bush Alaska teacher explained during our observations, students must be able to accomplish part one of a content area before moving on to part two, even if they are able to complete part two with a higher accuracy than part one. Conversely, during a conversation with a classroom teacher in Pennsylvania, the participant stated that teachers are "highly encouraged that in order to get ready for state testing and do their very best at remediation plans for struggling students, they must continue to move forward in the curriculum." Of course, as discussed above, social promotions, a bane of the more common evaluation systems, are not the norm in a standards-based system.

Standards-Based Education and the Alaska Environment

While Pennsylvania has rural areas, they tend to be less remote than Bush Alaska, and life's necessities are more readily at hand. Conversely, a Bush Alaska teacher stated during an observation, "It is not uncommon for a student to be absent from school because they are hunting for caribou in order to help feed the family." There are simply no grocery stores in most Bush Alaska villages at which to acquire food. In Bush Alaska, the standards-based evaluation approach provides the flexibility needed in the schools to adapt to these real-life circumstances.

Harsh environmental conditions—including isolation, extreme cold and snow, and the lack of amenities commonly found throughout the lower 48 contribute to not only a high teacher turnover rate as mentioned above but impact other school district functions as well. Alaska's remote,

sparsely populated school districts incur significant costs due to their isolation and extreme climate. Imagine the budgetary and logistical challenges of operating a school district the size of Minnesota with fewer than 1,500 students, and the only way for district staff to get from school to school is by airplane (Education Justice, 2015). Thus, from the perspective of school administrators, the standards-based system provides curriculum continuity despite teacher turnover and does so in what is arguably the most cost effective manner possible.

From our experiences in a rural Alaskan setting, the villages are not just a place for people to live—they incorporate a way of life. Many who live there have never lived outside the village, and a true family community was apparent in the villages that the team visited. This community dynamic is clearly different from what is found in the lower 48, including Pennsylvania, where moving into another county or state is not uncommon.

In Bush Alaska, community involvement is overflowing. The visiting pre-service teachers observed that a village school is not just a place for students to learn but is also the recreational gym, club host, and hub for school and community events. For example, in one of the schools, lunch is served to not only the students, but also to the elders in the community. K-12 students eat lunch with the very same people who make crucial decisions about the village. In one village, the parents came back to the school gym after classes to watch their children play basketball and then joined in on the game. Having a place that fosters such a vast array of activities allows everyone in the village to join in and become a part of the community.

A Standards-Based Approach for Pennsylvania?

Public schools in Bush Alaska reflect a combination of unique environment, culture, history, and educational practices, that include multi-grade classrooms and a standards-based evaluation system. Visiting village schools in this region was an eye-opening experience for the teacher candidates who undertook this journey. However, from a purely pedagogical perspective, it was the use of the standards-based evaluation system that the pre-service teachers found to be in stark contrast to their experiences in Pennsylvania schools. Upon completing her visit to Bush Alaska, one puzzled if not troubled pre-service teacher asked, "Which educational path is right, and which should be chosen?"

School districts in both Bush Alaska and Pennsylvania seek to educate their children and measure their results in doing so. However, as discussed above, the standards-based evaluation system in place in Bush Alaska appears to meet the needs of this unique educational environment. Whether it could (or should) supplant the more traditional evaluation system in Pennsylvania, which includes separation of classes based on grade and increasing reliance on standardized testing to measure educational progress and effectiveness, is open to question.

The old adage "one size doesn't fit all" seems to apply when attempting to answer this question. That is, what works in Bush Alaska might not work in Pennsylvania. However, Pennsylvania school districts may be remiss in not considering Bush Alaska's standards-based approach, notwithstanding the environmental and cultural differences that exist between these two geographic regions. In essence, a standards-based evaluation approach requires motivation and accountability for personal learning on the part of students.. It was clear to the visiting pre-service

teacher candidates that the classroom dynamics in Bush Alaska are far different from those with which they are more familiar in Pennsylvania, in large measure due to the Alaska village schools' emphasis on student motivation to learn and personal accountability for learning. Nevertheless, these characteristics are central to student success in any school setting, and for this reason alone, some incorporation of a standards-based approach to evaluation in Pennsylvania schools may be worth considering.

While the logistical problems of larger student populations in Pennsylvania may be an obstacle to widespread application of a standards-based evaluation approach, those subject areas that require students to master basic material before advancing to the next level would seem to be a natural fit, with mathematics being a good example. It is very difficult for a student to successfully move from one level of math to the next without first mastering the preceding level. Under a standards-based system, students would not be able to continue on to a higher math level without demonstrating adequate knowledge of the preceding level. Thus, student evaluation would be based upon mastery of specific content levels as opposed to performance on a cumulative standardized test.

In conclusion, Bush Alaska poses a unique environment in which to provide public education in terms of geography, culture, and student populations. A by-product of this unique environment has been the development and implementation of student evaluation, not based on testing performance, but rather on meeting established proficiency standards. This approach places a premium on student motivation and personal accountability for learning. Pennsylvania students would benefit from such an emphasis as well.

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The Impact of Professional Learning Communities on Student Engagement

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This article discusses the professional learning communities (PLCs) at an urban school in the northeastern United States that included middle and high school teachers and university researchers from a university in the northeast region. The objective of the study was to engage teachers in the PLCs of a practice model to increase student achievement. Prior research indicates that developing PLCs is one of the best ways to implement change in teaching methods in the classroom. Over the course of the 2013-2014 school year, the PLCs focused on five areas: student engagement, Common Core standards and implementation, assessment and differentiated instruction, writing strategies, and supporting special education and ELL populations. This article focuses on the student engagement PLC.

It is widely recognized that professional learning communities (PLCs) are one of the best ways to implement change in teaching methods in the classroom. "'Professional learning communities' or 'communities of practice' are the terms often given to schools in which staff members provide meaningful and sustained assistance to one another to improve teaching and student learning" (Joyce & Showers, 2002, p. 55). Through these opportunities, teachers obtain the time and resources that they need to discuss, observe, and reflect on learning models.

This study focused on the student engagement aspect of a year-long professional development (PD) program for teachers in an urban charter school in the northeast United States. PLCs were one component of this program. Teachers were matched with content matter experts from a local university who led various exercises regarding best practices for improving student outcomes. One of those exercises included a focus on student engagement, which is the focus of this article.

Supporting Research

Teachers are a significant resource not only to what students learn, but also how students learn. PD of teachers is one way to increase student achievement, but it needs to be offered in such a way that participants can be ensured success. Joyce and Showers (2002) propose,

> if a teacher or a community of teachers engages, for a dozen days during the school year, in the formal study of a curriculum area or a teaching strategy that is useful across curriculum areas, and regularly studies implementation and consequent student learning, then the odds are that student achievement will rise substantially. (p. 3)

A good PD plan that encourages teachers to make changes in their own classrooms must include time and opportunities for teachers to practice implementing the skills and strategies about which they learn.

According to Joyce and Showers (2002), when demonstration and practice are added to theory, teacher skills continue to rise. This finding gave the university facilitators of the PD under study reason to believe that implementing PLCs, which included theory development, practice in the classroom, and coaching by facilitators and each other, would have a positive impact on student achievement. Joyce and Showers (2002) also found that "a large and dramatic increase in transfer of training— effect size of 1.42— occurs when coaching is added to an initial training experience comprised of theory explanation, demonstrations, and practice" (p. 76). Since research also suggests that the teachers would transfer this knowledge into everyday practice, this plan incorporated coaching in addition to the explanation of what works.

Lack of student engagement is sometimes more pronounced in adolescents and urban minority students (Goodwin, 2000). "Research shows that engaged students experience greater satisfaction with school experiences, which may in turn lead to greater school completion and student attendance rates, as well as lower incidences of acting-out behaviors" (Voke, 2002). One aspect of the student engagement PD program was to have the teachers think from the students' perspectives; in response, they began to consider activities that would engage students. The PLCs focused mainly on work with the teachers, but the intent was to have this work effect student achievement.

It was the understanding of the university faculty that increasing student engagement during the school day would have a positive effect on student learning and achievement. The key beliefs that guided the stakeholders (teachers, administrators, and university faculty) during this PD program were based on the four conditions that Joyce and Showers (2002) suggest must be present if staff development is to significantly affect student learning:

1. A community of professionals come together who study together, put into practice what they are learning, and share the results.

2. The content of staff development develops around curricular and instructional strategies selected because they have a high probability of affecting student learning—and, as important, student ability to learn.

3. The magnitude of change generated is sufficient and the students' gain in knowledge and skill is palpable. What is taught, how it is taught, and the social climate of the school have to change to the degree that the increase in student ability to learn is manifest.

4. The processes of staff development enable educators to develop the skill to implement what they are learning. (p. 4)

The university faculty collaborating with this charter school focused on using the PLCs during the year-long PD as a way to allow the teachers the time to learn, discuss, and reflect on teaching practices that would impact student engagement, which in turn was intended to have an impact on student achievement.

Site and Participants

The urban charter school in which this study occurred was established in 2007. Of the 22 full-time teachers on the faculty, 12 had achieved a graduate degree. Two teachers were highly qualified in their fields, but they were not yet certified. According to the laws governing charter schools in Pennsylvania, at least 75% of teachers must be certified, and up to 25% of the faculty may be non-certified, but highly qualified, teachers.

Since the school's inception, its students have outperformed their peers from surrounding sending schools. In two of the three years of accountability, the school achieved adequate yearly progress (AYP). The school comprised students in seventh through twelfth grade and included students with learning and emotional disabilities. The school community focused on academic excellence and committed resources to curriculum alignment with the Common Core. The school leadership recognized that many of the incoming students lacked the necessary literacy skills to be successful across all content areas, so learning time dedicated to reading was added. While the school did not plan to grow in grades or enrollment, it did project growth in quality by improving PD, including PLC experiences for the faculty.

Professional Development Design

The PD plan presented here provided teachers with the time to discuss, implement, and study their teaching strategies. To bring a teaching model of medium complexity under control requires 20 or 25 trials in the classroom over a period of 8 to 10 weeks (Joyce and Showers, 2002). In this PD program, teachers were provided the opportunity to practice skills during an eight-week time period with the expectation that the skill would become part of each teacher's repertoire. Data were collected over each eight-week period and evaluated to provide teachers with the knowledge of whether they were implementing the new skills effectively. Ongoing evaluation and assessment of teacher effectiveness and student achievement were necessary to make decisions about implementation. This PD plan included bi-weekly observations during the school day and bi-weekly, one-hour PLC meetings during which teachers met in their peer content area groups.

Standards for Professional Learning

Learning Forward's (2011) seven Standards for Professional Learning guided the work in the PLCs. The first standard suggests forming PLCs. Teachers in the school created PLCs of five or six teachers in the same content area in order to understand the theory, discuss best practices, and reflect on student learning while implementing the knowledge and evaluating student learning to determine the extent of the implementation.

The second standard involves leadership. The school leadership had a vested interest in this plan. The leadership supported this plan and helped foster teacher buy-in. The teacher leaders were an integral part of the PLCs. They ensured that the PLCs were meeting, observing, and evaluating. The leadership participated in the in-service days.

Resources are an integral part of any PD plan, and making sure all the necessary resources were available was the third standard that guided this work. By implementing this plan, the school committed to the resources of time, expertise, and finances. The school provided the finances necessary to bring in the university faculty to lead the PLCs. The leaders also provided the time

for the teachers to meet on a bi-weekly basis. Teachers committed to the time they spent in PLCs. The teachers had buy-in in this process since they were part of the decision making process of integrating PLCs into the school culture.

Using data is the fourth standard in the Standards for Professional Learning (Learning Forward, 2011) and was a significant piece of the success of the PLCs. Teacher data were collected through surveys, small group sessions, whole group sessions, and questionnaires. Teachers collected data on student performance through writing assignments, unit tests, formative assessments and checklists of student behavior. The teachers were observed on a rotating basis every two weeks. All the data were discussed during the PLC meetings.

Learning design was the fifth standard to guide this work. The university facilitators provided theory- and evidence-based research in the five areas of the plan. The university faculty members that offered the PD spent multiple years as practitioners themselves. They were aware of the most current evidence-based practices for effective instruction. Cochran-Smith and Lytle (1999) state, "knowledge teachers need to teach well is generated when teachers treat their own classrooms and schools as sites for intentional investigation while considering knowledge and theory produced by others as generative material for interrogation and interpretation" (p. 250). Making these links was the intent of this PD plan. Teachers treated their own classrooms as a place for research and used extant theory in the field for the models or strategies for effective teaching. Once teachers in the school learned this process, the goal was for them to continue the process throughout their teaching careers without the support of the researchers.

Implementation was the sixth standard that guided the PLC work. The PD plan was determined the summer prior to the beginning of the school year. Implementation of the plan began the first day of school for the teachers. Change in teacher practice was expected to be slow and steady. By providing the same support over an extended period of time, in this case one year, it was expected the teachers would implement many of the best practices on a regular basis by the end of the school year.

The final standard outlined in Learning Forward's (2011) Standards for Professional Learning is outcomes. Outcomes for teachers and students were evaluated in this study. Teachers were observed by the university faculty on a rotating basis throughout the year. These observations were not official observations, but were a time for coaching and reflection in order to increase teacher effectiveness. Student achievement outcomes were based on results of the annual Pennsylvania State System of Assessment (PSSA) in reading and mathematics.

In the PLCs, the school teachers studied together, learned strategies, and reflected on what happened in their classrooms. The content covered during the meeting days included evidence-based instructional strategies that have been shown to improve student learning. The topics were established based on the results of a teacher survey that had been given at the end of the prior school year. The time given to the teachers during the school day to meet, discuss, observe and reflect provided teachers with opportunities to develop the skills necessary to implement what they learned.

High-Quality Staff Development Criteria

This PD plan included the necessary components of high-quality staff development. The school teachers worked with experts in content knowledge and pedagogical skills. They had the opportunity to practice these skills and researched the results. The staff had the time to implement this process during the school day with the help of colleagues and administrators. The plan included the criteria that Sparks (2002) identified for high-quality staff development:

- Focused on deepening teachers' content knowledge and pedagogical skills;

- Included opportunities for practice, research, and reflection;

- Embedded in educators' work and takes place during the school day;

- Sustained over time; and

- Founded on a sense of collegiality and collaboration among teachers and between teachers and principals in solving important problems related to teaching and learning.

Content Areas

University facilitators with content area expertise led bi-weekly PLC discussions on five topics over the course of the school year. The PLCs focused on each of these topics for eight weeks at a time.

Classroom management, classroom behavior, student engagement. This topic was discussed during the initial in-service prior to the start of the school year and is the main focus area of the study discussed here. Since management, behavior, and engagement are crucial to student achievement and important to start and maintain throughout the year, it was chosen to be the first topic of the PLCs. Results from the teacher survey showed they wanted deeper training in this area. The charter school already had a positive behavior support plan in place. This plan was reviewed and implementation of the plan was discussed. At the bi-weekly PLC meetings, teachers reflected on the strategies they implemented to improve student engagement.

One of the strategies that most of the teachers found easy and effective to employ was beginning the class with a warm up. The teachers at the charter school used "Do Now" as common language (Elias, 2013). As students entered the classroom, they were expected to read the "Do Now" instructions on the board and get to work. A "Do Now" assignment was typically a five-minute activity that allowed the teacher to take attendance and prepare the checklist/data sheet to incorporate the positive behavior support plan the school implemented. The activity might be a review of the previous day's topic or a way to involve students in the new topic being introduced. This time was important because it decreased the amount of time it took students to engage in the course material.

The teachers discussed having difficulty with student collaboration. Some of the teachers did not use collaboration in the classroom for fear of students being off task and discussing other topics rather than the topic at hand. Teacher fears and concerns were validated. More discussion on the importance of teaching students to collaborate and having expectations for each member of a group were helpful in giving teachers the confidence to try collaboration. In observations of the classrooms over the eight-week period, teachers began to implement student work groups and

collaborative activities. The skills learned and the strategies implemented during this eight-week session continued through the entire school year.

Implementing the Common Core standards. As of July 1, 2013, school districts were expected to implement the new Pennsylvania common core standards for English/language arts and mathematics. New literacy standards for reading and writing in the content areas were also introduced. The second eight-week session focused on the different content areas. PLCs were rearranged according to content area. Teachers of English were all in the same PLC, teachers of mathematics were in the same PLC, etc.

Assessment and differentiated instruction. Teachers in this charter school identified assessing students and differentiating instruction as an area of need in which they wanted to learn more effective strategies. For this eight-week PLC, teachers were grouped according to their area of instruction, similar to the groups for the Common Core Standard PLC. They were grouped by content area across grade levels.

Writing strategies. This topic was chosen based on the teacher survey and supported the strategic plan on preparing students to be ready for college and careers. One of the issues seen at the college level is poor student writing (Eberly Center, 2015). Writing skills can improve student achievement. Writing a summary reflection of a required reading also demonstrates comprehension. The new Common Core standards also require writing in the content areas. The thought was that if all the teachers were implementing writing strategies in their classrooms over an eight-week period, improvement in student writing should result. During the PLC meetings, student writing samples were evaluated to determine areas that need scaffolding and additional instruction. The teams decided, based on evidence-based research, how often students should write and what instructional strategies best meet the needs of the students.

Supporting special education and ELL populations. The strategic plan of the charter school included closing the achievement gap. The teacher survey showed teachers wanted tools/strategies to improve instruction when working with students with IEPs and students where English is their second language.

Program Goals

There were four main goals for the year-long PD initiative. First, the program sought to engage teachers in PLC practice. Teachers are used to working individually in their own classrooms. Research has shown that working in small learning communities helps teachers to implement new initiatives and strategies (DuFour & Eaker, 1998; Joyce & Showers, 2002). Teachers needed to understand PLCs, why they are important to the PD process, and how to work collaboratively in these communities.

Second, the program was designed to increase teachers' use of evidence-based effective skills/strategies in the classroom. There is a difference between research-based practices and evidence-based practices. An evidence-based practice has been shown to be effective in improving student achievement. While a research-based practice might be grounded in theory, it does not necessarily mean the practice has been shown to be effective. The university faculty members who implemented

the PD program were aware of evidence-based practices and provided the knowledge and theory necessary to help the school teachers use these evidence-based strategies in the classroom.

The third goal of the PD program was to increase student achievement in the areas of reading, math, and writing. The overarching goal of this PD initiative was for teachers to implement strategies in the classroom that would increase student achievement. Reading, math, and writing are integral parts of all subject areas. Improvement in these areas would lead to improvement in the other curricular areas as well. Preparing students for college and careers means making sure that their reading, math, and writing skills are developed to the best of the students' abilities.

The fourth and final goal was to provide teachers with the time and resources to implement an effective PD plan. Each part of this PD plan was important to its effectiveness. Often, plans are started with high expectations, and daily struggles within the school get in the way of continuing the plan. It was extremely important that teachers were provided with the time and resources to implement their plans so as to accomplish the ultimate goal of increased student achievement.

Professional Development Implementation Activities

The activities and learning experiences included in this PD plan were directly related to the school's strategic plan and the needs identified through the teacher survey. The plan relied heavily on the use of PLCs. Research supports the use of PLCs, and they were also the avenue of choice of the teachers.

The PD plan was divided into three phases during the school year. Teachers received four full days of professional development before the school year began (Phase I). PLC meetings subsequently were held after school on a bi-weekly basis (Phase II), and full-day or half-day in-service sessions on topics chosen by the teachers were provided every eight weeks (Phase III). The entire plan is described here, although the focus of this particular study was on student engagement, which was the first eight-week PLC topic.

Phase I: In-Service Prior to Start of School Year

Day 1. This half day of in-service training included activities that encouraged the teachers to build a team and work together. This training was provided by a university faculty member. The school leadership team shared the school vision and the the overall PD plan, and the teachers voted on how to group the PLCs. The teachers and administrators agreed the best way to group the PLCs would be by content area, with English and humanities in one group, science in a second group, mathematics in a third group, and social studies in another group.

Day 2. The second half-day of in-service concentrated on teaching and learning in the digital age for the twenty-first century and student engagement. This study focused on this particular piece of the year-long PD program. This session was provided by a university faculty member and was an information session on the latest evidence-based practices for using technology and improving student engagement. During the training, teachers read and discussed de Frondeville's (2009a) article, "How to Keep Kids Engaged in Class," in which he presents 10 rules of engagement: (1) start class with a warm up, and have the students expect to be engaged as soon as they enter the room; (2) get the students up and moving at some time during the class to help them refocus; (3) have students practice collaborating together before expecting them to do it well; (4) after a

discussion or activity that might increase activity, have students write a summary or prediction to help bring quiet to the classroom; (5) when giving instructions, have a routine to make sure everyone is quiet and focused on the teacher; (6) establish a system to ensure all students get to answer questions and participate; (7) teach students to use a signal when they have an answer, and make sure everyone gives the signal before taking the answer; (8) ask students to discuss class topics with a partner, review vocabulary words, or complete a similar task during times when papers are being passed out or there are a few minutes of downtime; (9) rotate between teacher instruction and student-centered instruction; and (10) during group work activities, expect the students to check with other members of the team before coming to the teacher. During this PD, teachers discussed each of the ten ideas and how they might implement them over the next eight weeks.

Day 3. The next half-day in-service training engaged English/language arts, social studies, and science/technology teachers in discussion on incorporating Pennsylvania's new Common Core literacy standards. Concurrently, a half-day in-service program led mathematics teachers in discussion on incorporating the new Common Core math standards. These sessions were provided by university faculty members. Teachers that did not teach these courses were welcome, but they not required to attend.

Day 4. On the final in-service day before the beginning of the school year, a university facilitator provided a two-hour presentation for all teachers on evidence-based writing strategies for adolescents. Another university facilitator provided a two-hour presentation for all teachers on best practices, modifications, and adaptations for special education students and ELL students. A focus on students with emotional behavior disorders was offered because of teacher requests for information in working with students with these issues. A facilitator also offered an additional two-hour presentation for special education teachers on Response to Intervention (RtI) and progress monitoring.

Phase II: Bi-Weekly PLC Meetings

Teachers discussed ways to form PLCs during the first of the in-service days before the start of the school year. The teachers determined it would be best to assign PLCs based on content areas. Those PLC teams met every two weeks throughout the school year. The PLC groups remained the same throughout the year, but the topics that they addressed changed every eight weeks. A specific topic was discussed, observed, and reflected upon every eight weeks. Five topics were covered over the course of the year: (1) classroom management, classroom behavior, and student engagement; (2) implementing Common Core standards; (3) assessment and differentiated instruction; (4) writing strategies; and (5) supporting special education and ELL populations. During PLC time, a university faculty member assigned to the group was available to discuss issues, provide deeper learning and help the teachers reflect on their practices (Sparks, 2002, p. 55). To help with implementation, the faculty member also engaged in classroom observations and coaching throughout the eight-week period.

Phase III: Full-Day or Half-Day In-Service

Full- or half-day in-service sessions provided by the university faculty were offered at the end of each eight-week period. These sessions provided an opportunity to reflect on what had occurred over the preceding eight weeks. The topics for the sessions were similar to the topics for the PLCs. Teachers did not feel that they needed additional in-service training on the Common Core standards, but rather they wanted to focus on effective instructional strategies. Thus, the original plan of including another in-service day on Common Core was replaced with an in-service program on homework. Below are descriptions of the in-service sessions that concluded each eight-week period.

Student engagement. During part of the full-day PD session, teachers were asked to read de Frondeville's (2009b) "Ten Steps to Better Student Engagement": (1) foster a safe and supportive environment, (2) establish multi-leveled activities, (3) create an interactive and engaging environment, (4) scaffold activities so all students can learn, (5) encourage student reflection of their learning, (6) establish an environment that encourages multiple ways of, (7) help students become aware of their prior knowledge, (8) remember to call on various students randomly and not just the same ones over and over, (9) practice using the draft and revision approach to assignments, and (10) help students see how their assignments relate to their everyday lives. Teachers discussed the article and how they might begin to implement the suggested strategies. the use of small groups allowed for more open sharing of effective and ineffective strategies.

Working with students who are emotionally disturbed. For this half-day PD session, an overview of the characteristics of students with emotional/behavioral disorders was given, as were descriptions of the different types of disorders that fall into this category, including bipolar, obsessive-compulsive, conduct, anxiety, and psychotic disorders. Small groups of teachers were given case studies of students with emotional disorders. Each teacher in the group was given a role to play in the case study, and each group acted out a classroom scenario. A group discussion followed to determine which teacher behaviors escalated and deescalated student behaviors.

Assessment and differentiated instruction. During this full-day PD, participating teachers were given a survey to identify how they currently differentiate instruction and use assessments in the classroom. The results of the survey were used to determine areas of need for support and development. Also, in small groups teachers participated in a cooperative controversy exercise. They were asked to read "Grading for Success" (Tomlinson, 2001). The teachers were divided into two groups and were asked to debate the issue of differentiated grading. A discussion and reflection followed with a role play that encouraged them to be reflective on understanding differentiated grading from different viewpoints.

Writing. During part of this full-day PD, teachers were led through an exercise in argument writing that they could use with their students. Teachers were provided a picture of a scene in which a man appears to have fallen down the steps, along with a short narrative describing the events that led up to the fall (Hillcocks, 2011). A graphic organizer with three columns was used. In it, the teachers wrote down the evidence obtained from the narrative and the picture, describe the rule that determines whether or not it is evidence, and create a conclusion that was drawn from the evidence and rule. Teachers implemented this activity in their classrooms, and their students used

graphic organizers to write argument pieces on whether they believed the scene was an accident or a murder.

Homework. In this full-day PD, teachers were asked to respond to a series of questions regarding homework practices. A discussion of homework practices and alternative approaches happened in small groups, and best practices were then shared with the whole group.

Evaluation

Over the course of the year, the PLCs focused on five areas: student engagement, Common Core standards and implementation, assessment and differentiated instruction, writing strategies, and supporting special education and ELL populations. Each of the five PLCs was evaluated during and after each eight-week focus period. This study concentrated on the student engagement activities and learning experiences of the PLCs. Evaluation included classroom observations, teacher interviews, and focus groups with stakeholders. During the eight-week PLC on student engagement, every two weeks two teachers from each PLC were selected to be observed by the PLC university leader on the implementation of the student engagement training in which they had participated. On the same day as the observations, teachers and university facilitators met for one hour after school in their PLCs. During this focus group time, specific questions were asked of the teachers to identify areas of success and areas of concern in implementing strategies specific to student engagement.

Teachers also met individually with the university facilitators for one-on-one interviews. It was at this time that specific concerns regarding student engagement became apparent. Even though the PLCs were designed to be a safe place in which teachers could share their concerns, sometimes the teachers wanted to share issues in confidence rather than in the PLC. Since this study only focused on the student engagement phase, only the results of observations, interviews, and focus groups related to that phase are shared here. In addition, since the strategies implemented during this PLC phase were incorporated throughout the entire year with the hope of affecting student achievement, the PSSA results are also shared. Other studies will follow that focus on the other PLC areas.

Findings

The first eight-week PD program covered student engagement. In a survey prior to the school year, this topic was selected by 30% of the teachers as the topic that would be most effective in improving their classroom practice. Prior to the school year, but after the initial in-service, teachers met in their PLCs with the university facilitator with corresponding content area expertise. During the PLCs' bi-weekly meetings, teachers discussed the issues they experience with student engagement in the classroom. It is interesting to note that the teachers were more concerned with engagement than behavior issues at the beginning of the year. Behavior became an issue later in the year, which is not uncommon in schools (Marzano & Marzano 2003; Stormont, Reinke, Newcomber, Marchese, & Lewis, 2015).

After the eight-week sessions were completed, teachers met to discuss and reflect on strategies that were implemented, and they reported success with multiple strategies. It ended up that some of the strategies were used for behavior issues, and some were used to engage students. Some

of the strategies used to address inappropriate student behavior included changing student seats, using non-verbal cues (walking toward students, tapping student on the shoulder), using verbal warnings, counting backward from five to one, using negotiation, and talking to the student one-on-one.

Throughout the eight-week student engagement PLC, the university partners became aware that the teachers did not see a difference between student behavior and student engagement. It took some time and multiple discussions before some of the teachers were seeing differences in student behavior due to changes in classroom activities that provided the students with opportunities to interact with their peers as well as the teacher. Where some teachers were timid in allowing small group activities and project based learning for fear of students misbehaving, the same teachers trusted the PLC relationship and shared their fears and concerns and tried the strategies with some immediate success. In particular, one teacher who was worried about introducing hands-on activities was observed teaching students to understand author's purpose using art and having students discuss what they saw in a variety of pictures. Students were actively engaged and what may have appeared to be "noisy" to the teacher, he soon realized it was active engagement and not only were the students interacting appropriately, but they were learning and understanding how to apply author's purpose in a variety of genres. By the end of the eight-week PLC on student engagement, they began to see the differences and how focusing on engagement could actually improve behavior. To assist in grasping the difference, the teachers revisited de Frondeville's (2009b) ten steps of student engagement. Due to the needs of their students, some teachers focused on creating an emotionally safe environment and an intellectually safe classroom. Teachers discussed using punishment for student misbehavior vs. using positive influences. Teachers who were already proficient at creating an emotionally safe classroom shared that they had more success by highlighting the students who were involved and participating and trying to ignore some of other students' inappropriate behavior.

Some teachers were ready to work on cultivating student engagement in their classrooms. They wanted to focus on getting all students involved and actively participating. One teacher introduced the idea of peer help with certain assignments and shared that it was very successful in getting a struggling student to participate. The same teacher also asked students to be classroom helpers by handing out and collecting papers, which allowed students who have difficulty sitting still the opportunity to get out of their seats. Another teacher included flashcard games and discovered that her students enjoyed the competition and studied in order to win the game. She also learned that a student who slept a lot in class did not sleeping during these types of activities.

Another strategy used by some of the teachers was to group students differently depending on the activity. Teachers discussed different ways to group students and the pros and cons of grouping. Many of the teachers wanted to have students work in small groups, but they were afraid that the work would not get finished and/or the behavior would be too difficult for them to handle. During one of the after-school PLC meetings, teachers shared how they teach students to work in groups and how they practice the necessary skills. After discussions in the PLCs, other teachers felt comfortable enough to try an activity with small groups. Teachers that tried group work reported that it was successful, and student engagement was positive.

Pennsylvania System of School Assessment Results

While this study cannot directly connect students' standardized scores to the professional development of teachers, the eighth-grade students' Pennsylvania System of School Assessment (PSSA) results showed increases in reading, writing, and mathematics skills from their seventh-grade year. This group of students was the same student population from the year prior to the introduction of the PLCs. The PSSA categories are Advanced, Proficient, Basic, and Below Basic, in ranked order.

According the school's PSSA report for seventh and eighth graders (in 2014, eleventh graders no longer took the PSSA), there was a decrease in the number of students in the Below Basic category for reading and an increase in the number of students in the Advanced category. In 2013, 31 students were Below Basic, and in 2014, 16 were Below Basic. In 2013, four students were Advanced, and in 2014, 24 students were Advanced. The vast majority of students who tested in the Basic and Proficient categories were similar in both years.

The PSSA report for seventh- and eighth-grade writing indicated that fewer students remained in the Below Basic level, and more students entered the Proficient level. In 2013, 26 students were Below Basic, and in 2014, 11 students were Below Basic. There were 63 students in the Basic category in 2013 and 55 students in 2014. In 2013 11 students were in the Proficient category, and in 2014 that number increased to 33.

Mathematics PSSA testing also enjoyed similar outcomes. The categories of Below Basic and Proficient had similar results from 2013 to 2014. However, there were 26 students in the Basic category in 2013 compared to 10 students in 2014. Additionally, 12 students achieved the Advanced category in 2013, while 34 students were in Advanced in 2014.

Although the proportion of students in the Proficient and Advanced scores are still below the state averages, it appears there was an overall improvement in moving students from the lower levels (Basic and Below Basic) to the higher levels (Proficient and Advanced).

Discussion

The PLCs were implemented at this charter school to support the teachers' use of evidence-based practices to positively impact student achievement. Although the PD plan continued throughout the entire school year and covered five different topics, this study focused on the evidence-based practices of student engagement that began with the first eight-weeks. Teachers were encouraged to use these strategies throughout the entire school year. Teachers were eager to try the suggested strategies since it was a topic that they deemed important. Teachers freely participated in activities around the differences between behavior and student engagement. Discussions ensued around trying some of the strategies and reporting on the results.

While all new models of engagement in education, such as PLCs, may begin with enthusiasm and support, sustaining the effect or maintain lasting impact of the new model can be a challenge. To help ensure that the PLCs would have a lasting impact after the first year, it was important that the partnership had the administration's support, teachers' receptivity, and time necessary for critical reflection on the process on the PLC concept's purpose and merits. Steps that were taken to help support the lasting impact of the PLC in this partnership were the shared creation of the

year-long topics on the part of the teachers, administration, and university faculty; forging strong ties between the content faculty and the university faculty; and providing time for reflection on a regular basis for teachers to share and reflect on the various practices.

The sharing of information between teachers was vital to this process. It is important to note that the university facilitators all had experience teaching in schools and spent time building rapport and trust with the teachers with whom they worked. This factor was important in the teachers' "believing" the information being shared. Having the teachers share previous experiences of what worked in the past was also extremely important. The teachers were building their own culture of safety that would allow them to come to each other for advice when they were having difficulty.

The focus of the PLCs was on teachers feeling safe and comfortable in trying the strategies and being able to ask for support when necessary, which helped the PLCs have a common mission from the beginning. Another focus was on supporting true collaboration of the PLCs within and among all content areas. The administration emphasized supporting teacher collaboration with the university facilitators during the academic year and beyond. Teachers appreciated the time provided and the expertise shared by the university faculty members. Strong relationships were forged between the university facilitators and the teachers. In fact, their collaboration is ongoing in year two and has led to greater support and trust between the partners thus leading to even richer collaborations.

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Practitioner's Page:
Gifted Education: A Change is Brewin'

Wendy Palese
Mechanicsburg School District

Change: It's the only constant in education. As I recently sat in the audience of a high school production of *Mary Poppins*, the musical, I was awed as Mary floated in with her umbrella. The line that prefaced that great moment went something like this: "Winds in the east, mist coming in. Like somethin' is brewin' and about to begin. Can't put me finger on what lies in store, but I fear what's to happen all happened before." It's funny how this quote could be taken straight out any experienced educator's handbook.

The change that has been "brewin" in gifted education is well overdue. The idea behind the much debated Common Core focuses around more rigor in the classroom. Love it or leave it, challenging students is key. Gifted educators have approached teaching in this way for years, looking at the present curriculum and providing students with the opportunity to explore its concepts in more depth. However, while gifted educators have been focusing on the depth and pacing of curriculum concepts for a long time, much of a school district's focus has been not on the extension of concepts, but the remediation of these concepts.

While it is certainly important to help those students who are struggling in the classroom to meet grade-level expectations, a change in attitude is slowing emerging. It is becoming equally as important to nurture a district's academically highest performing students as well. It is no longer acceptable to assume that those students will do fine on their own, or expect the gifted students to be self-motivated and independent learners. This wind of change is encouraging to educators of gifted students.

To allow our gifted learners to become all that they truly can be and achieve goals that even they were not aware were within their reach, takes a quality educator with the passion to advocate for the student and administrators who believe that gifted education is worth the effort. Now that administrators are beginning to see the importance of not just having all students achieve, but also growing as learners, the focus turns to what this change will look like at the ground level. Helping gifted students to grow academically is no longer a job for a single teacher. With gifted caseloads growing as we continue to have a better understanding of the multitude of data that we are collecting on each student, it is no longer acceptable to visit a student once a week for 30 minutes to provide an enrichment activity, and then return the student to their regular class to proceed with grade level material. More and more, gifted teachers are becoming coaches and even cheerleaders for the regular education teachers. Providing ideas, lessons, materials, and encouragement to the

classroom teacher is key in ensuring that the gifted student is challenged throughout the day—every day.

Flexibility is vital in helping these students to grow academically. A gifted educator has to be able to sift through data and teacher input to develop strategies that will reach each student individually. Differentiation is challenging, but being able to provide the classroom teacher with ways to make it a bit more attainable is imperative. Not only does a gifted educator have to be flexible and able to interpret data, but perhaps first and foremost, much like *Mary Poppins*, he or she has to be a "people person" who is strong willed and skillful, yet understanding and caring. When the classroom teachers feel that they have an ally on their side, and the students feel like they really matter, anything can happen. Classroom teachers become willing to try something new, and students give their best, even when they are working independently.

Yes, somethin' is brewin', and this change is well deserved for our gifted students. No longer will they get lost in the background of education, left to their own devices to grow as a learner. With the support of administrators who see the importance of growth for all students, gifted support teachers are embracing the change and looking forward to what the future brings for these remarkably talented students.

About the Author

Wendy Palese is currently in her tenth year with Mechanicsburg School District where she serves as the gifted support teacher at Mechanicsburg Middle School. Wendy is a member of the Pennsylvania Association for Gifted Education (PAGE), the National Association for Gifted Children (NAGC), and Pennsylvania Association for Middle Level Education (PAMLE). She has spoken on using practical strategies to promote gifted education in the classroom, written and reviewed gifted lessons for the PA Standards Aligned System website, and directs enrichment camps for students throughout the year. She bases her philosophy on gifted education around the idea that gifted education should be "different" not "more." She can be reached at wpalese@mbgsd.org*.*

Practitioner's Page
Meeting in the Middle: Forming Partnerships Between Home and School

Michelle Minotti
Parkland School District

Middle school is a pivotal time in an adolescent's life—a transitional time of "coming of age" socially, emotionally, and physically during which the student must also engage in high-stakes testing. There are many pieces of the puzzle that middle school students need to begin to put together. Given this mix of changes and pressures, it is imperative for the middle school principal to assist the school community in understanding the importance of educating the whole child.

Today middle school is more challenging than it was 10 years ago. There is more pressure to demonstrate academic growth in the Pennsylvania System of School Assessment (PSSA) for through sixth, seventh, and eighth grades, as well as to demonstrate proficiency on Keystone exams. Pennsylvania's Core Standards (PA Core) are more rigorous, with high expectations for students to excel. Students are also applying more creativity, collaboration, critical thinking, and communication as they delve into career pathways to consider their postsecondary opportunities. A recent study by the American Psychological Association (2014) showed that "on average, teens reported their stress level was 5.8 on a 10 point scale, compared with 5.1 for adults" (p. 2). This finding does not surprise me as I reflect on students who are feeling pressure academically while trying to balance outside activities and maintain a solid presence on social media.

In light of all these challenges, strong parent partnerships are needed more than ever to bridge the gap between home and school. Fortunately, I work in a progressive school district with visionary leaders and an extremely supportive school board. We are very data driven, but we understand the human aspect of our job, which is to help students to learn and grow every day.

During the 2013-2014 school year, the Parkland School District completed its Comprehensive Plan. Although the plan identified many areas in which both middle schools had to grow, one area in which both schools had already achieved success was our school climate, including our parent partnerships. I am blessed to work with a leadership team that understands the importance of not resting on our past laurels; we must consistently strive to ensure that students, teachers, and the parent community are informed about developments in our schools. Although we do fulfill this responsibility well, we still want to improve.

For example, we established a Parent University program five years ago, which was developed by a team of administrators, teachers, and parents from both middle schools to address growing concerns in our buildings. Marzano (2003) emphasized offering workshops to involve parents and help their children be successful. We sent out a survey and asked parents for topics of interest,

available meeting times, and any contributions they would have for this educational context. Such topics included nutrition, cyber bullying, top ten parenting strategies for middle school students, drugs/alcohol awareness in the Lehigh Valley, transitional opportunities to high school, college and career readiness, and district technology resources to maximize opportunities.

Some of our most well attended evenings have been on cyber safety, including an FBI agent and a special agent for the Pennsylvania Attorney General's Office. Attendance at these meetings did not exceed 150 parents, however. Our middle school enrollment is 2,252, so this showing is actually rather poor. Although I understand that parents are busy, such low participation concerns me because the issues that pervade the school often originate outside of school. The school community can create educational videos to provide parents with knowledge about cyber safety, math and reading literacy, and other topics that will help students succeed in school. This initiative may solve the problem of "informing" but we also must continue to create a partnership and model "community" so our parents—and ultimately, our students—feel that they are part of something special.

During the 2014-2015 school year, the Parkland Middle Schools implemented the Olweus Bullying Prevention Program (Olweus, 2007), which we titled "Take a Stand." There are four components to this program: a school-wide kickoff, classroom discussions, individual interventions, and community awareness. We created a historic event bringing both middle schools to Parkland High School to listen to a motivational speaker and a band, as well as to participate in a pep rally led by the PHS cheerleaders. Congressman Charlie Dent was present for this epic event, as were Matt Szuchyt, representing Sentator Pat Browne, and Representative Michael Schollsberg. All students had blue "Take a Stand" shirts, which they continue to wear for class discussions on "Take a Stand" Tuesdays.

This program has provided an opportunity for students to share concerns with teachers, counselors, and principals. This openness has made us realize the concerns in our building and the importance of mentoring. It has also made us realize that we cannot fix this problem on our own. For example, alarm bells go off for me when girls sit in my office crying because after 500 likes on Instagram, one boy types "Eww," and they are crushed for days. These girls are bright, ambitious young ladies who are letting themselves be defined by what people say about them. The most recent website that the students shared with me was Ask.FM, which is an anonymous bullying site. Between [KIK](#), [Instagram](#), [Facebook](#), [Twitter](#), [Snapchat](#), and [Ask.FM](#), students are consumed with what others are saying about them. In a recent survey of 10, 000 youths, "7 out of 10 young people said they were victims of cyberbullying, which was also found to have catastrophic effects upon the self-esteem and social lives of up to 70% of young people" (No Bullying, 2014). Gone are the days when you disagree with someone at school and leave it at the front door. Now, it stays with students all day and night.

The staff of Parkland Middle Schools has been working hard to guide students to understand why it is imperative to be respectful, but parents need to relay this message as well. There is a consensus that a comprehensive anti-bullying program may help in addressing the problem (Ockerman, Kramer, & Bruno, 2014). Although we have taken this step, it is also recommended to continue to

build layers of partnerships with family and community members to have interconnected strategies to ensure adolescents are safe and ready to learn (Ockerman, Kramer, & Bruno, 2014, p. 11).

Parent partnerships within a school culture have been researched for decades. In 1978, Lawrence-Lightfoot revealed what she called the "invisible but pervasive presence of families" (p. 10). Lawrence-Lightfoot's ethnographic studies recognized the disconnect between school and family. Her foundational work suggested that "families and schools can feel comfortable and unthreatened in their separateness only when they know each other well, when there are no hidden mysteries behind the walls, and when communication and interactions can be spontaneous and substantive" (Lawrence-Lightfoot, 1978, p. 189). These overlapping spheres of influence, as Epstein (1990) theorized, are the complex interrelationships between school, family, and community partnerships. These spheres represent forces in a child's educational experience, including philosophy, policy, practice, and pressure from different constituents. The spheres overlap at different times in a child's education, primarily at the preschool and elementary levels. Although the spheres begin to separate in middle school, some secondary schools maintain an overlap (Epstein, 2009). Parent involvement has been linked to increased student attendance, decreased discipline problems, and higher student aspirations (Baker & Stevenson, 1986; Fan & Chen, 2001; Henderson & Mapp, 2002; Henry, 1996; Hoover-Dempsey & Sandler, 2005; Lawrence-Lightfoot, 1978; Smith, 2011). Despite research and policy on the topic, in practice, parental involvement diminishes when students begin sixth grade (Brough & Irvin, 2001; Epstein, 1997, 2005; Jackson & Davis, 2000).

EdSource's large-scale study (2010) suggested that "middle grades are the last chance to identify students at risk of academic failure and get them back on track in time to succeed in high school" (p. 2). Studies on the perceptions of parents, principals, and teachers (Epstein, 1997; Lloyd-Smith & Baron, 2010; Smith, 2011) show that parents want to be involved beyond conferences. So how do we engage them? In 1997, Epstein, Coates, Salinas, Sanders, and Simon defined six types of involvement for comprehensive parent partnerships:

Type 1—Parenting: Assist families with parenting and child-rearing skills, understanding child and adolescent development, and setting home conditions that support children as students at each age and grade level. Assist schools in understanding families.

Type 2—Communicating: Communicate with families about school programs and student progress through effective school-to-home and home-to-school communications.

Type 3—Volunteering: Improve recruitment, training, work, and schedules to involve families as volunteers and audiences at the school or in other locations to support students and school programs.

Type 4—Learning at home: Involve families with their children in learning activities at home, including homework and other curriculum-linked activities and decisions.

Type 5—Decision making: Include families as participants in school decisions, governance, and advocacy through PTA/PTO, school councils, committees, and other parent organizations.

Type 6—Collaborating with the community: Coordinate resources and services for families, students, and the school with businesses, agencies, and other groups, and provide services *to* the community. (National Network of Partnership Schools, n.d.)

The challenge is helping parents find the right fit to feel "at home" at school and provide strategies to help them support their children at home. Some strategies include parent workshops on topics that will impact their child's academic progress as well as safety, social, and emotional growth; electronic school communications such as Parent Teacher Organization (PTO) updates and links and event reminders via text; and access to important school district information including district technology resources, which are updated regularly on the website. Some strategies for teachers are interactive homework for students to collaborate with parents, teacher-created screen casts to guide parents on how to assist with homework, and opportunities for parents to be involved in the classroom or with team activities such as a Medieval Day or a Multicultural Awareness Program. These are just a few strategies that work for me, but there are many others noted in *Promising Partnership Practices* (2014), an annual collection of successful parent partnership strategies from National Network of Partnership Schools (NNPS).

During the April 2015 Education Policy Fellowship Program (EPFP)[1] seminar in Washington, DC, which is the culminating national conversation on educational issues and policy of the EPFP experience, Doris Terry Williams, Executive Director of the Rural School and Community Trust, emphasized how every school needs to figure out what works in its community. She said, "Show me one community school, and you've shown me one community school." This simple statement reminded me how important it is to establish a team to create goals, action steps, and progress monitor for each school.

Being a middle school principal is a challenging opportunity, balancing managerial and leadership tasks. It is a gift to interact with all stakeholders who impact a student's learning—teachers, parents, students, guidance counselors, assistant principals, cafeteria staff members, bus drivers, nurses, office staff members, and community members. Each relationship that is built creates cohesiveness and strength. As my parent community continues to grow and demographics change, I am faced with finding new opportunities to "teach," or educate parents on what is happening at school, and "touch," or find ways to bring parents into our school community.

Upon reflection, I can honestly say that we are getting there. Despite days when I feel frustrated with the rapid changes imposed on us by the Pennsylvania Department of Education, I am joined by an incredible leadership team and inspiring educators who will do just about anything to guide students to succeed. I am blessed to see the "a-ha" moments in the classroom or through working with students to improve behavior.

In our corner of the world, I am confident that we are making a difference one student at a time. Maya Angelou (n.d.) once stated, "Do the best you can until you know better. Then when you know better do better." I often share this sentiment with my students. As I research parent partnerships and school effectiveness and apply what I have learned, I hope to improve our programs and create

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[1] EPFP is a 10-month professional development opportunity offered through the Education Policy Leadership Center. Participants must apply. More information can be found here: http://www.eplc.org/leadership-programs/education-policy-fellowship-program/about-the-program/

more opportunities for parents to be engaged and confidently guide their children through the middle years. As a result, I started a conversation on Twitter, via #MSMIM (Meeting in the Middle), to learn more from all stakeholders how to create stronger parent partnerships and improve student learning. I also plan to schedule parent and/or principal chats in the near future.

As middle school teachers, counselors, and administrators try to balance the weight of effective transitions, it is important to remember that the bridge we build has tons of supports. Each time we engage and communicate with parents, we strengthen this safety net for our students and build greater connections so they are prepared for high school and beyond. Ultimately, our vision is for them to live authentic, happy lives and give back to our community.

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Practitioner's Page:
Using a Professional Learning Community Framework for Sustained Professional Development

Tracy A. McNelly and Constance DeMore Palmer
Norwin School District

In the movie *Field of Dreams*, an Iowa farmer hears voices whispering, "If you build it, he will come." Later, he hears, "Go the distance." In the end, the farmer heeds the voices' advice and builds a baseball field so the prophecy comes true. A lesson learned from *Field of Dreams* is that we should listen to the advice of those closest to us. We did so when we decided to build a model of professional development and peer coaching based upon our teachers' advice. Simply, we believed that to "go the distance" and "build" a model most appropriate for our secondary program, we needed to allow our teachers to guide its development. In the end, many willingly and happily embraced the opportunities to enhance their practice.

Our model of coaching grew because of our need to provide sustained professional development to a large group of teachers, and it is quite different from what most educators think about when they hear "coaching." Initially, when we considered using a traditional coaching model to provide job-embedded professional development to foster the sense of collegiality necessary for teachers' professional growth (Hargreaves, 1994), we failed to realize that our teachers were not ready for such a drastic cultural change. When we suggested using coaches to observe and model instructional strategies, collect data, and provide feedback on ways to strengthen lessons, teachers appeared apprehensive.

Determined to go the distance and ease our teachers' concerns about employing a traditional coaching model, we first reviewed literature on professional development, which uncovered common themes about effective programs. In sum, professional development should be sustained and intensive, allow for or include teacher reflection and collaboration (Darling-Hammond, 2000; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 1997), support classroom practices, and involve collaboration with experts (Stein, Smith, & Silver, 1999).

By reviewing literature, assessing our culture, reevaluating the traditional model of coaching, conversing with teachers, and determining attainable goals, we framed a more suitable model of professional development. Instead of using coaches to work with individual teachers to improve their pedagogical skills, our coaches assist small groups of teachers with their implementation of professional development initiatives. This model of professional development systematically addresses what is best for our students and teachers, encourages interactions among teachers so deprivatization of practice and active engagement become the norm, and is grounded in best practices.

Our Model

Our model relies upon the work of classroom teachers who assume leadership responsibilities in planning and implementing a professional development initiative. Our teacher leaders form a Leadership Cadre comprised of teachers from various content areas who become experts in an area of professional development. Working in small professional learning communities, teacher leaders facilitate sustained professional development to all subject area teachers of grades 7 through 12. Although research recommends involving experts in the implementation of professional development (Stein et al., 1999), our teachers typically do not respond favorably to professional development workshops facilitated by outside providers or even their own district administrators. Our teachers' disapproval of "outside experts" is consistent with some educators' assertions that professional development should remain strictly site-based (Willis, 2002). Consequently, our teachers, and not outside professionals or district administrators, lead our professional development.

Three pieces of our model occur simultaneously: training, coaching, and professional practices. Guiding the three pieces is a set of beliefs. First, we believe that learning occurs through socialization. Therefore, our model provides many opportunities for professional dialogue among teachers. Second, we think that educators should continue to grow professionally at all stages of their careers. Hence, our teachers are encouraged to provide evidence of growth through professional portfolios and modeling. Third, we understand that professional development should be sustained and focused, which is why we focus on the same professional development initiatives over multiple school years and make adjustments according to feedback that we receive from teachers.

Training

The success of a professional development initiative depends largely on the planning that is done long before teacher training begins. Our planning begins with the selection of a group of teacher leaders who become our Leadership Cadre. Teachers apply to become part of the Cadre and are selected by central office administrators based on a variety of attributes, including the capacity to lead peers and the ability to communicate effectively. Leaders are paid a minimal stipend, are required to attend a number of professional development training and planning sessions, and must commit to leading and coaching a group of teachers through the initiative.

Within the Leadership Cadre, a core group of teachers is then selected to provide direction to the whole Cadre. This core group is provided extensive training by experts in our professional development initiative. These experts typically hail from local universities or intermediate units. For example, when the district embarked on a professional development program in Reading Apprenticeship, we sent a core group of teachers to be trained locally by an intermediate unit and sent teachers to a national training.

As part of the intensive training, the core group spends time framing the district's professional development. This process includes mapping how information will be disseminated over three to five years and identifying big ideas for monthly training sessions within each year of the initiative. Additionally, the core group considers and plans for all logistics, including teacher accountability, the development of make-up sessions, and the collection of anecdotal and survey data. During the

summer months before a new school year begins, selected members of the Leadership Cadre plan for and facilitate a two-day workshop for all Cadre leaders who will be responsible for coaching colleagues throughout the year. In summer training sessions, the core Cadre members provide other members of the Leadership Cadre training in the professional development initiative with an emphasis on what leaders need to know to coach other teachers throughout the school year. For example, during one summer workshop, our core leaders introduced the Leadership Cadre to Understanding by Design, with a more intense focus on Stage 1 to begin the first year of the initiative (Wiggins & McTighe, 2005). Most recently, core Cadre leaders focused on effective summative assessment practices.

As part of the summer training, the Leadership Cadre discusses how to introduce the professional development initiative to the entire teaching staff. During summer, time is also spent on the development of a training model designed specifically for the group of teachers that each Cadre member will coach. For example, the Cadre leaders who facilitate the high school English department training would choose resources and communicate information differently than Cadre leaders who coach the middle school math department. Differentiation and flexibility allow the Leadership Cadre to meet the needs of individuals in the group while maintaining the integrity of the professional development initiative.

The training process for the Leadership Cadre and the core group continues every year until the professional development initiative is completed. We have been fortunate throughout the years to maintain a majority of the same Cadre leaders through the duration of each initiative. This consistency helps to sustain our professional development and provides smoother transitions from one year to the next.

Coaching

Once trained, the Leadership Cadre begins to coach content-specific groups of colleagues during regularly scheduled, uninterrupted monthly training sessions that occur during two-hour early dismissal days. During the monthly training sessions, the Leadership Cadre members, with support from building administrators, deliver the professional development, using a formative assessment learning cycle (Moss & Brookhart, 2012). First, small bits of new information are provided to teacher groups. For example, early during the 2014-2015 school year, one of the monthly training sessions focused on writing effective selected response questions. After new information is delivered, Cadre members work with small teacher groups in a guided practice session. For this particular session, groups had to work together to develop selected response questions for a fairytale. During guided practice, Cadre members provide teachers with feedback. Guided practice is also a time when teachers can collaborate with Cadre leaders and colleagues for the purposes of planning lessons in accordance with the initiative; engaging in professional dialogue; sharing resources; and ultimately, enhancing their practices. For instance, after leaders first taught their colleagues how to employ a "talking to the text" strategy as part of the Reading Apprenticeship program, they then assisted teachers in planning lessons that included that strategy, and assisted in finding appropriate, content-related text to use. The last phase of the formative assessment cycle requires teachers to implement the professional development independently. It is our objective that teachers perceive professional development as more than just a series of strategies that are add-ons

to current lessons. Instead, we hope that teachers recognize professional development as a way to reframe their thinking about teaching and learning. When teachers return for training the following month, the Leadership Cadre plans time for sharing and reflection of practice. Cadre leaders use a series of guiding questions that provide scaffolding for group discussions. Examples of questions that might be used during reflection and sharing are:

- How did you use each strategy to ensure the integrity of professional development initiative?
- How has training influenced your approach to lesson planning?
- What worked and did not work in your lesson?
- How did students react to the lesson?
- Did your modeling have an impact on the effectiveness of the lesson?
- Were students able to demonstrate proficiency in your learning target?

Essentially, these content-specific groups led by the Cadre form professional learning communities, comprised of colleagues who rely upon one another for their professional growth.

Professional Practices

Teachers grow to understand that professional development is not an event—but something that should occur continually within their practice. As such, our model for professional development includes a number of ways teachers can extend their understanding of the year's professional focus. Upon school board approval, for example, teachers may attend relevant conferences or workshops conducted by experts in the field. Additionally, teachers can further their own professional development by observing colleagues' lessons during the school day. Teachers take responsibility to schedule the non-evaluative observations with peers within their own and other content areas. Both current and past professional development initiatives are the focus of the observations; teachers identify best practices and reflect upon how they might adapt what they observed for use in their own classroom. Although the teachers' reflections of the observations are confidential, we find many teachers sharing with one another and conducting informal conferences following the observations. Teachers can also choose to study independently by extending their professional knowledge base, engaging in action research, or taking a teacher-led class on a topic of choice that will benefit them professionally.

Finally, Cadre leaders also serve as traditional coaches when they are invited to assist in lesson planning, modeling instructional strategies, or observing colleagues' use of strategies in their respective classrooms. The purpose of these practices is to offer teachers control of their professional development so they might continue learning in a differentiated manner that applies specifically to their respective work and students.

The last scene in *Field of Dreams* shows a long line of cars inching slowly toward the newly constructed baseball field to watch the game: the vision of one Iowa farmer played out in reality. Our vision, sustained professional development delivered by teacher leaders in small learning communities, also became a reality. Like the farmer, we decided to "go the distance" by listening to the teachers who remain most knowledgeable about their students' needs and effective classroom practices. We sought teachers' advice to determine the model of professional development most

appropriate for our district's culture. By maximizing teachers as our greatest resources, we built a model of professional development based upon coaching and collaboration.

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An Invitation to Write for
Pennsylvania Educational Leadership

Erin McHenry-Sorber and Kathleen Provinzano - Co-Editors

Pennsylvania Educational Leadership (PEL) is the professional journal of the Pennsylvania Association for Supervision and Curriculum Development (PASCD).

Pennsylvania Educational Leadership (PEL) is a peer-reviewed journal that accepts manuscripts year round. Topics address the interests and concerns of Pennsylvania educators at all levels. We welcome a wide variety of manuscripts including (but not limited to) single study inquiries, qualitative and quantitative research, theoretical and conceptual pieces, historical analyses, literature reviews, action research, and first-person narratives. Beginning spring 2014, the journal began including a Practitioner's Page highlighting the voices, thoughts, and opinions of educators in the field. Submissions for the Practitioner's Page can take a variety of formats including (but not limited to) book reviews, policy reviews, and critical reflections on current educational issues and trends. Individuals choosing to submit to the Practitioner's Page should follow the same submission guidelines as those submitting manuscripts with the exception of the abstract. Authors must also indicate that the submission is intended for the Practitioner's Page on the cover sheet.

Manuscript Submission Guidelines

Manuscripts should be emailed to the co-editors, Erin McHenry-Sorber (West Virginia University) and Kathleen Provinzano (Drexel University) at editor@peljournal.org. All submissions are reviewed by at least one of the editors. Submissions evaluated as appropriate for review are then sent to three readers for blind review.

Manuscripts should follow the guidelines set forth by the American Psychological Association.

Before submitting a manuscript to PEL, please consider the following guidelines carefully.

1. Your manuscript should be submitted as a single Word document and include these items:

   - Cover sheet
   - Abstract
   - Body/text
   - Tables, charts, and figures (if applicable)
   - Reference list

2. The manuscript should be typed in 12-point font, Times New Roman, with one-inch margins. The text should be double-spaced.

3. The cover sheet should include the title and author information, including contact information for the primary author, including mailing address, email address, and phone number. On this page, the author should indicate that the manuscript has not been submitted elsewhere for publication. If the manuscript involves the use of human subjects, the author should indicate whether Institutional Review Board approval has been granted unless deemed exempt.

4. The second page of the submitted manuscript is the abstract page. The abstract should be 150 words or fewer. The abstract should include the purpose of the manuscript and essential findings or discussion points.

5. The author(s) should remove from the body of the text any references that might be self-identifying to ensure blind review of the manuscript.

6. The reference list will follow the body of the text and any tables, charts, or figures. Please be sure to check that all in-text citations match references in the list and that the list is properly formatted using the APA guidelines.

Questions regarding a possible submission, submissions under review, or submissions requiring revision can be directed to the editors via the PEL e-mail address listed above.