Monitoring What We Value:
Center for Leadership and Educational Equity
Program Outcomes 2017

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Center for Leadership and Educational Equity

Introduction

The Center for Leadership and Educational Equity (CLEE) is a non-profit organization dedicated to creating equitable outcomes for all students by providing leaders with professional learning and support. The Center runs two leadership development programs: the Principal Residency Network (PRN) and the Learning Leader Network (LLN).

Established in 2000, the PRN is a residency-based administrator certification program approved by the Rhode Island Department of Education to recommend graduates for PK-12 Building Administrator Certification. The PRN's mission is to prepare educational leaders who champion educational equity through leadership of innovative schools for the purpose of increasing educational equity. The PRN has three pathways to allow a wide range of intensive residency arrangements: the Classic one-year pathway, the Leader of Record alternative certification two-year pathway, and the Extended Time two-year pathway.

The LLN was established in 2005 and is a transformational professional development program that engages Rhode Island school and teacher leaders in learning communities that skillfully provide crucial feedback and support to one another on leadership practices that increase educational equity for all students. The LLN runs multiple leadership development programs, including a statewide Critical Feedback Group, Facilitating Professional Learning Communities Institutes, Communities of Practice, and district strategic planning.

Both the PRN and LLN provide pivotal experiences to increase educational equity for a wide range of leaders, including teacher leaders, aspiring principals, assistant principals, principals and central office leaders. A belief that guides all CLEE programs is that skilled and courageous leaders play a critical role in increasing educational equity. CLEE defines educational equity as eliminating the predictability of student outcomes based on categories such as race, socioeconomic status, learning needs, and language by raising the achievement of all students while narrowing the gaps between the highest and lowest-performing students on fair and varied measures. Further, CLEE believes that equity-oriented educational leaders are not born; they grow through powerful learning experiences like those used in the PRN and LLN. The programs that CLEE has developed provide leaders with essential tools to increase equitable outcomes. The key values of CLEE can be seen in the distinguishing characteristics displayed in Table 1. Further, testimonials, like the one below, from experienced leaders are included throughout the report.

> *High levels of student achievement and engagement is always the aspirational goal for dedicated and talented educators. CLEE believes and promotes attainment of that goal by creating safe environments in which educators can talk things through, gain new perspective, challenge one another's thinking and always walk away having learned something that will move students forward.*
> **- Carol Blanchette, Chief for Teaching and Learning, Rhode Island Department of Education, LLN Participant**

Table 1

CLEE Distinguishers

> The use of:
>
> - Continuous cycles of inquiry and research to inform decisions, improve practice, and increase our impact.
>
> - Communication and networking to foster a supportive, collaborative community.
>
> - Shared leadership to empower all board and staff members.
>
> All CLEE programs, research and initiatives:
>
> - Embolden educators to impact equitable outcomes and practices.
>
> - Build diverse democratic learning communities that drive equity.
>
> - Impact ways to develop human capacity for sustaining transformational communities.
>
> - Develop a broad array of leadership roles across diverse educational contexts.

CLEE also conducts research on the outcomes and characteristics of preparation programs, professional development, and school program designs linked to educational equity. CLEE's research is both centered around the organizations work and is for other organizations and schools. This report and the study it represents is an example of the organization's research activities.

Purpose

A significant part of CLEE's research activities have been focused over the last 8 years on developing a robust process for data-based improvement that improves the quality of CLEE programs, and contributes to the larger research base. As part of this, the organization has moved from conducting intermittent program evaluations (Braun, Billups & Gable, 2013; Center for Leadership and Educational Equity, 2010) to building the infrastructure and capacity for ongoing cycles of consistent data collection, inquiry and use. The impetus for the year-long project that culminated in this report was to build the capacity of CLEE staff, with the guidance and support of a research consultant, to develop an extensive database and a protocol for collecting, analyzing, and reporting the data. This method of using the process of evaluation to build sustainable capacity is supported by the utilization-focused evaluation model (Patton, 2002).

While some aspects of this report are similar to what has been reported in past program evaluations, this report represents a tremendous effort to systematize data collection around challenging key indicators. Two long-term outcomes that have been difficult to monitor in the past were tracked and analyzed, and are present for the first time in this report. The first is the multi-year student achievement data (see section titled, *Impact of CLEE-Trained Principals on Student Achievement Statewide*) that allowed for the inferential analysis of the ways and extent to

which students in schools lead by PRN schools perform compared to those lead by non-PRN graduates. In the past, state assessments needed for this analysis have changed frequently and sample sizes of our graduates have been small when comparing across specific contexts (e.g., urban middle schools). These challenges had previously made analyses using inferential statistics impossible. While some limitations in sample sizes are still present, this study contains exciting new data on the outcomes of the PRN and has allowed the organization to establish a complex database to continue collecting and analyzing regularly.

The second long-term outcome that CLEE was able to measure and analyze for the first time is a critical long-term outcome for the organization, the degree to which CLEE-trained leaders are closing intraschool (within school) achievement gaps to accelerate equity. From 2013-2015, CLEE worked with Center for Research and Evaluation at the Johnson and Wales University's Alan Shawn Feinstein Graduate School to establish a data collection and analysis protocol, including a survey (Billups, Braun & Gable, 2016), to enable the results reported in the section titled, *Outcomes for Team and Principal Leadership Development*.

Organization of Document

The remainder of the report is divided into two major sections. The first section focuses solely on outcomes related to CLEE's principal preparation program, the PRN. The second section is primarily focused on CLEE's professional development program, the LLN. However, the results on the degree and ways that leaders and teams closed achievement gaps includes data for both participants trained in the PRN and the LLN.

CLEE has been a tremendous resource for me both professionally and personally. I have had the privilege of being a mentor three times. Each experience was unique and I learned as much as I was able to teach. Each cadre of participants creates it's own culture and everyone brings something different to the group. The one constant is the CLEE leadership and the use of protocols to frame our work. These two ingredients are the foundation for the most powerful professional development experiences I have had. I have become a much more reflective leader because of my work with CLEE. This work has stretched my thinking and helped me examine my own biases. All of this work is done in a safe and supportive environment.
- Laurie Weber Andries, Assistant Superintendent, Coventry Public Schools. PRN Mentor, LLN Participant

Outcomes for Principal Preparation Program

The Principal Residency Network (PRN) is a principal preparation program of the Center for Leadership and Educational Equity. The program was initiated in 2000 as a state-approved administrator certification program featuring an intensive residency with a mentor principal and a cohort structure. The PRN has continuously identified, implemented, and refined the research-based practices identified in Table 2 through ongoing efforts to collect and evaluate data for the purpose of program improvement (Braun, Billups & Gable, 2013). For a more extensive discussion of the theoretical framework and literature that supports the principal preparation practices used by the PRN, see Braun, Gable, & Kite (2011a; 2011b).

Table 2

Essential School Leader Development Practices and Supporting Literature

Practices	Supporting Research and Reviews of Literature
• Standards-based content	Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Orr, 2006; SREB, 2006; USDOE, 2004
• Coherent and relevant curriculum	Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Orr, 2006; SREB, 2006; USDOE, 2003
• Individualized content	Jackson & Kelly, 2002; Leithwood & Jantzi, 1996
• Focus on shared instructional leadership	Darling-Hammond et al., 2007; Elmore, 1999; Jackson & Kelly, 2002; Leithwood & Jantzi; 1996; Orr, 2006; SREB, 2006
• Focus on transformation and social justice	Jackson & Kelly, 2002; Darling-Hammond et al., 2007; Leithwood & Jantzi, 1996; Orr, 2006; Ross & Berger, 2009; SREB, 2006
• Authentic learning in residency and/or role	Breidenstein, Fahey, Glickman, & Hensley, 2012; Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Leithwood & Jantzi, 1996; SREB, 2006; USDOE, 2004
• Problem-based learning	Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Leithwood & Jantzi, 1996; Leithwood et al., 2004; Orr, 2006
• Mentoring or coaching	Breidenstein et al., 2012; Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Leithwood & Jantzi, 1996; SREB, 2006
• Cohort structure	Breidenstein et al., 2012; Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Leithwood & Jantzi, 1996; USDOE, 2004
• Habit of reflection	Breidenstein et al., 2012; Leithwood & Jantzi, 1996; SREB, 2006
• Performance assessments	Jackson & Kelly, 2002; Leithwood & Jantzi, 1996; Orr, 2006; SREB, 2006; USDOE, 2004

Recruiting and Selecting High Quality Candidates

The PRN has a rigorous selection process and research-based criteria for admission, which has been found to be critical to high quality school leader preparation (McCarthy & Forsyth, 2009). To ensure a large pool of potential candidates, extensive recruitment is conducted for each cohort. Typical cohorts of admitted applicants have grown over the years to 16-22 aspiring principals per year selected out of approximately 100-150 potential candidates. During the recruitment phase, all the interested candidates are asked to complete a survey to describe why they are interested in the program. Figure 1 shows the results of the last four years.

PRN is selecting from a candidate pool that is motivated to become change agents for educational equity through a rigorous, hands-on experience

Figure 1 displays that the top reasons candidates are interested and apply to the PRN are to (a) learn to lead for educational equity, (b) to lead school transformation and (c) for the hands-on experience. These consistent results affirm that the candidates that are the best match for the goals and mission of the PRN are being drawn to the program. Further, these results show that the PRN is selecting from a candidate pool that is motivated to become change agents for educational equity through a rigorous, hands-on experience.

0 - Not at all Important 1 - Somewhat Important 2 - Important 3 - Extremely Important
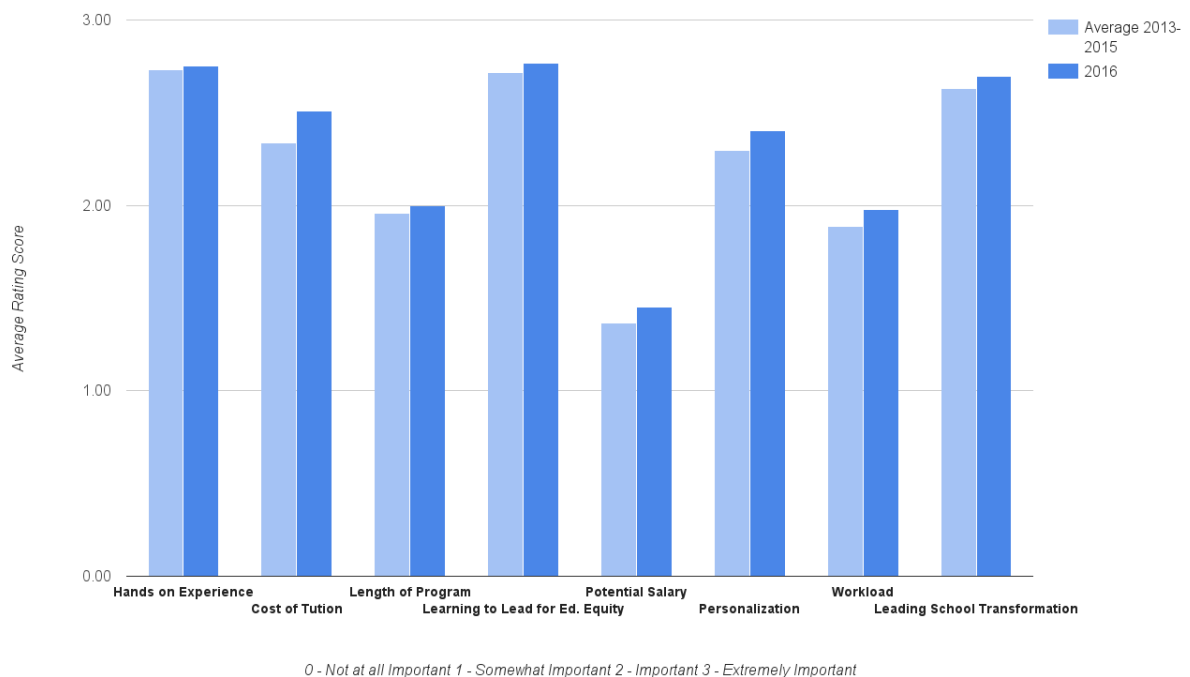
Figure 1: Reasons candidate apply to the PRN. Scale is 0 = Not at all Important, 1 = Somewhat Important, 2 = Important, and 3 = Extremely Important.

Graduates Obtaining and Retaining Leadership Positions

The PRN has continuously monitored completion data and the positions that graduates assume after completing the program. From 2000-2016, the program has maintained a 99% completion rate. As of fall 2016, 92.3% of the 143 graduates have been hired into school and/or district leadership roles. The remaining 7.7% did not apply for or advance into leadership positions after graduation, but rather remained teacher leaders.

92.3% of the 143 PRN graduates have been hired into school and/or district leadership roles

Research from across the United States indicates that the national rates for attainment of a school or district leader position for students who complete an administrator preparation program are between 48% - 67% (Fuller, Reynolds, & O'Doherty, 2017). The PRN rate of attainment and retention is well above this national range.

The types of leadership roles as of fall 2016 the graduates (*N*=143) have assumed are displayed in Figure 2. The vast majority (86.8%) of graduates are currently in school administration (68.4%), district administration (12.5%) or specialist (5.9%) positions in Rhode Island. Nearly all of the graduates in district leadership and nonprofit/higher education leadership, were first in principal and/or assistant principal positions. Further, of the 92.3% that have been hired into leadership, 95% have remained or been retained in leadership positions.

Figure 2: Roles of PRN Graduates as of 2017.

Approval Rating by State Department of Education

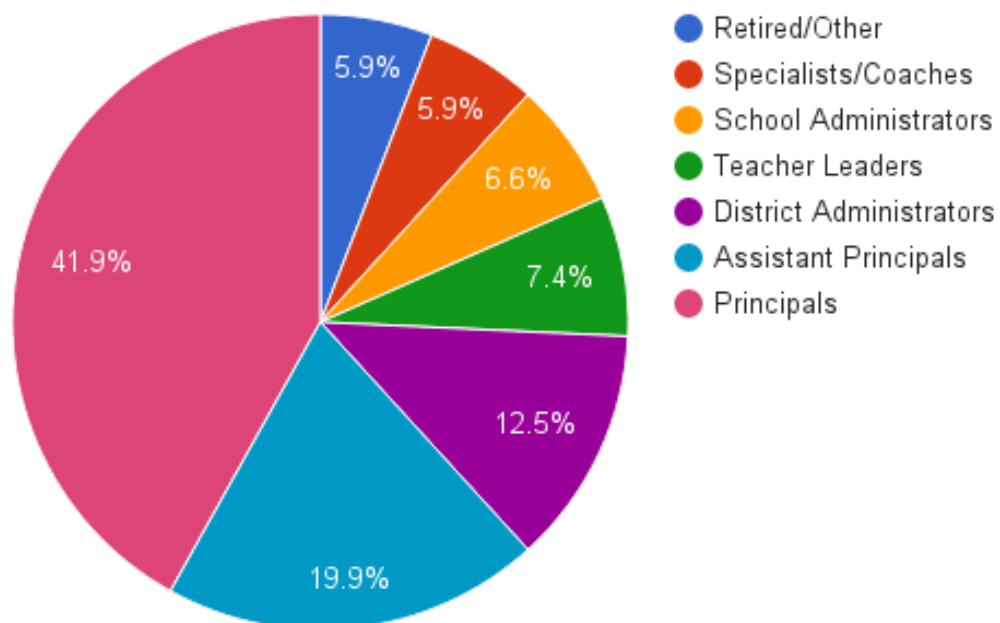The PRN undergoes a regular review process by the R.I. Department of Education (RIDE). RIDE has a rigorous, standards-based approval process to determine an approval rating for a preparation program by using multiple sources of evidence. For the last two review periods (2010 and 2015), the PRN was awarded the highest, maximum approval. In 2015, the PRN earned the designation, approval with distinction, from RIDE.

PRN earned the designation, approval with distinction, from the RI Department of Education

Perceptions of PRN Effectiveness by Graduates

The main quantitative method used to monitor the graduates' perception of the quality of the PRN in preparing them to lead is through the *PRN Graduate Survey.* The survey has been administered to all graduates after they have graduated and been in leadership for one or more years. As Table 3 displays, the survey has been administered five times and the samples from the first three administrations (2001-05, 2006-09 and 2010-12) included multiple cohorts. As the cohorts have increased in size, the last two surveys were administered annually (2014-15 and 2015-16), approximately one year after the cohort graduated. The results displayed in Table 3 are from the items that asked participants to rate on a 5-point scale the degree to which each of the program experiences and assessments gave them the knowledge and skill to be prepared to lead for equity in schools. The list is ordered by the ranked means of all five survey administrations for each experience (the last column in Table 3).

On average across all administrations, over 90% of the program experiences have been rated by graduates as preparing them to lead for equity a *considerable* or a *great extent.* Notably, the highest rated PRN learning experiences across all survey administrations are: *Internship at school*, *Learning relationship with mentor*, and *PRN Advisor visits and feedback*. All three of these speak to the importance of the authentic learning that occurs through the residency with supportive mentoring and coaching from the mentor and advisor.

the highest rated PRN learning experiences across all survey administrations are:
Internship at school*, *Learning relationship with mentor*, and *PRN Advisor visits and feedback

Table 3

Mean Graduate Ratings on Degree Experiences Prepared Them to Lead for Equity

	2001-05 Survey N=21	2006-09 Survey N=6	2010-12 Survey N=14	2014-15 Survey N=14	2015-16 Survey N=12	All Surveys N=67
Internship at school	5.0	5.0	4.8	4.7	4.7	**4.8**
Learning relationship with mentor	4.4	4.8	4.6	4.6	4.6	**4.6**
PRN Advisor visits and feedback	4.7	4.6	4.6	4.4	4.5	**4.6**
Action Research	4.4	4.4	4.4	4.8	4.4	**4.5**
Required readings	4.5	4.4	4.5	4.2	4.4	**4.4**
Meetings with Aspiring & Mentor Principals	4.5	4.2	4.5	4.2	4.4	**4.4**
Vision Paper	4.5	4.4	4.3	4.3	4.5	**4.4**
Final Exhibition and feedback	4.3	4.4	4.5	4.2	4.1	**4.3**
Mid-year Exhibition and feedback	4.1	4.4	4.7	4.3	4.1	**4.3**
Portfolio, review, and feedback	4.7	4.4	4.0	4.1	4.1	**4.3**
Final Paper and feedback	4.4	4.2	4.4	4.2	4.2	**4.3**
Reflections	4.3	4.6	3.9	4.1	4.5	**4.3**
Meetings with Aspiring Principals only	4.5	3.6	4.7	4.3	4.4	**4.3**
Learning Plan	4.6	4.2	4.1	4.1	4.2	**4.2**
Mid-year Aspiring Principal Paper/Assessment	4.1	4.2	4.3	4.0	4.1	**4.2**
Visits to other schools	4.1	4.2	4.0	4.5	4.3	**4.2**
Non-PRN trainings	4.4	4.6	4.1	3.8	3.6	**4.1**
Mid-year Mentor Paper/Assessment	4.0	4.4	3.9	3.7	4.0	**4.0**
Final Mentor Ratings	4.0	4.0	3.8	3.9	4.2	**4.0**
Feedback Circle	3.5	3.6	4.1	4.2	4.1	3.9

Note. Scale for all items: 1=*Not at all*, 2=*a little*, 3=*somewhat*, 4=*a considerable extent*, 5=*a great extent.*

Impact of CLEE-Trained Principals on Student Achievement Statewide

Methodology

A data set of the state-administered assessment (Partnership for Assessment of Readiness for College and Careers) scaled scores in English Language Arts (ELA) and math by school from 2014/15 and 2015/16 for all students and for the subgroups of English Language Learners (ELL), Special Education (Sp.Ed), Social-Economic Status (SES), and Ethnicity/race was obtained from the Rhode Island Department of Education for all Rhode Island schools. The school-level student achievement scores were added to a CLEE database of all Rhode Island principals, and coded as lead by a principal or assistant principal who was a PRN graduate or lead by a principal who was not a PRN graduate. Coding was also applied to indicate if the same principal was in a school during the 2014/15 and 2015/16 school years so that some of the analyses could control for differences due to changes in principals.

While the PRN has been increasing in cohort size and number of graduates ($N = 143$) over the last 16 years of operation, the sample sizes were still too small on some of the analyses to allow for inferential statistics to be used. In these cases, descriptive statistics are presented. The reasons for lower sample sizes are that some PRN graduates have retired, advanced into district-level positions, and/or transferred to new schools during the 2014/15 or 2015/16 school years. Further, sample sizes dropped too low to be analyzed when attempting to control for important correlates with students achievement (grade level, urban/suburban location) by comparing like groups. Therefore, statistical techniques like analysis of covariance (ANCOVA) were used to assess differences on the 2015/16 assessment for the entire data set while controlling for initial differences on the 2014/15 assessment. That is to say, any differences in the findings for the 2015/16 data would not be due to initial differences between comparison groups for the 2014/15 data.

The PRN provided the fertile ground to grow my confidence and knowledge as a leader. This program creates leaders who put student achievement front and center of all decision making. Students have been successful because they have a leader who builds the relationships with their teachers to challenge ideas and find ways to support their learning. My success at both the building and district level as an instructional leader is due to the strong and lasting relationship I have had with this organization over the past fifteen years.

- Pauline Lisi, Assistant Superintendent, South Kingstown School District, PRN Graduate, CLEE Board member

Demographics of Schools Lead by PRN Graduates and Non-PRN Graduates.

Figures 3 and 4 display the demographics of grade level and degree of urban context for schools lead by PRN graduates and non-PRN graduates. The data include only schools that the principal had been a leader in the school for at least 2014/2015 and 2015/16. There are higher percentages of PRN graduates leading in secondary schools than elementary schools (Figure 3). Also, there are lower percentages of PRN graduates leading in schools categorized as urban ring, than urban or suburban locations (Figure 4).

Figure 3. Percent of Schools Lead by PRN Graduates (*N* = 35) Compared to Schools Lead by Non-PRN Graduates (*N* = 35) by Grade Level. Note: Only schools that the principal was the same in 2014/15 and 2015/16 are included.
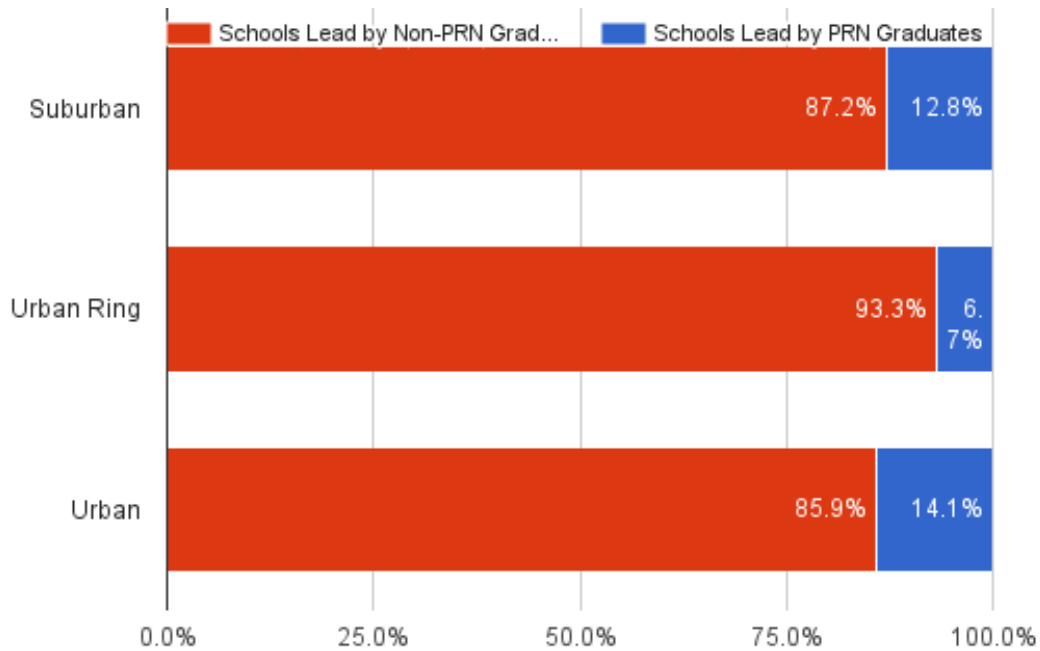
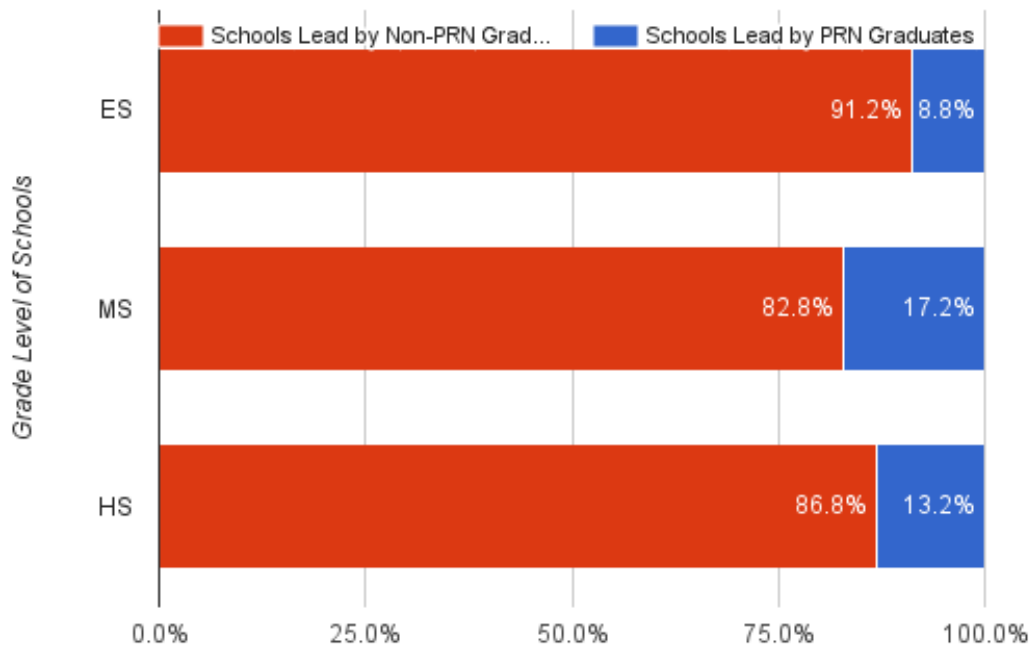

Figure 4. Percent of Schools Lead by PRN Graduates (*N* = 35) Compared to Schools Lead by Non-PRN Graduates (*N* = 35) by School Context. Note: Only schools that the principal was the same in 2014/15 and 2015/16 are included

Differences Between Schools Lead by PRN Graduates and Non-PRN Graduates for the All Students group on the 2015/16 PARCC Assessment.

Like the data represented in Figures 3 and 4, the data on the mean student achievement scores includes only schools that the principal had been in the school for at least 2014/15 and 2015/16. The descriptive results are represented in Figure 5 by the mean scaled scores of all students in the schools lead by PRN graduates ($N = 33$) and non-PRN graduates (N = 233). Schools lead by PRN graduates had higher overall means than those lead by non-PRN graduates for both ELA and math in 2014/15 and 2015/16.

While Figure 5 is descriptive only, the next analysis tested to see if the difference in the 2015/16 means was statistically significant by using ANCOVA to control for initial 2014/15 differences. The ANCOVA adjusts the 2015/16 means based on any initial differences in the 2014/15 means. If the 2015/16 means are statistically different, one can assume that it is not due to initial differences in the 2014/15 means. This helps to control for differences from variables like grade level or location (urban, suburban, urban ring) which could have contributed to initial differences in the 2014/15 achievement data.
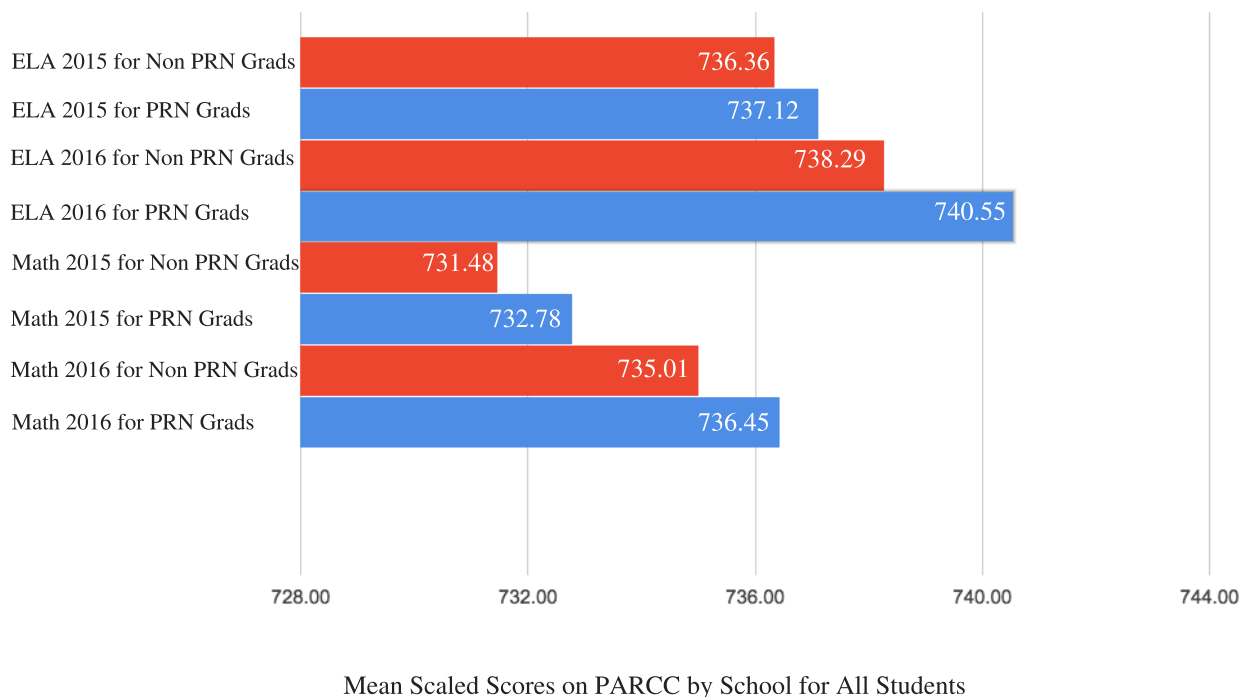

Mean Scaled Scores on PARCC by School for All Students

Figure 5. Mean Scaled Scores for All Students on PARCC Assessments in Schools Lead by PRN Graduates ($N = 33$) Compared to Schools Lead by Non-PRN Graduates ($N = 233$).

To test for the statistical significance of the differences in the 2015/16 student achievement means, analysis of covariance (ANCOVA) was used to control for initial differences on the 2014/15 assessment. It was found that schools lead by PRN graduates had statistically significantly higher ELA scores than schools lead by non-PRN graduates on the adjusted 2015/16 PARCC assessment means, after controlling for initial differences on the 2014/15 PARCC assessment means (see Table 4, F=3.70, p=.05). A statistically significant difference was not found in adjusted math scores between schools lead by PRN graduates compared to those lead by non-PRN graduates, after controlling for initial differences (see Table 4, F=.07, p=.78).

> **schools lead by PRN graduates had statistically significantly higher ELA scores than schools lead by non-PRN graduates**

Table 4

Analysis of Covariance (ANCOVA) to Analyze Differences in Student Achievement (Mean Scaled Scores for the All Student Group) in Schools Lead by PRN Graduates Compared to Schools Lead by Non-PRN Graduates

	Schools Lead by PRN Graduates (*n* = 33)		Schools Lead by Non-PRN Graduates (*n* = 233)			
	2014/15	2015/16[a]	2014/15	2015/16[a]	ANCOVA	
	M	*M*	*M*	*M*	*F(p)*	η^2
ELA	737	741	736	738	**3.7 (*p*=.05)**	.02
Math	732	735	731	735	.07 (*p*=.78)	

Note. Effect size (η^2) guidelines were as follows: .01 = small, .06 = medium, .14 = large. Effect sizes were developed to provide a qualitative statement about the practical significance for statistically significant findings. [a] Indicates the 2015/16 mean is adjusted by the ANCOVA analysis to equate the comparison groups on the 2014/15 achievement data. **Bolded** statistics show statistically significant difference.

Differences Between Schools Lead by PRN Graduates and Non-PRN Graduates for the Subgroups on the 2015/16 PARCC Assessment.

Descriptive results are presented in Figures 6 and 7 by the mean scaled scores of the student subgroups in the schools lead by PRN graduates and non-PRN graduates. Many of the means of the subgroups in the schools lead by PRN graduates were higher than the means for those lead by non-PRN graduates for both ELA and math in 2014/15 and 2015/16. Likely due to small sample sizes (noted as the bottom two lines in Figures 6 and 7), the differences between the ANCOVA adjusted 2015/16 student achievement means for the subgroups in PRN lead and non-PRN lead schools were found not to be statistically significant. Therefore, these data are not included here.

Figure 6. Mean Math PARCC Scaled Scores for 2014/15 and 2015/16 for Students in Underserved Subgroups at Schools Lead by PRN Graduates Compared to Schools Lead by Non-PRN Graduates. Sample sizes of schools are noted and vary by subgroup.
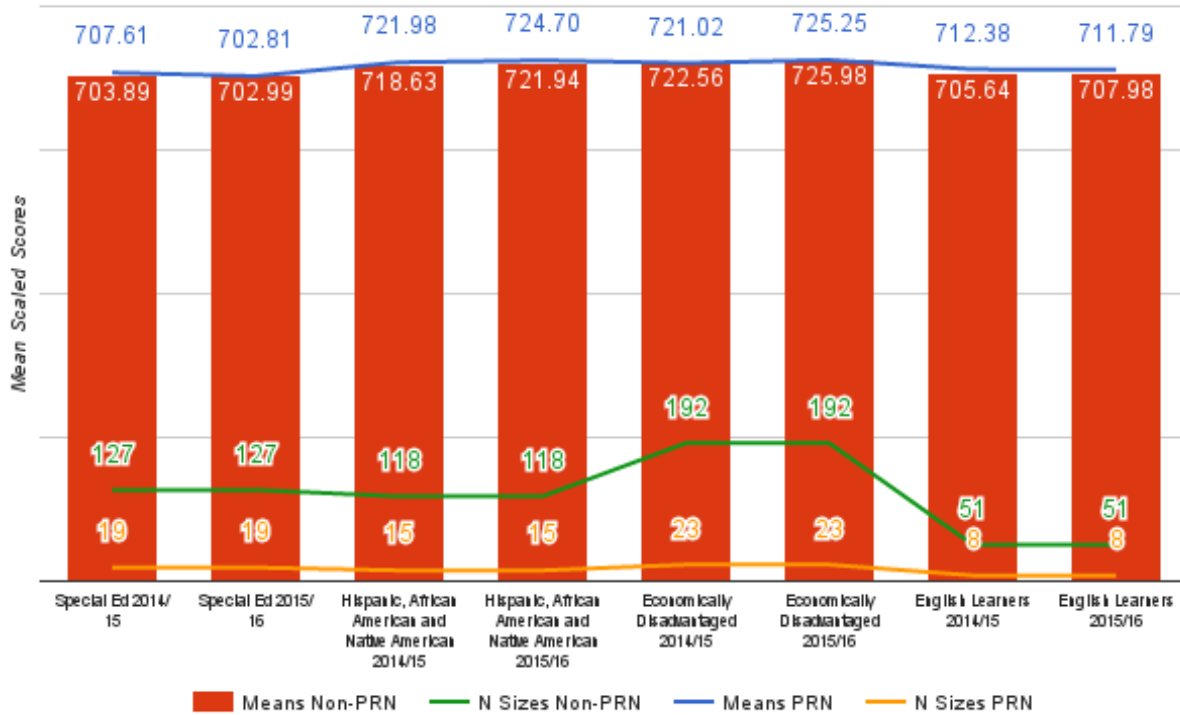

Figure 7. Mean ELA PARCC Scaled Scores for 2014/15 and 2015/16 for Students in Underserved Subgroups at Schools Lead by PRN Graduates Compared to Schools Lead by Non-PRN Graduates. Sample sizes of schools are noted and vary by subgroup.
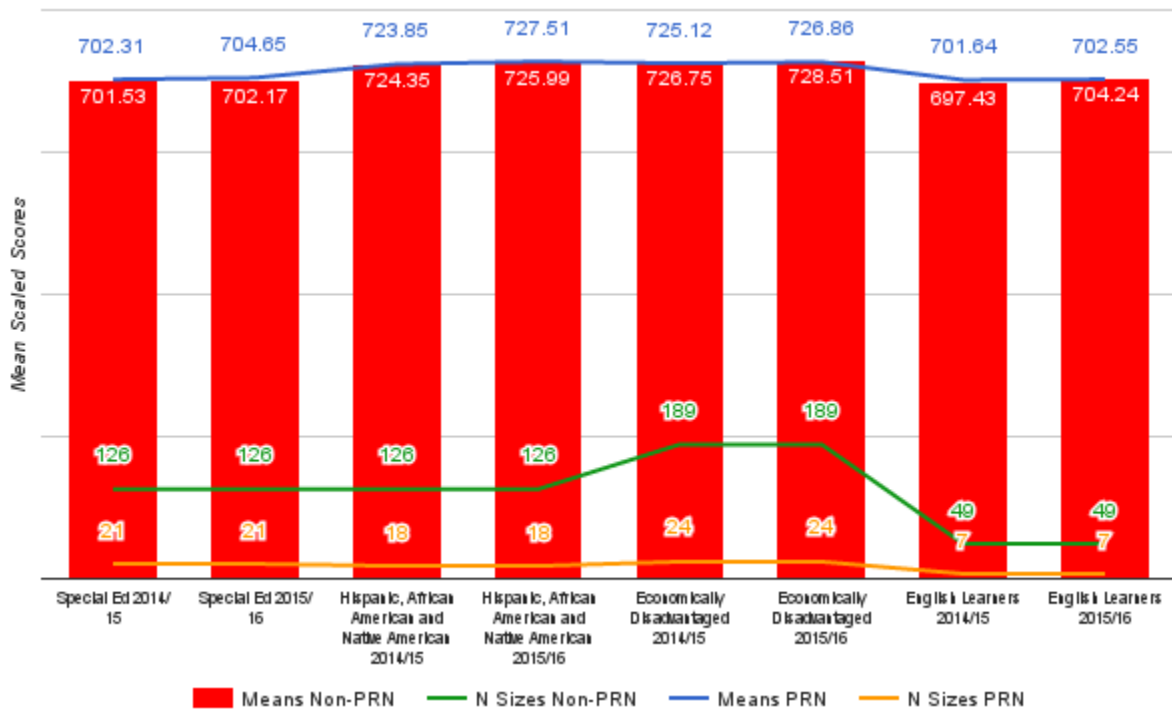
Differences Between Schools Lead by PRN Graduates and Non-PRN Graduates on Intraschool (within the same school) Gaps Between Underserved Subgroups and Peers on the 2015/16 PARCC Assessment.

ANCOVA was used to assess the degree of difference (or gap) in student achievement on the 2015/16 assessment between underserved subgroups and their peers (after controlling for initial differences on the 2014/15 assessment) in schools lead by PRN graduates and schools lead by non-PRN graduates. This analysis examined intraschool gaps. That is, gaps occurring between sub-groups of students in the same school, as opposed to achievement gaps between subgroups of students in a school compared to students outside the school. The degree of gap remaining between students in subgroups and their peers in the same school (i.e., ELL students compared to non-ELL students) is measured by the significance level (if p, the probability, is equal to or less than .05 this signaled the presence of remaining gaps) displayed in Tables 2, 3, 4 and 5).

Overall, lower intraschool gaps in 2015/16 student achievement remained in the schools lead by PRN graduates (Tables 5 and 6) than in schools lead by non-PRN graduates (Tables 7 and 8). Only the area of math achievement between special education and non-special education students (peers) remained a statistically significant difference (gap) in schools lead by PRN graduates (see Table 6). In contrast, schools lead by non-PRN graduates (Tables 7 and 8) had statistically significant 2015/16 differences (gaps) in all areas except between ELL and non-ELL students in ELA. Schools lead by PRN graduates had fewer statistically significant differences (gaps) on the 2015/16 assessment between subgroups within schools, after controlling for initial differences on the 2014/15 assessment.

Table 5

Analysis of Covariance (ANCOVA) of Subgroups Compared to Peers in ELA for Schools Lead by PRN Graduates

	Subgroups			**Peers**				
	2014/15	**2015/16[a]**		**2014/15**	**2015/16[a]**		**ANCOVA**	
	M	*M*	*N*	*M*	*M*	*N*	*F(p)*	η^2
ELL	701	729	7	739	737	31	**3.20(.08)**	
SES	724	734	23	743	740	29	**2.63(.11)**	
Race	722	739	17	746	740	24	**0.03(.86)**	
Sp.Ed.	702	725	20	743	732	29	**2.17(.15)**	

Note. Effect size (η^2) guidelines were as follows: .01 = small, .06 = medium, .14 = large. **Bolded** statistics show most positive results that there is not a statistically significant difference (that the gap is closing) between peers and subgroups). [a] Indicates the mean is adjusted by the ANCOVA analysis.

Table 6

Analysis of Covariance (ANCOVA) of Subgroups Compared to Peers in Math for Schools Lead by PRN Graduates

	Subgroups			Peers			ANCOVA	
	2014/15	2015/16[a]		2014/15	2015/16[a]			
	M	M	N	M	M	N	$F(p)$	η^2
ELL	712	727	8	734	735	32	**3.26(.08)**	
SES	720	736	22	743	733	29	**2.59(.11)**	
Race	721	735	14	741	738	24	**0.96(.34)**	
Sp.Ed.	707	718	18	738	731	30	11.03(.00)	.20

Note. Effect size (η^2) guidelines were as follows: .01 = small, .06 = medium, .14 = large. **Bolded** statistics show most positive results that there is not a statistically significant difference (that the gap is closing) between peers and subgroups). [a] Indicates the mean is adjusted by the ANCOVA analysis.

Schools lead by PRN graduates had fewer statistically significant differences (gaps) on the 2015/16 assessment between subgroups within schools, after controlling for initial differences on the 2014/15 assessment.

Table 7

Analysis of Covariance (ANCOVA) of Subgroups Compared to Peers in ELA for Schools Lead by Non-PRN Graduates

	Subgroups			Peers			ANCOVA	
	2014/15	2015/16[a]		2014/15	2015/16[a]			
	M	M	N	M	M	N	$F(p)$	η^2
ELL	697	732	49	738	732	220	**.06(.81)**	
SES	726	735	189	744	741	195	34.90(.00)	.08
Race	724	734	126	742	738	194	9.13(.00)	.03
Sp.Ed.	701	724	126	742	730	216	16.93(.00)	.05

Note. Effect size (η^2) guidelines were as follows: .01 = small, .06 = medium, .14 = large. **Bolded** statistics show most positive results that there is not a statistically significant difference (that the gap is closing) between peers and subgroups). [a] Indicates the mean is adjusted by the ANCOVA analysis.

Table 8

Analysis of Covariance (ANCOVA) of Subgroups Compared to Peers in Math for Schools Lead by Non-PRN Graduates

	Subgroups			Peers				
	2014/15	2015/16[a]		2014/15	2015/16[a]		ANCOVA	
	M	*M*	*N*	*M*	*M*	*N*	*F(p)*	η^2
ELL	705	728	51	732	731	220	4.07(.05)	.02
SES	722	735	192	741	733	207	16.95(.00)	.04
Race	718	730	118	734	734	197	10.33(.00)	.03
Sp.Ed.	703	721	127	735	727	215	40.36(.00)	.11

Note. Effect size (η^2) guidelines were as follows: .01 = small, .06 = medium, .14 = large. **Bolded** statistics show most positive results that there is not a statistically significant difference (that the gap is closing) between peers and subgroups). [a] Indicates the mean is adjusted by the ANCOVA analysis.

The support through the Principal Residency Network has afforded our leadership team exposure and support in implementing best practices for leading others, managing change, looking at data, and coaching others. Perhaps as importantly, those in the program enter into a professional network that provides them access to some of the strongest and most innovative leaders in Rhode Island.
- Jeremy Chiappetta, Executive Director, BVP Mayoral Academies

Outcomes for Team and Principal Leadership Development

Rationale and Methodology

One of the 'keystone' leadership practices that CLEE incorporates throughout the PRN and LLN programming is closing intraschool (within school) achievement gaps. The importance of closing intraschool gaps is based on the following theory of action that CLEE has developed through research and practice over the last 15 years of preparing school leaders. By drawing attention to current inequitable outcomes for specific subgroups of students in a school (compared to their peers in the same school), school leaders and teams guide school communities through a process to challenge systemic inequities occurring in the school and change beliefs about the ability of *all* students. As Scharff, DeAngelis, and Talbert (2009) found implementing a model of school improvement that shares a similar theory of action:

Studying the system through the lens of students for whom it is not working clarifies which decisions lead to patterns in curriculum and instruction that consistently fail to meet specific students' needs. The tight focus on a small group of students makes facing and addressing those conditions manageable; shifts the conversation from generalities and assumptions about why struggling students can't learn to specific information about what they don't know and how teachers can help them learn it; and illuminates places where a small, strategic system change can make a big difference. (p.59)

If a school community focuses only on general school improvement or on improving performance of subgroups compared to peers outside the school, they may not develop the necessary shift in community perception and beliefs that are needed to implement high expectations for all students. This shift is necessary to achieve equitable outcomes for all students (Campbell Jones, Campbell Jones, & Lindsey, 2010; Johnson & Avelar La Salle, 2010; Skrla, McKenzie, & Scheurich, 2009; Talbert, Mileva, Chen, Ken Cor, & McLaughlin, 2010).

By focusing leadership practices on intraschool inequities in student outcomes, school communities increase their sense of efficacy that they can impact the most underserved students. Thus, their assumptions of these students' abilities is challenged and influenced in positive ways: educators begin to change their minds about stereotypes they may have regarding students' abilities and see that, through their own and their students' efforts, all students can learn at high levels (Campbell Jones et al., 2010). When a school community believes in their ability to impact the learning of all students, they are more willing to take responsibility for all students. The resulting high level of internal accountability leads to an ability to meet external measures of accountability (Elmore, 2007) and to function as learning communities focused on eliminating the barriers to equitable outcomes in their schools.

CLEE teaches aspiring and active school and teacher leaders to collaboratively identify, plan, monitor, and close intraschool achievement gaps to lead toward a trajectory of high and equitable student outcomes. Literature clearly supports the leadership practices that the CLEE programs teach (Campbell Jones et al., 2010; Johnson & Avelar La Salle, 2010; Leithwood, Harris, & Strauss, 2010; Love, 2009; Ross and Berger, 2009; Skrla et al., 2009). Further, Talbert et al. (2010) have investigated the perceptions of educators associated with implementing a similar school improvement model; however, there is no research that links preparation and training of leaders to close intraschool achievement gaps with outcomes for students.

To address this need, CLEE developed a protocol and survey to study the outcomes of leadership practices focused on closing intraschool gaps (Billups, Braun & Gable, 2016). This section describes the resulting use of the protocol and survey to investigate the extent and ways that CLEE-trained leaders are closing achievement gaps within their schools.

Impact of CLEE-Trained Leaders and Teams on Intraschool (Within School) Achievement Gaps

Schools with leaders and/or leadership teams that CLEE had trained in the 2015/16 school year were included in this analysis. Each school leadership team identified a critical equity-based achievement gap between an underserved subgroup in the school and their peers. Leaders and teams trained in the CLEE Core Leadership Practices (see Braun, Gable, Billups, 2016) used these leadership practices (i.e., the intervention) to evolve educator practices and school systems to raise achievement for all students while also closing the gaps (increasing equity) between underserved subgroups and their peers.

To analyze the degree to which the intraschool gaps closed, a three-step process was used. First, an independent samples *t*-test was used to compare the pre-test results for the

intervention and peer groups to determine if they began in significantly different places (Table 9). Next, a related *t*-test was conducted to compare the pre and post-test means of the intervention and peer groups to determine if both groups' scores significantly incremented upwards (Table 10). Finally, an ANCOVA analysis using the pre- and post-test data for the intervention and peer groups provided the degree to which a significant difference remained between the groups after the intervention treatment and controlling for the 2014/15 initial differences (Table 11). Effect sizes were calculated for each step.

Degree of Initial Differences Between Identified Underserved Subgroups and Peers Within CLEE-Trained Schools

Independent samples *t*-tests were used to examine the difference in student achievement on the pre-test between the subgroups and peers in each school. All but two CLEE-trained schools (schools 11 and 13) correctly identified an intervention subgroup with a statistically significant gap (see Table 9).

all but two CLEE-trained schools correctly identified an underserved subgroup with a statistically significant gap

Table 9

Results of t-test for Pre-Test (Fall 2015 administration) by CLEE-Trained School

	Intervention Group		Peers				
	N	M	N	M	t	p	d^a
1 MS - ELA	102	361	562	553	8.11	**.00**	**0.97**
2 HS - Math	50	632	308	753	9.54	**.00**	**1.27**
3 HS - ELA	98	237	163	689	17.86	**.00**	**2.22**
4 ES - Math	18	313	412	470	4.45	**.00**	**1.25**
5 ES - Math	90	329	410	488	11.97	**.00**	**1.27**
6 ES - ELA	174	128	265	343	20.15	**.00**	**1.94**
7 MS - ELA	118	250	521	478	14.40	**.00**	**1.30**
8 ES - ELA	91	177	293	223	2.64	**.00**	**0.35**
9 ES - ELA	66	181	81	266	4.40	**.00**	**0.73**
10 MS - ELA	50	539	308	747	7.86	**.00**	**1.05**
11 HS - ELA	7	3	39	5	1.90	.10	
12 ES - ELA	8	436	48	527	2.57	**.00**	**1.20**
13 ES - ELA	69	155	70	163	1.09	.30	
14 ES - ELA	67	2	67	3	4.01	**.00**	**0.69**
15 MS - ELA	27	26	281	52	6.70	**.00**	**1.78**

Note. Effect size (d^a) guidelines were as follows: .20 = small, .50 = medium, .80 = large. **Bolded** statistics indicate the ideal outcome that the schools chose a statistically significant gap within their school to close. Sample sizes (*N*) represent individual students. œ

Degree of Growth for Underserved Subgroups and Peers Within CLEE-Trained Schools

Related samples *t*-tests were used to detect the degree of difference between the fall 2015 pre-tests and the spring 2016 post-tests (see Table 10). While many of the schools used the STAR assessment as the pre- and post-test, schools were encouraged to use any measure that best assessed the curriculum they were teaching. Some even used school-designed measurements. The calculation of the effect size allowed the results to be compared across sites. Of the CLEE-trained schools that had a significant gap detected on the pre-test, all but one (school 11 HS – ELA) had significant gains from the pre to the post test for the underserved subgroups and the peer groups.

all but one CLEE-trained school had significant gains from the pre to the post test for the underserved subgroups and the peer groups.

Table 10

Results of t-test and Descriptive Statistics for Pre (Fall 2015) and Post (Spring 2015) Assessment by CLEE-Trained School

	N	Pre-test M	Post-test M	t	p	d^a
1 MS - ELA						
Intervention	102	360	421	5.09	.00	0.50
Peers	562	553	612	10.87	.00	0.46
2 HS - Math						
Intervention	50	631	657	2.57	.01	0.28
Peers	308	753	772	2.15	.03	0.17
3 HS - ELA						
Intervention	98	237	279	3.8	.00	0.38
Peers	163	688	740	3.83	.00	0.30
4 ES - Math						
Intervention	18	313	475	6.71	.00	1.59
Peers	412	469	555	26.9	.00	1.33
5 ES - Math						
Intervention	90	328	512	16.52	.00	1.74
Peers	410	487	615	34.93	.00	1.73
6 ES - ELA						
Intervention	174	127	258	15.16	.00	1.15
Peers	265	342	492	22.78	.00	1.40

	N	Pre-test M	Post-test M	t	p	d^a
7 MS - ELA						
Intervention	118	250	351	10.1	**.00**	**0.93**
Peers	521	478	600	20.2	**.00**	**0.89**
8 ES - ELA						
Intervention	91	177	270	11.33	**.00**	**1.19**
Peers	293	222	336	18.63	**.00**	**1.09**
9 ES - ELA						
Intervention	66	181	279	12.07	**.00**	**1.21**
Peers	81	265	366	9.67	**.00**	**1.26**
10 MS - ELA						
Intervention	50	539	668	6.76	**.00**	**0.96**
Peers	308	746	833	11.3	**.00**	**0.64**
11 HS - ELA						
Intervention	7	3	3	1.37	.23	0.51
Peers	39	5	4	1.25	.21	-0.20
12 ES - ELA						
Intervention	8	435	710	13.7	**.00**	**4.85**
Peers	48	526	749	17.13	**.00**	**2.48**
13 ES - ELA						
Intervention	69	154	144	3.09	**.00**	**-0.37**
Peers	70	163	148	4.31	**.00**	**-0.52**
14 ES - ELA						
Intervention	67	1	5	9.95	**.00**	**1.22**
Peers	67	2	6	11.21	**.00**	**1.37**
15 MS - ELA						
Intervention	27	25	27	7.11	.43	0.14
Peers	281	51	52	1.26	.21	0.08

Note. Effect size (d^a) guidelines were as follows: .20 = small, .50 = medium, .80 = large. **Bolded** statistics indicate the ideal outcome that the schools increased the achievement of the subgroup and the peer group a statistically significant amount. Sample sizes (*N*) represent individual students. Note that while many of the schools used the same assessment for the pre- and post-test, schools were encouraged to use any measure that best assessed the curriculum they were teaching. Therefore, some of the means are calculated using different scales (e.g., 11 HS – ELA, 14 ES-ELA, and 15 MS – ELA) than the rest.

Degree of Gap Remaining Between Underserved Subgroups and Peers Within CLEE-Trained Schools

ANCOVA was used to detect the degree of difference (gap) on the Spring 2016 post assessment between the subgroups and peers, after controlling for initial differences on Fall 2015 pre assessment data. Of the schools that had a significant gap detected on the pre-test, the majority showed the most optimal result – greater rate of improvement for the intervention subgroup, while also increasing the achievement for the peers (see Table 11). That is to say that the lack of statistical significance noted by the bolded *p* values in Table 8 indicate that there was no longer a significant gap (difference) between the intervention subgroups and their peers.

the majority of CLEE-trained schools showed a greater rate of improvement for the intervention subgroup, while also increasing the achievement for peers

Table 11

Results of ANCOVA Degree of Difference (Gap) Between Underserved Subgroups and Peers on the Adjusted Post Assessment After Controlling for Initial Differences on the Pre Assessment in CLEE-Trained Schools.

	Intervention Group		Peer Group				
	Pre-test	Post-test[a]	Pre-test	Post-test[a]	ANCOVA		
	M	*M*	*M*	*M*	*F*	*p*	η^2
1 MS - ELA	360	573	553	584	0.54	**.46**	
2 HS - Math	631	721	753	738	1.11	**.29**	
3 HS - ELA	237	528	688	590	5.56	.02	.65
4 ES - Math	313	603	469	549	11.94	.00	.03
5 ES - Math	328	601	487	595	0.37	**.54**	
6 ES - ELA	127	371	342	418	11.76	.00	.03
7 MS - ELA	250	544	478	556	0.68	**.41**	
8 ES - ELA	177	300	222	326	5.06	.03	.01
9 ES - ELA	181	314	265	324	0.47	**.49**	
10 MS - ELA	539	829	746	807	1.10	**.30**	
11 HS - ELA	3	5	5	4	1.03	**.32**	
12 ES - ELA	435	739	526	744	0.04	**.85**	
13 ES - ELA	154	146	163	145	0.12	**.73**	
14 ES - ELA	1	6	2	5	10.85	.00	.08
15 MS - ELA	25	45	51	50	7.13	.01	.02

Note. Effect size (*d*[a]) guidelines were as follows: .20 = small, .50 = medium, .80 = large. Bolded statistics indicate the ideal outcome that the schools increased the achievement of the subgroup at a greater rate than the the peer group thereby reducing the gap so that there was not a statistically significant difference on the adjusted post assessment. Sample sizes (*N*) represented in Table 10.

CLEE Learning Community Survey

A 35-item survey that measures the core leadership practices (see Table 12) was developed from CLEE research (Braun, Billups, Gable, 2016; Braun, Gable, Kite, 2011b). The validity and reliability of the survey dimensions was initially determined through the use of a confirmatory factor analysis (Braun, Gable, Billups, 2015). The alpha reliabilities of the items in the dimensions from the initial study in 2014, as well as the most recent use of the survey in 2016 survey, were found to be adequately high to confirm the use of the dimensions (the core leadership practices) in analyses (see Table 12).

Table 12

Alpha Reliability of the Learning Community Survey

Dimension	Number of Items	Alpha Reliability	Alpha Reliability
		2014 Schools (N=154)	2016 Schools (N=438)
Setting Direction	6	.73	.76
Monitoring Progress	5	.72	.81
Building Capacity to Teach	5	.81	.84
Building Capacity to Collaborate	7	.82	.83
Building Capacity to Distribute Leadership	7	.73	.84
Reorganizing Systems	5	.78	.87

Relationship of the CLEE Core Leadership Practices to Student Achievement

All the CLEE-trained schools that worked to close an intraschool gap (see Tables 9 - 11) had their entire staff take the Learning Community Survey in the spring of 2016 to assess the ways the core leadership practices throughout the school were being implemented and changing. Hierarchical regression analysis was used to detect the degree of the relationship (percent of variation explained) between the six core leadership practices reported on the CLEE Learning Community Survey and the three achievement outcome variables (represented in Tables 10 and 11), after controlling for grade level (i.e., elementary, middle and high school). The first outcome variable was the degree of growth (measured in effect sizes) for the peers (Figure 8). The second outcome variable was the degree of growth (measured in effect sizes) for the subgroups (Figure 9). The third outcome variable was the degree of gap remaining (measured in effect sizes) between the peers and subgroups, after controlling for initial 2014/15 differences (Figure 10) at the participating schools.

While none of the results were statistically significant, a trend revealed a positive relationship between the core leadership practices that leaders and teams have been trained to implement (measured on the CLEE Learning Community Survey) and the three outcome variables: degree of growth in student achievement for the peers (Figure 8), degree of growth for the subgroup (Figure 9), and degree of difference or gap remaining on the post test, after controlling for initial differences on the pre test (Figure 10). As Figure 8 displays, approximately 60% of the variation in the academic growth of the peer groups was explained by grade level. This indicates a strong relationship between grade level and student achievement. Only a small amount (between 3 to 7%) of the variation in the academic growth of the peer group was explained by the presence (reported in the Learning Community Survey) of the Core Leadership Practices (this represents a weak relationship).
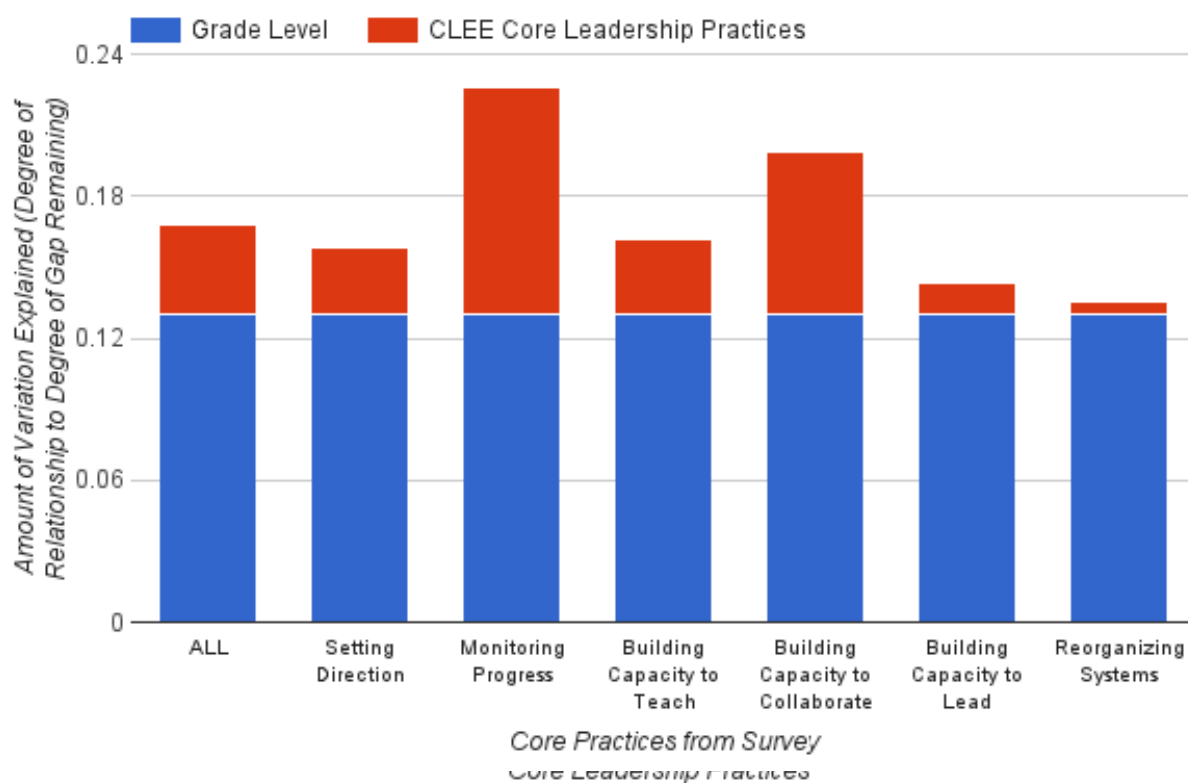

Figure 8. Hierarchical Regression: Degree to which Grade Level and Implementation of the Core Leadership Practices Predict Growth in Student Achievement for Peers

In contrast, Figure 9 shows that the relationship between grade level and growth for the subgroup was half as strong (less than 30% of the variation in the subgroup growth was explained by grade level) as it was in Figure 8 for the growth of the peers. This means that grade level (typically a major predictor of academic achievement) had a weaker relationship to the subgroup growth for the CLEE-trained schools. Importantly, the relationship between the presence of the CLEE Core Leadership Practices and the subgroup was stronger than it was for the peer group (between 5% to 26% of the variation in subgroup scores was explained by the presence of the Core Leadership Practices in CLEE-trained schools).
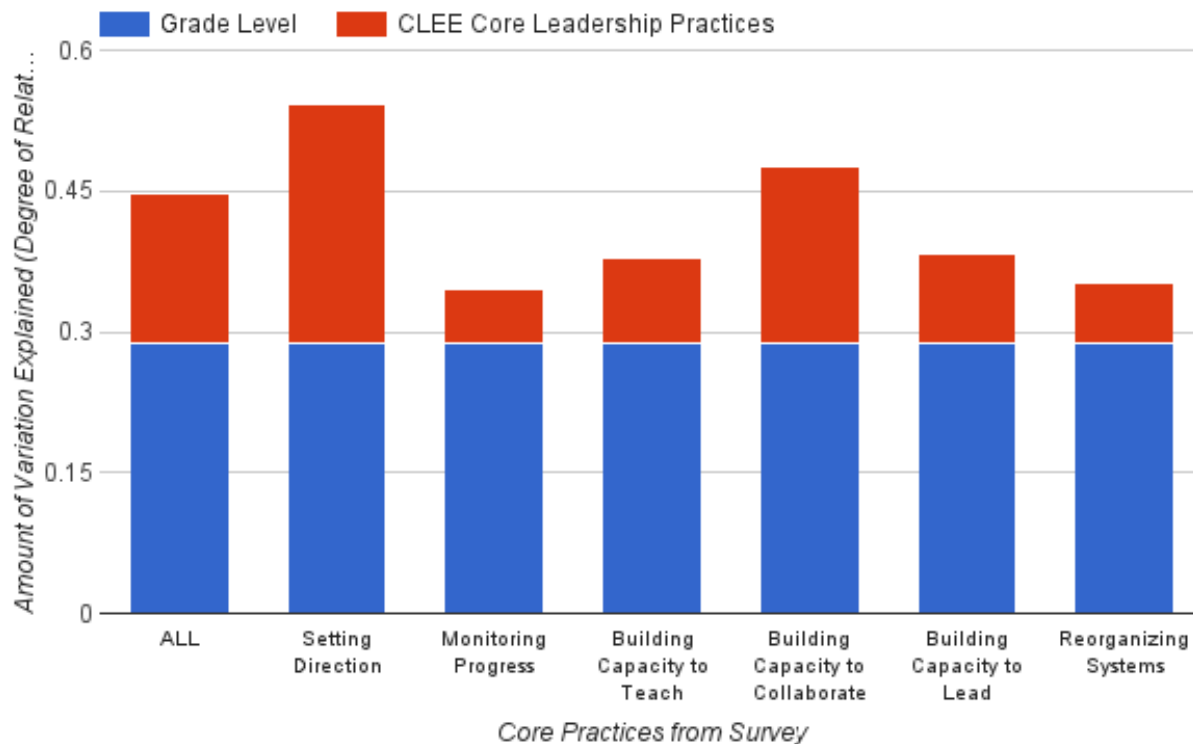
Figure 9. Hierarchical Regression: Degree to which Grade Level and Implementation of the Core Leadership Practices Predict Growth in Student Achievement for Subgroups.

Finally, Figure 10 displays an even weaker relationship (than those between the peers (Figure 8) and subgroups (Figure 9) academic growth) between grade level and the degree of gap remaining between the subgroups and peers in schools (only 13%). Interestingly, only the presence of the core practices of monitoring progress (10% of variation explained) and building the capacity to collaborate (7% of variation explained) had a slightly stronger relationship with the degree to which schools were closing gaps between peers and subgroups (Figure 10).

Overall, this data reveals a trend that when the leadership teams implement the core leadership practices, there is potential for a positive increase in growth for the underserved subgroups and peer groups, and a closing of the gaps in CLEE-trained schools. Further, this trend is even stronger for the undeserved subgroups, suggesting that when the core leadership practices are implemented fully, they have a great potential to accelerate growth for underserved subgroups (whereby increasing equity) while also increasing excellence for all students.
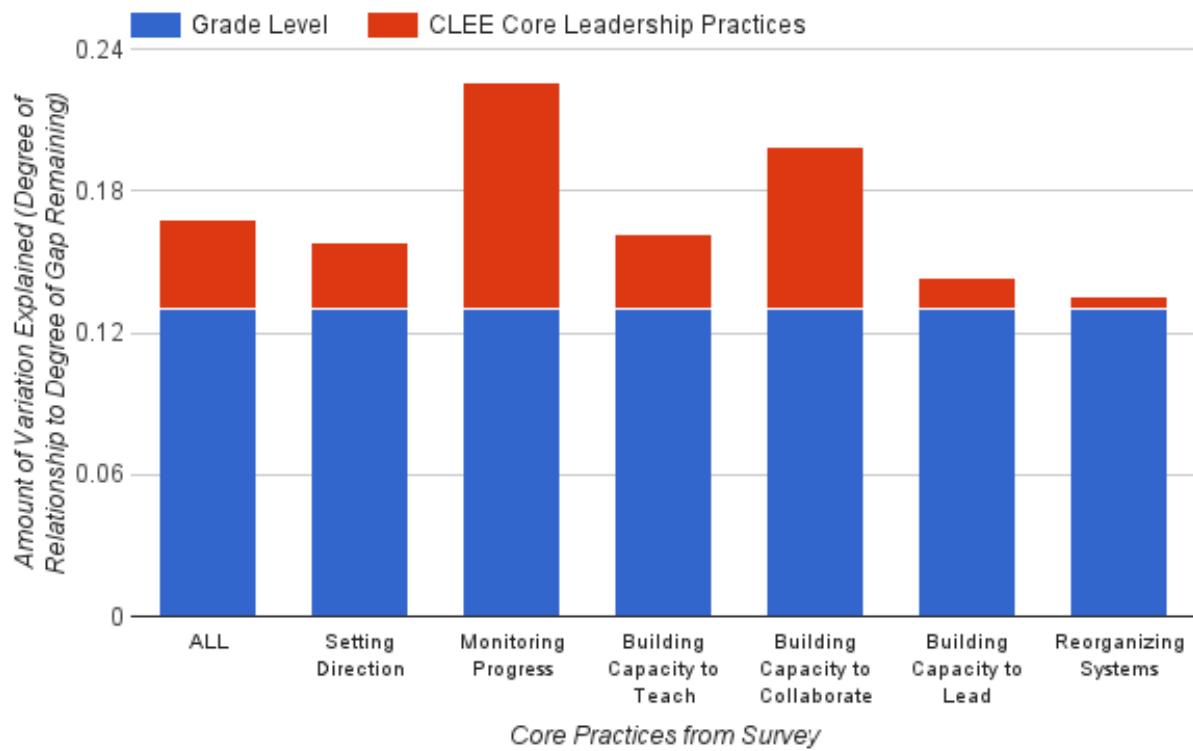
Figure 10. Hierarchical Regression: Degree to which Grade Level and Implementation of the Core Leadership Practices Predict Degree to Which the Gap in Student Achievement Between the Peers and Subgroup Remains.

this data reveals a trend that when the leadership teams implement the core leadership practices, there is potential for a positive increase in growth for the underserved subgroups and peer groups, and a closing of the gaps in CLEE-trained schools

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Perceptions of Effectiveness by Learning Leader Network Participants

The Learning Leader Network (LLN) facilitates a wide variety of professional learning experiences across the state of Rhode Island. Since 2005, the LLN has been evolving the programs offered to schools, districts, and individual leaders and teams to meet the needs of educators and to increase the impact of adult learning on student learning. A great example of this can be seen in the results of the LLN leadership team training on closing equity-based gaps in the previous section.

While the LLN facilitates a number of different programs, the key program over the last decade has been the Facilitative Leadership Institute. This 4-6 day training builds the capacity of participants to engage in shared leadership to increase excellence and equity in student outcomes. By the conclusion of the Institute, participants are able to:

- Enact facilitative leadership practices that cultivate and sustain shared leadership.
- Strengthen their home-based professional learning communities (e.g. team, grade-level, whole school) with a focus on core issues of equity and excellence.
- Facilitate protocols to engage colleagues in reflective conversation rooted in professional readings and/or research.
- Facilitate protocols to deeply analyze student and adult work or data in a supportive learning community.
- Give and receive feedback on professional practice based on the core principles of facilitative leadership.
- Focus in on issues of equity to increase student achievement and create a culture of high expectations.
- Advocate for and articulate the significance of collegial relationships and shared leadership as high-yield strategies to improving student learning.
- Develop a clear, practical plan for working with colleagues in their context.

At the completion of each institute, participants complete an evaluation of the training. Of the Facilitative Leadership Institutes conducted over the last two years, 96% of respondents ($N = 73$) rated the qualities of the institutes (see Table 13) a good to great extent. The average rating for all the institute evaluations from the past two years is 3.65 out of 4.

96% of respondents rated the qualities of the CLEE institutes as a good to great extent

Table 13

Items from the Facilitative Leadership Institute Final Evaluation

> - I have increased how much I value giving and receiving feedback with my colleagues.
> - I have grown as a reflective practitioner.
> - I have learned effective ways to learn from student work with my colleagues
> - I have learned new or better methods for giving and receiving feedback from colleagues.
> - I have learned new or better methods for discussing important ideas or texts with colleagues
> - I have improved my adult learning facilitation skills.
> - I can plan effective agendas for group conversations.
> - I have used the Institute materials (texts, protocols, activities) to improve my learning community.
> - The Institute was well paced and the work was meaningful to me.
> - The Institute facilitators were knowledgeable and adapted their teaching to meet the needs of individuals in the group.
> - The support material (resource book, handouts) were useful and adequate.

Conclusion

This report shows the positive ways that CLEE programs are impacting leaders, students, and schools in Rhode Island. Importantly, the methodology used to collect, analyze and report the data allowed the organization to vastly improve the infrastructure to continue the process. This will enable CLEE to engage in even more robust ongoing cycles of inquiry to improve both programming and impact. Finally, this work represents the modeling of the same best practices and core leadership standards that CLEE programs aim to empower in educational leaders. That is, to set direction for high expectations and outcomes, monitor progress toward the short- and long-term outcomes, build the capacity of educators to teach, collaborate and lead, and while doing this work, evolve systems that support continuous improvement and equity for all in a learning community. CLEE will continue to use these core leadership practices and transparently share results publicly on a regular basis.

References

Braun, D., Billups, F.D, & Gable, R.K. (2016). Equity-Oriented Leadership: Closing Intraschool Achievement Gaps. Pending Publication. Retrieved from: https://drive.google.com/file/d/0B1RcvnEpxSzpTFQ0aHc0SWNma0U/view

Braun, D., Gable, R., & Billups, F. (2015). Learning Community Survey Validity and Reliability Study. Retrieved from: https://docs.google.com/document/d/1dyr6_p6gNSNpDq3bAREehBmqy_276EjLNpvl9WZe2qQ/edit

Braun D., Billups, F.D., & Gable, R.K. (2013). Transforming Equity-Oriented Leaders: Principal Residency Network program evaluation. *NCPEA International Journal of Educational Leadership Preparation, 8*(1).

Braun, D., Gable, R., & Kite, S. (2011a). Relationship Among Essential Leadership Preparation Practices and Leader, School, and Student Outcomes in K-8 Schools. *The   International Journal of Educational Leadership Preparation, 6*(2).

Braun, D., Gable, R., Kite, S. (2011b). Situated in a community of practice: Leadership preparation practices to support leadership in K-8 schools. *The International Journal of Educational Leadership Preparation*, 6(1).

Breidenstein, A., Fahey, K., Glickman, C., & Hensely, F. (2012). *Leading for Powerful Learning: A Guide for instructional leaders.* New York, NY: Teachers College Press.

Campbell Jones, F., Campbell Jones, B., Lindsey, R.B. (2010). *The Cultural Proficiency Journey: Moving beyond ethical barriers toward profound school change*. Thousand Oaks, CA: Corwin.

Center for Leadership and Educational Equity. (2010). Principal Residency Network: A Ten year journey to change the leadership landscape in Rhode Island. Retrieved from: http://leadershipandequity.org/wp-content/uploads/2010/09/PRN_10-year-journey_reduced-size.pdf

Darling-Hammond, L., LaPointe, M., Meyerson, D., Orr, M. T., & Cohen, C. (2007). *Preparing school leaders for a changing world: Lessons from exemplary leadership development programs*. Retrieved from Stanford Educational Leadership, Stanford University: http://seli.stanford.edu/research/sls.htm

Elmore, R. F. (2007). *School Reform from the Inside out: Policy, practice, and performance*. Cambridge, MA: Harvard Education Press

Fuller, E.J., Reynolds, A.L., & O'Doherty, A. (2017). Recruitment, selection, and placement of educational leadership students. In M. D. Young (Eds.), *Handbook of Research on the Education of School Leaders* (pp.77-117). New York, NY: Routledge.

Jackson, B. L., & Kelley, C. (2002). Exceptional and innovative programs in educational leadership. *Educational Administration Quarterly*, 38(2), 192-212.

Johnson, R.S., Avelar La Salle, R. (2010). *Data Strategies to Uncover and Eliminate Hidden Inequities: The wallpaper effect*. Thousand Oaks, CA: Corwin.

Leithwood, K., & Jantzi, D. (1996). Preparing school leaders: What works? *Journal of School Leadership*, 6(3), 316-42.

Leithwood, K., Harris, A., Strauss, T. (2010). *Leading School Turnaround: How successful leaders transform low-performing schools*. San Francisco, CA: Jossey-Bass.

Love, N. (ed). (2009). *Using Data to Improve Learning for All: A Collaborative inquiry approach*. Thousand Oaks, CA: Corwin.

McCarthy, M.M., & Forsyth, P.B. (2009). An historical review of research and development activists pertaining to the preparation of school leaders. In M. D. Young, J. Murphy, & R.T. Ogawa (Eds.), *Handbook of Research on the Education of School Leaders* (pp.86-128). New York, NY: Routledge.

Orr, M. (2006). Educating leaders for tomorrow: Mapping innovation in leadership preparation in our nation's schools of education. *Phi Delta Kappan 87*(7).

Patton, M. Q. (2002). *Utilization-focused evaluation.* (3rd ed.). Thousand Oaks, CA: Sage.

Ross, J.A. & Berger, M-J. (2009). Equity and leadership: Research-based strategies for school leaders. *School Leadership and Management 29*(5), 461-474.

Sharff, H.A., DeAnglis, D.A., & Talbert, J.E. (2009). Starting small for big school improvement. *Principal Leadership 10*(8).

Skrla, L., McKenzie, K.B., & Scheurich, J.J. (2009). *Using Equity Audits to Create Equitable and Excellent Schools*. Thousand Oaks, CA: Corwin.

Southern Regional Educational Board (SREB). (2006). *Schools can't wait: Accelerating the redesign of university principal preparation programs*. Retrieved from Southern Regional Educational Board: sreb.org/programs/.../publications/special/ 06V04_Schools_Cant_Wait.pdf

Talbert, J.E., Mileva, L., Chen, P., Ken Cor, M. & McLaughlin, M. (2010). *Developing School Capacity for Inquiry-based Improvement: Progress, Challenges, and Resources.* Center for Research on the Context of Teaching: Stanford University. Retrieved from: http:// www.baruch.cuny.edu/spa/researchcenters/documents/NVPSSAMProgramEvaluati onNovember2010.pdf

U.S. Department of Education (USDOE) (2004). *Innovative pathways to school leadership*. Retrieved from Office of Innovation and Improvement: https://www.ed.gov/admins/ recruit/prep/alternative/report_pg3.html