

Pennsylvania Educational Leadership



Volume 35, Number 2
Spring 2016

Pennsylvania Educational Leadership

Volume 35, Number 2
Spring 2016

Editor

Kathleen Provinzano
Drexel University

Editor Emeritus

Robert F. Nicely, Jr.

Pennsylvania Educational Leadership is an official publication of the Pennsylvania Association for Supervision and Curriculum Development. Since 1996 the journal has received numerous awards from the international Association for Supervision and Curriculum Development. These awards include “best affiliate journal,” “outstanding affiliate article” (multiple times), and “outstanding affiliate journal.”

The views expressed or implied in the journal are not necessarily official positions of Pennsylvania ASCD. Membership in the Pennsylvania ASCD includes a subscription to *Pennsylvania Educational Leadership*, *Pennsylvania ASCD Update*, and selected occasional publications. Inquiries should be directed to the editor at ktp37@drexel.edu.

Pennsylvania Association for Supervision and Curriculum Development

Executive Committee

President

Lori Stollar
Littlestown Area SD

President-Elect

Jeffrey M. Taylor
North Hills SD

Treasurer

William McNamee
Baldwin-Whitehall SD (ret.)

Executive Director

Richard D. Nilsen
Eastern Lebanon County SD (ret.)

Website

<http://www.pascd.org/>

*Pennsylvania ASCD...
Educators impacting teaching and
learning through leadership.*

Pennsylvania Educational Leadership

Volume 35, Number 2 - Spring 2016

Table of Contents

<i>Acknowledgments</i>	5
<i>Articles</i>	
The Public School Response to Cyber Charter Programs: Fiscal Considerations, Retention and Recruitment Strategies, and Participant Experiences..... <i>John Christopher Hardin</i>	6
Co-Teaching: A Guiding Light Through the Implementation of Effective Practice and the Impact of Collaborative Teaching on Students and Teachers..... <i>Anthony Preston, Daniel Roesch, and Michael Patte</i>	22
Perceptions of Teacher and Principals: Gender Comparisons of Leadership Actions..... <i>Karen H. Larwin and Linda Lorei</i>	42
Getting the House in Order: Lessons from Multicultural Education for Principals Leading Today’s Diverse Schools..... <i>Bruce Campbell and Kristine S. Lewis Grant</i>	55
<i>Practitioner’s Pages</i>	
Confronting Inequality: Actions for Public Education..... <i>Vito A. Forlenza</i>	69
The Farmer Takes a Child: A University, Early Childhood, and Community Farm Camp Collaboration in Southwestern Pennsylvania..... <i>Wendy L. Hardy</i>	79
<i>An Invitation to Write for Pennsylvania Educational Leadership</i>	89
<i>Manuscript Submission Guidelines</i>	90

Pennsylvania Educational Leadership

Editor

Kathleen Provinzano
Drexel University

Webmaster

Jeffrey M. Taylor
North Hills SD

Editor Emeritus

Robert F. Nicely, Jr.

Technical Editor and Layout Designer

Sarah G. F. Klyberg

Acknowledgments

PEL would like to thank the following reviewers for the Spring 2016 issue.

William Clark
Susan Curtin
Mary Jean DeCarlo
Robin Fillman
John Gould
Allen Grant
Erin McHenry-Sorber
Denise Meister
Joyce Pittman
David Reese

The Public School Response to Cyber Charter Programs: Fiscal Considerations, Retention and Recruitment Strategies, and Participant Experiences

John Christopher Hardin
Palisades School District

This article examines the contributing factors for students' and parents' decisions to remain in, or return to, a district's cyber-school program. Cost considerations regarding public school budgets and policy analysis pertaining to online learning in a cyber-charter school and a traditional public school setting are addressed. This article also discusses and provides examples regarding the efficacy of a school district's cyber program, and how the cyber program specifically contributed to students' and families' decision-making process about where to attend online learning. This article also analyzes the practices that one public school district employed in its management of cyber programming, as well as its retention and recruitment plans pertaining to in-district cyber education in K-12 schools.

Throughout Pennsylvania and the United States, K-12 students are opting for a flexible education that allows for a full cyber or blended learning school experience (Democratic House Education Committee, 2014). According to the Pennsylvania School Board Association (PSBA, 2014), cyber-charter school enrollment across the state has increased to over “32,000 students” during 2011-2012 school year (p. 5). To meet the needs of these students and families, Pennsylvania authorized the implementation of cyber-charter schools, which are defined by the Education Law Center (2013) as a “school that provides most of its instruction to its students through the Internet or by some other electronic means” (p. 1). These cyber-charter schools are funded through traditional public school districts on a per-pupil tuition basis. Since the increasing enrollment of cyber-charter schools and the public schools' response with their own cyber programming are relatively new phenomena, very little research exists regarding the success or failure of in-district cyber programs in the United States, and particularly in Pennsylvania.

School districts are struggling to retain current students and develop programs that are viable compared to cyber-charter program offerings. Public school districts are required to provide tuition payments for students who opt to attend cyber-charter programs; this subsidization causes significant financial issues for nearly all public K-12 schools and districts throughout Pennsylvania. Research from the PBSA (2014) concluded that cyber-charter school costs vary from several thousand dollars to substantial higher amounts.

At the time this project was undertaken, the in-district cyber program explored in this study was facing competition from several cyber-charter programs within the region and the commonwealth. The majority of students attended two different cyber-charter programs, while the remaining students attended several different online charter options. Cyber programming necessitated a deeper understanding of the district's retention and recruitment strategies and an exploration into how these strategies were aligned or misaligned with students' and parents' cyber expectations. This article discusses which specific programmatic elements students and parents in the district deemed vital in a K-12 online learning environment that may have supported retention or recruitment practices.

Fiscal Conditions

Although online learning may make or provide more options for students at cyber-charter programs in Pennsylvania and around the nation, K-12 public school districts are financially responsible for providing tuition for each student who chooses to attend one of these programs. K-12 public school districts are attempting to save money by providing their own in-district cyber programming in an effort to retain and recruit potential or current cyber-charter students. One example of in-district program cost savings comes from the Quakertown Community School District in Bucks County. This district reported that its cyber program “grossed more than \$156,000” and allowed for “savings of \$50,000 per year” (Han, Ableidinger, Hassel, Jones, & Wolf, 2013, p. 2).

Retention and Recruitment

Barbour (2010) noted that retention issues are one of many factors currently impacting online learning, as some students are not equipped or ready to complete online coursework. Cavanaugh, Barbour, and Clark (2009) explained that student isolation and the quality of online programming impact student retention in the online or cyber format. Further research is needed regarding specific kinds of retention or recruitment strategies that may support student consistency in a district cyber program.

Preliminary research regarding online learning has indicated that when a program is able to “develop organized evaluation systems that examine multiple aspects of distance learning to facilitate consistent data collection” (Rice, 2009, p. 174), schools are able to clearly determine successes and failures within programs. Schools that understand the importance of effective evaluation of these key areas expect to see improvement relating to attendance, retention, and student outcomes.

Lee and Figueroa (2012) remarked that “discussion boards, e-mail, telephone, Skype, instant messaging, and any other forms of communication tools available” (p. 25) are likely to engage students in the online educational experience. Lee and Figueroa (2012) also stressed the importance of parental involvement to online learning success, along with evaluation tools or pretests that students must take prior to beginning an online course.

Participant Experiences: Administrators, Students, and Parents

The administrator, student, and parent experiences with K-12 online learning are valuable components to understand when considering best practices for in-district program development. To develop strong in-district cyber content and procedures, it is important to understand both the positive and negative experiences reported by parents and students. A U.S. Department of Education report regarding online learning found: “Distance learning outcomes were less positive when instructor involvement was low, with effects more positive, up to a point, as instructor involvement increased” (Means, Toyama, Murphy, Bakia, & Jones, 2010, p. 74). Also, parents and students are likely to choose online learning in the K-12 setting because “the local brick-and-mortar school down the street is not meeting their needs” for a variety of reasons, and also as “a way to avoid negative influences or bullying. Kids with special needs make up 10% of K12’s student population” (Riley, 2011, p. 1).

According to former Pennsylvania Auditor General Jack Wagner’s 2012 report, charter and cyber charter education funding reform “could save \$365 million a year in taxpayer money ” (“Auditor General Jack Wagner,” 2012) if cyber charter program per pupil costs were reduced to the national average of \$6,500. The expense of this tuition reimbursement is now prompting the implementation of in-district cyber programming as a cost-saving measure. Since the costs of losing students to cyber-charter programming are so exorbitant, school districts are developing in-district cyber programming in an effort to recruit and retain students. School administrators, students, and parents, along with their experiences, are key factors to understanding the in-district cyber planning strategies that support successful retention and recruitment outcomes.

Participants

Participants in this study included high-school students in 11th and 12th grade who had completed (within the last year) or were enrolled in an online course in the district. A total of 12 students participated in this study. Furthermore, five high school students were active as full-time cyber students.

Parents of students who had taken online coursework with the in-district program were recruited to provide feedback. Five parents took part in the interview process. Some of the parents in this study had students who were both full cyber and partial cyber students. These parents had children who participated in secondary online learning within the in-district program or with another provider. Some parents also had a student taking an online course during the study.

School administrators who provided commentary were the school superintendent, the director of online learning, and the business administrator. The three administrators selected for this study had extensive knowledge of the problematic scenarios associated with students’ choosing to attend cyber-charter programs and were able to answer specific questions about financial considerations, retention and recruitment strategies and outcomes.

Tables 1, 2, and 3 delineate the research questions and probing questions asked to administrators, parents, and students.

Table 1
Research Questions

Research Questions	Research Method	Data Sources	Rationale
What are the experiences and perceptions of administrators, students, and parents involved with the in-district program?	Semi-structured interviews	Individual interviews with school administrators, parents, and students	Qualitative interviews provide in-depth insight into participants' experiences
Why are students remaining with the district's cyber program?			
Why are students returning to the district's cyber program?			
What are the factors that influence a student to either remain or return to the district's cyber program?			
What role do teachers have regarding student persistence and student retention?			

Table 2
Probing Questions Asked to School Administrators

Probing Questions	Research Method	Data Sources	Rationale
What kinds of programs can school districts put into place that address the financial implications of expanding cyber-charter programs throughout Pennsylvania?	Semi-structured interviews	School administrators	Qualitative interviews provide in-depth insight to participants' experiences
What kinds of cyber/online programs can be put into place that attract students back to their home district and retain current students considering cyber/online educational options?			
What factors are most influential regarding the retention and recruitment of students in their K-12 in-district cyber school program?			

Table 3
Probing Questions Asked to Students and Parents

Probing Questions	Research Method	Data Sources	Rationale
What decision making process led you to return to your home school or remain at your district for cyber/online coursework?	Semi-structured interviews	Students and parents	Qualitative interviews provide in-depth insight to participants' experiences
Can the in-district cyber program vastly improve the retention/recruitment of students with their own cyber programming?			
Was the cyber course quality of home district programming versus cyber-charter courses a factor in the decision making process?			

Artifacts

Documents reviewed included district records of students and the specific cyber program they attended or were attending. Student artifacts analyzed included student demographics, academic and behavioral materials, and attendance information. This documentation was found through the school district's student management system, PowerSchool and PowerTeacher. Other documentation reviewed pertained to financial records of cost savings or records of costs associated with students attending cyber programming outside their home district or within an in-district setting. These financial records were maintained by the business office of the school district and were reviewed several times a year to ensure accuracy for budgetary purposes. These documents were also subject to audits by state and local officials as the in-district cyber program was under the umbrella of the entire public school district.

Findings and Results

Themes represent the most frequently stated concepts mentioned by participants. Each thematic section contains information explaining the number of references to the identified theme and an analysis of each participant's response. Table 4 presents the number of references per participant group, percentages per participant group, and totals. Table 5 presents the emerging themes identified.

Table 4
Themes, Participant Responses, and Number of References

Participant Groups	Teacher Quality		Retention/ Recruitment		Program Perception		Support	
	#	%	#	%	#	%	#	%
School Administrators (3)	20	54	8	30	4	15	3	12
Parents (5)	6	16	6	22	10	39	5	19
Students (12)	11	30	13	48	12	46	18	69
Totals	37	100	27	100	26	100	26	100

Table 5
Emerging Themes

Emerging Themes (Top Five)
Teacher quality: 37 references
Retention/recruitment: 27 references
Program perception: 26 references
Support: 26 references
Flexibility: 24 references

Teacher Quality

Participants reported that in-district teachers provided frequent and helpful feedback, were responsive to student and parent questions, and were available to meet face to face. Participants from the student and parent groups also stated that the quality of in-district teachers was a factor in their decision-making process concerning returning to or remaining in the in-district cyber program. Overall, teacher quality was an important consideration for school administrators, students, and parents, as these groups determined it was a key element associated with an in-district cyber program’s success.

Below are illustrative comments from a student and a school administrator. One student stated that interactions with in-district cyber teachers were positive and that teachers were knowledgeable and supportive: “When I came into school to talk to one of the teachers, it was good. They knew what they were talking about, and they would try to influence me as much as possible to get the work done. It’s a good experience.” The school administrator remarked, “We take a lot of pride in our teaching staff, and we expect that our online teachers are teaching with the same strategies, with the same remediation approaches, with the same level of support that they do in their face to face classes.”

Retention and Recruitment

School administrators noted that the district's reputation played a role in retaining and recruiting students back to the district. The administrator stated,

I feel our reputation here is one factor that would get parents to keep their kids here. I think that should be another reason that parents would want to have their kids through a cyber program offered by a public school district, is that degree that has a little more status than the other degree.

Additionally, students built relationships with students, teachers, and other staff within the district, making it an attractive feature of the in-district program for students. Individualizing the cyber program to student needs was an important part of the retention and recruitment process as well. This finding aligns with previous research by Davis (2012), who stated that online retention and recruitment strategies point toward creating personalized learning with as many course options as possible. Parents noted that course availability would support retention and recruitment efforts, and that the district was concerned with the costs associated with losing students to other cyber programs. These participants felt that more students would be inclined to participate in the program if they were more aware of course offerings and what it meant to be an online student. Participants mentioned course variety as an element to include when assessing retention and recruitment strategies.

Program Perception

Participants noted that the initial discussion and implementation of the in-district cyber program was thought of as possibly inferior to the traditional classroom learning environment. One participant stated that some members of the school community were unsure of the in-district program's merits and how effective the program might be; others stated that online learning might not be a good fit for everyone, based upon the solitary nature of online learning. Parents expressed concerns about teacher feedback and questioned the quality of courses taught by non-district teachers. Several student participants said that further support and clarity were needed regarding online instruction as well as programmatic offerings and access. One participant's parents thought the online coursework would be more challenging:

I didn't really know anything about it, but a lot of students thought that it was just like an easy way out of taking a normal class. But once you take it, you realize that it's a lot more in-depth and a lot more work than most of the students perceive it to be. For my parents, they thought that it would actually be more difficult than a normal class, because you have to do everything on your own to stay caught up.

Research by Barbour, Siko, Sumara, and Simuel-Everage (2012) found that some factors could be problematic for online learners and their parents: "Students also feel that their online teachers are difficult to contact, and that the asynchronous course content is poorly designed" (p. 14). This researcher's findings from interviews with parents and students aligned with the findings of Barbour et al. (2012). Other students remarked that online course difficulty could vary throughout

the program, and that the lack of interaction with peers in cyber education could be challenging for some students. It should be noted, however, that many of the negative experiences that students and parents recalled were aligned with cyber-charter experiences and not necessarily with the in-district online program. Additionally, other students found the program to be a viable option after finding traditional face-to-face classes to be problematic. Overall, participants provided a wide variety of responses pertaining to the in-district cyber program and other cyber experiences. The overarching finding pointed to the need for frequent teacher support for students who may have varying degrees of comfort with online learning.

Support

School administrators stated that personal connections and a sense of care regarding student success were key factors that allowed positive relationship building and student success. The quality of the online course content, keeping students engaged, and maintaining consistent feedback were considered important factors for creating a supportive environment for online learning. Participants also agreed that encouraging students who were falling behind in their coursework—with frequent reminders, providing flexibility, and providing accessible office hours or time after school—was likely to engender a supportive atmosphere. Students found that the physical presence of online teachers in the school building was extremely helpful when they needed further feedback or clarification on a project or assignment. Email communication was cited as being quite effective among students as they were able to receive feedback or support during the day or after regular school hours. One student said that teachers provided reminder emails about missing assignments and were available to meet in person:

[They] helped by making sure that I was staying on the top and sending emails when I wasn't, and it's also possible to be with the teacher to check in to see what's due that week and make sure that you have everything done that you need to.

Flexibility

The theme of flexibility emerged from parent and student comments regarding schedules. The option to take courses that met the desires of students or met graduation requirements was noted as one of the most useful aspects of in-district online learning. Online options certainly provide freedom and responsibility for students, which was referenced many times by participants in the study. Some parents remarked that they were skeptical about the quality of online courses, but the flexibility offered in this format was beyond what the traditional learning environment could provide. Flexibility and student satisfaction with this option were likely aligned with student recruitment to and retention in the in-district program.

Parents and students alike commented positively about the flexibility of an online learning program. One parent noted, “Students, from what I’ve heard, appreciate the flexibility that it gives them with block programming to complete or fit in what they need to fit in.” A student stated,

Taking the online classes made the process go a lot faster for making up credits and for me, it was just easier. If it was something that was going to help me, or help me progress getting credits, it would be something I could do.

Artifact Analysis: Overall District Enrollment and Demographics

When considering the thematic elements that emerged throughout the course of the study, it is important to note that demographic considerations clearly shaped these outcomes. High-school age students appreciated the flexibility and support of the program due to course options and work considerations, while parents were more likely to note the necessity of high-quality teachers and program perception, and school administrators referenced student retention and recruitment. Below are sub-groupings and analyses of various demographic considerations as they relate to the several types of artifacts.

Charter and Cyber-Charter Enrollment and Per-Pupil Costs

The following data were identified by analyzing current in-district cyber student records as tracked by the district's central office administration. For the 2014-2015 school year, 33 students in the district attended a total of nine charter schools; 18 of the 33 students were attending cyber-charter programs outside the in-district program at a cost to the district of \$13,567.59 per regular-education pupil and \$29,113.50 per special-education pupil. Fifteen regular-education students and three special-education students were attending cyber-charter schools. The total district cost was approximately \$290,854.35.

Student/District Demographics: In-District Cyber Program

Twenty-six students who met the researcher's criteria of cyber-course experience in grades 11 and 12 were participating in the in-district cyber program. Twenty-four students were identified as White (not Hispanic). Two students were identified as Asian (not Hispanic). Five students were recorded as economically disadvantaged by the school district. Attendance records for this group displayed a relationship between academic achievement and days in school. Students who regularly attended school and had zero or few instances of being late to school were more inclined to earn grades in the B to A range. Conversely, those who earned grades at or below the C range were more likely to have more days missed from school.

Artifact: Strategic Planning Documents

During the 2010-2011 school year, the per-pupil costs for students without an individualized education program (IEP) were \$11,185.27, and \$23,741.27 per student with an IEP. Forty-six students were without an IEP; four had IEPs. Table 6 displays charter and cyber-charter school costs to the district from the 2006-2007 school year through the 2010-2011 school year.

Table 6

Charter and Cyber-Charter School Costs: 2006-2007 Through 2010-2011 School Year

School Year	Cost	Student Enrollment
2006-2007	\$142,152 (actual)	Not recorded
2007-2008	\$225,492 (actual)	21 (7 cyber students)
2008-2009	\$290,183 (actual)	27 (9 cyber students)
2009-2010	\$466,269 (actual)	40 (26 cyber students)
2010-2011	\$527,700 (budget)	50 (36 cyber students)

Artifact: Teacher Survey Information

In 2014, the district also conducted a survey of in-district cyber teachers regarding perceptions of the third-party provider's online content, course rigor, learning strategies, assessment techniques, and face-to-face meeting time with students, as well as other topics pertaining to the online program quality and practice. A summary of key findings indicated that 64% of teachers found the predesigned, third-party provider courses to be of low quality when compared to district courses in the face-to-face setting; 87.5% noted that the administration of assessments differed online vs. in the classroom; 93% reported that instructional strategies were different online and required adaptations, as opposed to face-to-face learning; 56% stated that writing prompts and tasks differed when teaching an in-district cyber course; 91.25% felt comfortable with the quality of instruction they were providing their students; 80% to 87.5% of teachers used in-person or face-to-face training sessions offered by the third party provider of online content; 75% noted that understanding how to help students collaborate online would be helpful; 81% stated that students had met with them during the scheduled office hours or cyber teacher time; and 68.75% noted that students attended the in-district cyber lounge at the district's on-campus site.

Artifact: Financial Documents and Past Records

For the 2015-2016 school year, per-pupil costs were expected to rise to \$14,500 for a student without an IEP and \$30,500 for a student with an IEP. Additional expense reports from the 2009-2010 school year through the 2013-2014 school year displayed a substantial rise in costs associated with charter and cyber-charter programming for which the district must prepare in the years to come. Table 7 provides a brief history of the expenditure format. The budget has expanded nearly every year, at times by hundreds of thousands of dollars.

Table 7
In-District Budgetary Amounts

School Year	Original Budget	Current Budget	Expended/Received	Balance
2009-2010	\$455,000	\$455,000	\$457,332.96	-\$2,332.96
2010-2011	\$527,700	\$527,700	\$558,343.72	-\$30,643.72
2011-2012	\$646,000	\$438,095	\$346,970.56	\$91,124.44
2012-2013	\$577,600	\$577,000	\$390,903.47	\$186,096.53
2013-2014	\$697,898	\$697,898	\$398,266.25	\$299,631.75
2014-2015	\$923,400	TBD	TBD	TBD
2015-2016	\$733,000	TBD	TBD	TBD

Further analysis of the cyber-/charter school documents indicated that special-education pupil enrollment and costs were projected to increase for the 2015-2016 school year, with special education costs rising over \$60,000 from the previous school year.

Financial and District Savings

Artifact review of documents prepared by the school district business administrator displayed the following details regarding budgetary savings from charter and cyber-charter programming and the recruitment/retention of students (see Table 8).

Table 8
In-District Budgetary Savings

School Year	Charter School Budget	Number of Students	Savings
2009-2010	\$466,269	Not available	Not available
2010-2011	\$558,344	47 non-special education students	Not available
2011-2012	\$646,000	51 non-special education students	\$86,352
2012-2013	\$749,000 (includes in-district cyber operational costs)	44 non-special education students	\$126,821
2013-2014	\$865,957	46 non-special education students	\$270,000

The estimated budget for the 2014-2015 school year was approximately \$855,675, with 44 non-special education students. According to records kept by the district business administrator, the number of students would have expanded to 63 at a cost of \$950,000 if the in-district cyber program were not in place. Additionally, Table 8 shows tens and hundreds of thousands of dollars in savings due to the in-district program implementation when considering the overall cost breakdown of charter and cyber funding allocations. The school district business administrator also noted in his report that it was extremely difficult to determine the exact number of students who decided to attend the in-district cyber program instead of a cyber-charter option outside the district. The school business administrator stated that since the inception of the in-district cyber program, the addition of the director of online learning has completed an effort to retain and recruit students, and the entire savings could be approximately \$1,000,000. Further detailing the function of the budget process, the business administrator noted, if “we budget 44 students and we end up with 30 students, then we have achieved actual savings that can be reinvested in the program, or that money falls to fund balance” (Business administrator, personal communication, February, 2015).

Recommendations

Advertising

A number of students and parents remarked that to expand the in-district program, more advertising should be distributed throughout the district. Some parents and students explained that it appears as if in-district online courses are a credit recovery option of sorts that are offered by the guidance department. The district should look for ways to reach a larger percentage of the school and district population, perhaps via social media or assemblies during the course of the school year. A reasonable number of students and parents were somewhat unclear as to what the in-district program entailed and offered for students.

Research by Angelino, Williams, and Natvig (2007) concluded that to attract and establish relationships with potential students and current students, communicating with as many students as possible would be an appropriate strategy. Angelino et al. (2007) recommended that districts “initiate contact with students via phone call,” “conduct pre-course orientation,” and “facilitate informal online chats throughout the course website” (p. 10). Whereas some of these strategies would be helpful to currently enrolled students, contacting potential students with personal phone calls would likely develop overall social relationships and promote the concept of individualized learning.

Quality of Purchased Courses

An area that was cause for concern among several parents and students was the poor quality of purchased courses. The purchased courses were not taught by district teachers and were generally criticized by parents and students as too easy, vague, or upsetting, as students were unable to adequately interact with the designated teacher or instructor. Although these courses were offered as a way to provide further flexibility and options for students, perhaps the district needs to evaluate other course delivery methods that still have a high level of student-teacher engagement. One solution may lie with the continued expansion of the in-district cyber program, which would

allow for more classes taught by in-district teachers. An analysis of the provider of these purchased courses should also take place given the documented student and parent dissatisfaction. An investigation into the district's current contract status with the provider of the purchased courses would be necessary to determine if other options were feasible.

Overall Retention and Recruitment Practices

Although the district was successful to some degree in retaining students and bringing in new students, increased focus on advertising may support programmatic growth. The review of financial documents made apparent that the per-pupil costs for regular-education and special-education students climb on a yearly basis. Therefore, it is worth considering and evaluating the present in-district recruitment practices in order to maximize efforts for enhanced district savings. Retention and recruitment practices may simply be a byproduct of higher-quality purchased courses, an increased advertising presence, and greater awareness of the in-district cyber program, but this area is worth examining from a holistic perspective. Davis (2012) has remarked that course content should be focused on the individual needs of students and on meeting the needs or criteria that families deem important for cyber coursework. Research by the Rogers Family Foundation (2011) has stated that “small group instruction, integration of digital content, differentiated instruction, use of data, self-efficacy and increased satisfaction” (p. 5) influence students and families when making a decision about an online learning program. Furthermore, research findings by Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer (2004) supported the continued use of diverse forms of communication as a way to meet student needs and possibly increase retention and recruitment outcomes.

Possible Action Steps

Advertising. The school district should seek to review current advertising procedures for the in-district cyber program. Additionally, the district should seek feedback from students and parents regarding advertising practices and awareness of the in-district cyber program and what it has to offer. This feedback could be acquired with a survey tool deemed appropriate by the district.

Communication. The school district should seek to use social media outreach or face-to-face assemblies or meetings to provide further information about courses and options. The director of online learning can conduct social media outreach. Through such venues, online teachers can share their experiences and answer questions from prospective students regarding the format, content, and pacing of classes. Guidance counselors and building administrators can provide online informational sessions as needed as well as social media participation. They also determine how advertising and communication best meet the needs of students and parents. It is likely that social media, updated websites, email, and phone calls would be accessible to all stakeholder groups.

Program clarity, quality, and promotion. School leadership should evaluate steps to improve the understanding of the courses and the program throughout the entire district community. Such efforts should make clear that the quality of the in-district program courses is superior to other cyber-charter programming and emphasize the availability of frequent interaction with and feedback from a district teacher.

Retention and recruitment. School district leadership should examine retention and recruitment practices, identify gaps, and develop a strategic plan for target goals for the coming school year. As previously noted, analysis of present advertising strategies and the quality of purchased courses is worthwhile and needed. Advertising and the value of courses associated with the in-district program are vital to the long-term success of the program and the district.

Summary

Themes delineated in this research point to high quality in-district teaching staff as a major contributor to program success. School administrators, students, and parents all referenced the importance of quality teachers' providing substantive feedback in a timely manner as a way to create a positive reputation for the district's online learning program. Students and parents remarked that increased advertising would likely lead to further expansion of the in-district cyber school. Program perception was mostly positive and considered to be of high quality, although some parents and students had negative opinions about cyber courses provided by the in-district cyber academy that were fee-based and not taught by regular district teachers. School administrators, students, and parents lauded the support system in place for the in-district cyber courses and found teacher interactions and availability to be quite strong. By contrast, somewhat harsh criticism was levied against cyber-charter programs, as student and parent experiences with responsive feedback were absent, inconsistent, and/or at times frustrating. Cyber-charter programming often consisted of limited teacher-student contact and questionable course quality. Flexibility was also considered a strength of the cyber program, diminishing stress for students trying to manage and meet schedule requirements prior to graduation. Parents and students were pleased with the availability of social interaction and extracurricular activities while taking in-district cyber courses. Still, cost considerations continue to be a significant point of interest for school administrators, and some parents remain aware of the savings associated with retaining and recruiting students for the in-district cyber program.

In-district cyber programming is a relatively new approach meant to stem rising per-pupil tuition costs as more and more students opt for online educational options. The district evaluated in this study displayed considerable planning and foresight regarding the importance of establishing an in-district program several years ago and, as a result, saved hundreds of thousands of dollars. While the in-district program had areas of strength such as teacher quality, student support, social interaction opportunities, and a rigorous curriculum, there was still room for growth regarding program advertising and the quality of purchasable online classes. The district would be wise to continue analyzing its retention and recruitment strategies, as competition is likely to be fierce from myriad cyber-charter programs in the years to come.

References

- Angelino, L. M., Williams, F. K., & Natvig, D. (2007). Strategies to engage online students and reduce attrition rates. *The Journal of Educators Online*, 4(2), 1-14. Retrieved from www.thejeo.com/Volume4Number2/Angelino%20Final.pdf
- Auditor general Jack Wagner says fixing PA's charter school formula could save \$365 million a year in taxpayer money. (2012, June 20). *PR Newswire*. Retrieved from website: <http://www.prnewswire.com/news-releases/auditor-general-jack-wagner-says-fixing-pas-charter-school-formula-could-save-365-million-a-year-in-taxpayer-money-159734975.html>
- Barbour, M. K. (2010). Researching K-12 online learning: What do we know and what should we examine? *Distance Learning*, 7(2), 6-12. Retrieved from <https://www.usdla.org/resources/usdla-quarterly-journals/>
- Barbour, M., Siko, J., Sumara, J., & Simuel-Everage, K. (2012). Narratives from the online frontier: A K-12 student's experience in an online learning environment. *The Qualitative Report*, 17(20), 1-19. Retrieved from <http://www.nova.edu/ssss/QR/QR17/barbour.pdf>
- Cavanaugh, C. S., Barbour, M. K., & Clark, T. (2009). Research and practice in K-12 online learning: A review of literature. *International Review of Research in Open and Distance Learning*, 10(1). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/607>
- Cavanaugh, C. S., Gillan, K. J., Kromrey, J., Hess, M. & Blomeyer, R. (2004). *The effects of distance education on K-12 student outcomes: A meta-analysis*. Retrieved from <http://files.eric.ed.gov/fulltext/ED489533.pdf>
- Davis, M. R. (2012). New laws, programs expand e-learning options. *Education Week*, 32(2), 3-4. Retrieved from <http://www.edweek.org/ew/articles/2012/08/29/02el-choices.h32.html>
- Democratic House Education Committee. (2014). *Charter & cyber charter school reform update*. Retrieved from http://www.pahouse.com/files/Documents/Newsletter/Charter_and_Cyber_Charter_School_Reform_Update.pdf
- Education Law Center. (2013). *Cyber charter schools—Frequently asked questions*. Retrieved from http://www.elc-pa.org/wp-content/uploads/2013/08/access_CyberCharterSchools_FAQ.pdf
- Han, J. G., Ableidinger, J., Hassel, B. C., Jones, R., & Wolf, M. A. (2013). *Quakertown Community School District: A systematic approach to blending learning that focuses on district leadership, staffing, and cost-effectiveness*. Retrieved from Alliance for Excellent Education website: <http://www.all4ed.org/files/Quakertown.pdf>
- Lee, M., & Figueroa, R. (2012). Internal and external indicators of virtual learning success: A guide to success in K-12 virtual learning. *Distance Learning*, 9(1), 21-28. Retrieved <https://www.usdla.org/wp-content/uploads/2015/09/Vol.-9-No.-1-2012.pdf>

- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practice in online: A meta-analysis and review of online learning studies*. Retrieved from U.S. Department of Education website: <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Pennsylvania School Board Association. (2014). *The costs of charter and cyber charter schools*. Retrieved from https://www.psba.org/wpcontent/uploads/2014/09/Charter_School_Funding-White-Paper_Update_2014.pdf
- Rice, K. (2009). Priorities in K–12 distance education: A Delphi study examining multiple perspectives on policy, practice, and research. *Journal of Educational Technology & Society*, 12(3), 163-177. Retrieved from http://www.ifets.info/journals/12_3/15.pdf
- Riley, S. (2011, September 1). Online K-12 public ed advances most states offering it an approach that blends offline and face-to-face gains as popular option. *Investor's Business Daily*. Available from <http://www.investors.com/news/technology/online-ed-passes-grade-for-many-k-12-students/>

About the Author

Chris Hardin, Ed.D., is a high school English teacher for the Palisades School District. His research interests are K-12 online learning and methods of educational funding. He can be reached at johnchardin2013@gmail.com.

Co-Teaching: A Guiding Light Through the Implementation of Effective Practice and the Impact of Collaborative Teaching on Students and Teachers

Anthony Preston
Millville Area School District

Daniel Roesch
Bloomsburg University

Michael Patte
Bloomsburg University

Many schools are allocating a lot of time, energy, and money toward integrating collaborative teaching, also known as co-teaching, into their classrooms. The purpose of this article is to analyze literature from across many sources to highlight potential implementation strategies for co-teaching and the potential advantages and disadvantages that may be encountered through execution.

Throughout history, dynamic partnerships have been found in all facets of society. Whether it is George and Lennie from Steinbeck's *Of Mice and Men*, Buzz and Woody from Pixar's *Toy Story*, to even Bonnie and Clyde during the Great Depression, these duos can be found everywhere. Gracing the pages of literary classics, dazzling viewers on television and the silver screen, or finding their way into the analogues of history, many partnerships have contributed to society in some way, shape, or form. Recently, similar collaborations have begun to find their way into the classrooms of schools around the world. Although co-teaching is an educational practice that is becoming more prominent in many schools, many researchers are trying to determine whether the cliché "two heads are better than one" can and does apply in the sphere of academia and, if so, what is the best method for using such an approach.

Statement of the Problem

The purpose of this article is to highlight potential implementation strategies for co-teaching and the potential advantages and disadvantages that may be encountered through execution by addressing the following questions.

1. What are the different factors and implementation strategies connected with co-teaching that educators need to evaluate before adoption?
2. What are the different types of co-teaching that can be used within the classroom and the teacher roles associated with each approach?

3. What benefits for both students and teachers come about from the application of co-teaching in the classroom?
4. What disadvantages are encountered by both students and teachers with the use of co-teaching?

Review of the Literature

Throughout history, teachers have been expected to fulfill many roles on a daily basis. While teachers are expected to be facilitators, mentors, counselors, and managers, beyond the multifaceted nature of this occupation, at the end of the day teachers are expected to be experts at their craft and implement the best practices to gain optimal output from their students. It is a fact that “the job of *teacher* has become increasingly complex, demanding, and exciting due to our nation’s increasingly diverse student population and requirements of NCLB [No Child Left Behind], Individuals with Disabilities Education Improvement Act of 2004, and other state and federal mandates” (Thousand, Villa, & Nevin, 2006, p. 246).

Passing the torch of knowledge from teacher to student is not only a task not to be taken lightly, but it is one for which a plethora of approaches exists. Whether it is a lecture, small or large group discussion, Socratic seminar, or independent study, the ways in which teachers can guide their students’ learning is almost infinite. With the ultimate power of choosing between the approaches, many teachers and schools have found a necessity in pairing teachers to more effectively gain the desired outcomes from all their students, no matter their cognitive learning abilities.

While many facets of the U.S. educational system are still deeply rooted in frameworks established by the Industrial Revolution, Bob Dylan proclaimed it best in 1964 with his song, “The Times They Are A-Changin’.” The concept of team teaching is attributed to William Alexander, known as the “father of the American middle school,” who delivered a presentation on team teaching at a 1963 conference held at Cornell University. Alexander’s main idea was to establish teams of three to five middle school teachers who would be in charge of team teaching content to groups of 75 to 150 pupils (Gaytan, 2010, p. 82). With the continuous evolution of the world both in and out of education, it is uncertain as to how long co-teaching will be a desired educational practice. This topic needs to be researched because teachers today are presented with the daunting task of preparing students for jobs that have not yet been created, and teaching fundamental skills required to solve the problems of tomorrow using technology that has not yet been invented. With this notion in mind, “collaborative skills are important to success in the 21st century” (Thousand et al., 2006, p. 245). While every student learns differently, and each teacher has his or her own unique style of educating, it is essential that educators do not squander the precious instructional time remaining after standardized test preparation and implementation to put into practice the methods that will gain the greatest achievement results for students both in and out of the classroom.

Many schools are allocating a lot of time, energy, and money toward collaborative teaching, also known as co-teaching, in their classrooms. Co-teaching, or having “two or more educators working collaboratively to deliver instruction to a heterogeneous group of students in a shared instructional space” (Conderman, 2011, p. 1) is considered by Thousand et al. (2006) to be “a

vehicle for bringing together people with diverse backgrounds and interests to share knowledge and skills to generate novel methods to individualize learning” (p. 241). With the present economy, and many districts struggling with budget cuts and teacher furloughs, it is essential that resources are put toward strategies that work, as opposed to keeping up with educational fads that may dissolve as quickly as they find their way into application.

This literature review determines whether co-teaching is the best strategy for today’s educational system, or if resources should be given elsewhere. Although there are many different schools of thought on education, as well as various strategies that can be used to gain a desired outcome, whether co-teaching is one of those is still yet to be conclusively determined. A persistent “theme of school reform literature over the past decades has been the need for teachers to shift from working as isolated practitioners to working as colleagues” (Aliakbari & Bazayr, 2012, p. 60). Education goes through many trends, and this literature review determines whether the educational practice of co-teaching should continue for years to come. Furthermore, it illuminates four ideas regarding co-teaching. Specifically, it examines the preliminary steps needed before implementing co-teaching, the different models of co-teaching that can be applied in the classroom, the distinct benefits of co-teaching to students and instructors, and the drawbacks and disadvantages to students and instructors that may come about from co-teaching.

Co-Teaching as a Collaborative Process

To better gauge the effectiveness of co-teaching, it is essential to understand what collaborative teaching is. As previously mentioned, co-teaching focuses on bringing “the collaboration between general and special education teachers for all of the teaching responsibilities of all students assigned to a classroom” (Gately & Gately, 2001, as cited by Keefe, Moore, & Duff, 2004, p. 36). This partnership is not limited to this collaborative pair, but “generally co-teaching team[s] consist of a general educator and another licensed professional such as a special educator, speech/language pathologist, reading specialist, language specialist, or other general educator (Conderman, 2011, p. 24). One of the biggest reasons co-teaching has increased is that “the Individuals with Disabilities Education Act (IDEA) encourages schools to hold high expectations for all students and ensure students have access to curriculum in general education classrooms to the maximum extent possible” (Conderman, 2011, p. 24). More than “half of all students with disabilities in the United States are educated in the general education classroom for more than 80% of the academic school day” (Brown, Howerter, & Morgan, 2013, p. 84). Due to this added pressure, co-teaching has become a strategy that “can help schools comply with the spirit of these NCLB provisions by arranging for teachers with content expertise to jointly plan and deliver instruction with special educators to ensure the success of all students” (Conderman, 2011, p. 25). To increase the effectiveness of implementing co-teaching, four areas must be analyzed.

Four Essential Areas for Effective Co-Teaching

Much like any relationship or partnership, preemptive work must be done for effective co-teaching to take place. Before teachers can execute one of the many different approaches that collaborative teaching offers, certain factors must be analyzed. In the article “The Four ‘Knows’ of Collaborative Teaching,” Keefe, Moore, and Duff (2004) expressed how co-teaching can be

an effective practice only if educators understand the four essential areas that are needed to be successful in “creating and maintaining co-teaching relationships” (p. 37). These four essential areas are: “(a) know yourself, (b) know your partner, (c) know your students, and, (d) know your ‘stuff’” (Keefe et al., 2004, p. 37). Without understanding these factors, teachers may find their co-teaching experience to be difficult before the first student even enters the room.

A fundamental component of many teacher education programs today is the idea of being a reflective practitioner. This concept is important for new and veteran teachers alike as it promotes constant evolution while stifling complacency in the work place. It is along these lines that Keefe and associates (2004) asserted that knowing one’s self, while an arduous task, is vital to effective collaborative teaching. Although “self-analysis is fraught with pitfalls.., you must embrace it if you want to be part of a team” (Keefe et al., 2004, p. 38). This fundamental step in the process forces educators in the collaborative teaching partnership to recognize “strengths and weaknesses that may never have been called into play before” (Keefe et al., 2004, p. 37). It is also key to acknowledge any preconceived notions one may have about an inclusive environment and ask the important questions: “question yourself about your biases. Reflect on situations that possibly shaped your views as an educator and share those insights with your partner” (Keefe et al., 2004, p. 37).

It is this open communication between professionals that ties into the second most fundamental area to evaluate and understand: know your partner. Keefe and colleagues (2004) continued their analysis of these essential preliminary steps by endorsing the notion that “before teachers can plan for the effective engagement of student in their own learning, they need to know each other’s preferences and styles” (p. 38). Like oil and water, if teachers do not truly understand their fellow educators’ preferences and styles, collaborative teaching can be more harmful than beneficial to both teachers and students. Most important, “multiple instructors can provide positive, productive experiences for students and instructors so long as extra care is taken to both minimize adjustments students must make, and avoid sources of confusion” (Jones & Harris, 2012, p. 139). Good co-teachers “learn from each other,” recognizing each other’s strengths as well as continually growing as professionals through the collaboration process (Hepner & Newman, 2010, p. 70). For collaborative teaching to work, “teammates must connect on other personal and professional levels. Their relationship must be a model for the students in their classrooms, as well as a guiding force” (Keefe et al., 2004, p. 38). As co-teachers reflect on their professional partnership, they should be able to discuss the following issues.

They can discuss what went well, areas for future improvement, surprises that occurred, next steps in the curriculum, students who need more assistance, and the most appropriate way to divide responsibilities for upcoming lessons. (Conderman, 2011, p. 28)

Only by finding out who one’s partner truly is can a common vision for success and implementation can take root.

The importance of communication and unity between the pair is further accentuated by Hepner and Newman (2010). First, it is essential that “co-teachers agree to work together and believe that

working together they will be able to better meet the needs of their students” (Hepner & Newman, 2010, p. 70). Forced pairing could lead to extensive disparity in teaching tactics, discomfort with material, and student confusion and stigmatization. Second, effective co-teaching partnerships “report parity at every level, it is a shared class in every way; teachers share planning and grading responsibilities, the physical space is shared, both names appear on the student schedules, students feel that both teachers are ‘their’ teachers” (Hepner & Newman, 2010, p. 70). This concept of “I” turning into “we” and “our” is paramount for effective co-teaching to happen. Third, both co-teachers should “treat each other with respect as professionals, recognizing the expertise and area of specialization that their partner brings to the class” (Hepner & Newman, 2010, p. 70). While a special education teacher may be teaching a course with an English teacher, the expertise and experience that the special education teacher should not be eclipsed because of less knowledge in relation to the subject of focus.

Third, a strong understanding of one’s partner is only going to lead to an effective co-teaching partnership if the same care is presented for understanding their students. When entering into a co-teaching union, it is essential that the teachers “abandon criticism and embrace acceptance” as to who the students truly are, specifically understanding their morals, values, dreams, etc. (Keefe et al., 2004, p. 39). Students throughout history, and especially today, are very perceptive. They will know fairly quickly whether they can trust the two teachers in the front of the room and whether they feel safe in the classroom environment. Consequently, “only when students can see they are in a safe environment where trust is inherent, will they be able to confide in us [the collaborative teaching pair] and tell us what they need to be happy and successful in the classroom” (Keefe et al., 2004, p. 39). Presenting an assortment of assignments at the beginning of the course will allow the co-teachers to gain a better comprehension of not only the academic level with which they will be working, but also the other seven eighths of the iceberg that is not seen from the test scores and the individualized education programs (IEPs) that are visible on the surface.

The fourth facet of this preliminary analysis revolves around knowing the content matter. While all teachers possess certain expertise for which they received their diploma, all teachers are varied groups that have “skills and knowledge that reach beyond categorization” (Keefe et al., 2004, p. 40). These skills will be unraveled as the decoding of each partner takes place throughout the course of the school year. As already mentioned regarding the necessity of teachers’ being reflective practitioners, teachers should not become complacent with only what they already know. In collaborative teaching, it is the responsibility of each educator to delve outside of their educational comfort zones and “become knowledgeable about the day-to-day in the classroom” while also, for example, an “English or math teacher may need to read a special education journal article or attend learning-strategies workshops” (Keefe et al., 2004, p. 41). Keefe and colleagues (2004) conclude their analysis of these preliminary steps by asserting that “good co-teachers are actively engaged with all members of the class,” and that “entering into a collaborative partnership is always a risk, but knowing yourself, your partner, your students, and your stuff are critical steps to eliminate possible tension and controversy before the school year begins” (p. 41). Finally, to support implementation, leaders should consider allowing collaborative teachers to choose their

teammate; provide common planning time; and, as a process, collaborate with team teachers to clearly define approaches and roles of co-teaching.

Choose Your Teammate

Both “faculty and students must choose to be involved in a team-taught course because forcing them to get involved may not lead to a positive outcome” (Gaytan, 2010, p. 85). The principal strategy for maximizing advantages is to “ensure that multiple instructors work as a team, even when the teaching is done individually or in sequence” (Jones & Harris, 2012, p. 139). This cohesion between co-teachers, and even between faculty and students alike, starts with the administrators in the institution that is implementing the co-teaching initiative. Building administrators “can do a great deal to pave the way for a successful co-teaching experience for general and special educators and the students involved in the practice. In fact, active, visible involvement of administrators is key in both planning and implementing of successful co-teaching” (Nierengarten, 2013, p. 74).

Common Collaborative Planning

Before the school year even begins, administrator involvement starts with scheduling “collaborative planning times so that teachers are able to design lessons, learn from each other through their collaborative work, and determine strategies for teaching to a diverse group of students” (Rimpola, 2014, p. 50). Co-teaching can be described as “a high-leverage school system strategy that can result in continuous improvement for all students, and accelerated achievement for students with disabilities, when implemented with the necessary system-level supports and strategies” (Walsh, 2012, p. 29). One of those supports is simply providing the co-teachers with a shared time during the school day to work through all the trials and tribulations the course may offer.

Another key support that the administration initiates is the provision of training for co-teachers on effective models that can be implemented, as well as the creation a school-wide system that embraces co-teaching. In Howard County, Maryland,

several system-level strategies have contributed to the positive correlation between increased access to general education classrooms through co-teaching and improved performance of students with disabilities on state reading and mathematics assessments.... Most significant was a systematic and continuous professional development program. (Walsh, 2012, p. 30)

For this county in particular, the “Designing Quality Inclusive Education (DQIE) program was developed in 2002 to provide professional development that demonstrated and modeled a variety of co-teaching approaches” (Walsh, 2012, p. 30). This program, which provided essential professional development in co-teaching knowledge, was vital to the improved academic success of all students in Howard County.

Most importantly, though, administrators need training in co-teaching just as much as the teachers who will be delving into the teaching model. By understanding the practice of co-teaching, “the administrators can then provide vision, support and understanding for the general and special educators implementing the model” as well as the administration can also “proactively address

potential problems and issues before they lead to discouragement and frustration” (Nierengarten, 2013, p. 75).

Approaches to Co-Teaching and Roles

In 1916, one of America’s greatest poets, Robert Frost, published one of his most well-known poems, “The Road Not Taken.” Within this iconic poem, Frost’s speaker explains, “Two roads diverged in a yellow wood / And sorry I could not travel both / and be one traveler, long I stood / and looked down one as far as I could / To where it bent in the undergrowth.” Metaphorically speaking, Frost is trying to show the importance of the choices that everyone makes on a daily basis and how one simple choice can make “all the difference.” While co-teaching was originally a less-traveled road, it is becoming much more prominent not only in the U.S. educational system, but also globally. Much like Frost’s speaker, it is up to the educators involved in the co-teaching partnership to evaluate different approaches to co-teaching to determine which approach will best suit the needs of the lesson, unit, and the course as a whole. As Nierengarten (2013) asserted, “co-teaching requires careful planning and attention, and to neglect these strong recommendations would diminish the effectiveness of a promising practice” (p. 82).

Luckily for the co-teaching partners, they are different from Frost’s speaker, as they are not traveling down this path as a lonely traveler, but as a dynamic duo that can take the co-teaching vessel any direction they choose. When implementing co-teaching, it is important that general and special education teachers “rely on research-based methods that will lay a foundation for a strong partnership, thereby increasing the chance that students will academically achieve in co-teaching environments” (Brown et al., 2013, pp. 89-90). During a departure into rough educational seas, communication between co-teachers before, during, and after is significant for the overall success of the pairing. Also, as previously mentioned, the school administrator should also not only be knowledgeable in the field of co-teaching, but also be available for open and candid communication to assist co-teachers in finding the approach/approaches that best suit their overall objectives and personalities.

Within each co-teaching approach, each instructor will need to take on multiple roles. While some co-teaching approaches vary in the extent of each role that each educator adopts, all co-teaching philosophies share certain fundamental roles that must be played to their fullest to ensure success. For Bouck (2007), “co-teaching by the two teachers ... is more than just a term from a textbook that was enacted in practice” (p. 48). Instead, each educator must not only be able to share responsibility in the classroom, but take up these roles: “instructor to large class, instructor to individuals, disciplinarian to large class, disciplinarian to individuals, classroom manager, supporter, gatekeeper to authority, [as well as] confidant or friend” (Bouck, 2007, p. 48). On any given day, and for any given lesson, some of these roles will be used by one educator more than another, and some may not find their way into the classroom at all, but the teachers will need to be confident in assuming multiple roles within their co-teaching relationship and expect tensions in the process. Although many would find these tensions to be constraining, they should be embraced opportunities for educators to work through differences and become stronger as a collective entity (Bouck, 2007, p. 49).

Beyond the roles required of each educator, the practice of co-teaching has progressed steadily throughout its history. In relation to co-teaching, Friend and Cook (2010) identified six basic models that accentuate both lead and passive roles that educators can take within the given model. These models are: one teach/one observe, one teach/one assist, station teaching, parallel teaching, alternative teaching, and team teaching. Before independent analysis of each model is presented, it is important to note that while each approach is separate, they are all equal in theory and are only as good as the educators implementing them.

While many educators will attempt to employ these approaches in isolation, “it is not uncommon for co-teachers to use a variety of these models throughout a unit of study or even a class period” (Hepner & Newman, 2010, p. 68). Another key facet is that the aforementioned models of co-teaching are arranged somewhat developmentally, to the point where many first-year co-teachers will embark on one of the earliest described models and eventually work their way to the final models which take more time, practice, and mastery (Hepner & Newman, 2010, p. 68). In the end, though, “co-teachers need to use the approach that best matches the instructional objective and the teachers’ areas of expertise, and each teacher should experience the lead and passive instructional roles” (Conderman, 2011, p. 27).

One teach, one observe. The first approach, which is one of the most commonly embraced, is the one teach, one observe philosophy. Within this strategy, much like it sounds, one teacher leads instruction while the other strategically observes the classroom, whether it be individuals, groups of students, or even the other teacher (Conderman, 2011, p. 27). With this approach, while one educator takes the lead role and the other takes a more passive role, the goal is to focus on the observational behaviors of the students and collect data that can be used to inform future instructional practices (Aliakbari & Bazayr, 2012, p. 58; Conderman, 2011, p. 27). Observable data can be anything from student behaviors, student participation, student roles during cooperative activities, etc. The most important element of this strategy is not the instruction, but the focus of the observer, as this educator can use this time to better reflect on present practices to increase the likelihood of success in the future (Aliakbari & Bazayr, 2012, p. 58).

One teach, one assist. The second most commonly applied approach is the one teach, one assist/drift approach. In this particular approach, “one member of the team teaches (usually the content specialist), while the other assists (usually the special educator)” (Hepner & Newman, 2010, p. 68). The passive educator is responsible for circulating, or drifting, around the room to help either individuals or groups that may have been established. Much like the one teach, one observe approach, the passive educator is still very much responsible for monitoring behaviors both before and after they happen (Aliakbari & Bazayr, 2012, p. 58). Beyond the monitoring of behaviors, the assisting teacher can fulfill many other roles, such as “checking homework; re-teaching concepts; and answering questions” (Hepner & Newman, 2010, p. 68). This assisting teacher is also frequently known to redirect students and groups who may be getting off task, as well as re-explain any misconceptions in relation to the activity at hand (Conderman, 2011, p. 27).

Station teaching. A third approach that is used, even as a traditional approach with a single educator in the classroom, is station teaching. Much like the name suggests, in this model the

information that is presented for a lesson is chunked into smaller parts. Each of these smaller parts has a designated position in the room, which students will not only frequent for a specific amount of time, but they will “rotate among several different learning stations” (Conderman, 2011, p. 27). There are multiple ways to enact this type of co-teaching, but the main focus for this approach is to teach multiple complex ideas that are all tied to one overall learning goal. The number of stations is completely up to the educators, but independent stations will often be used along with teacher-led stations, with each educator facilitating one station (Aliakbari & Bazyar, 2012, p. 58; Conderman, 2011, p. 27). This model, unlike some of the others presented here, allows “for students to take advantage of a lower teacher-student ratio to explore the complex concept in a variety of ways” (Hepner & Newman, 2010, p. 69). Like some of the approaches that follow, it provides a bit more independence and freedom in relation to how each educator delivers the material at his or her specific station.

Parallel teaching. A fourth model for co-teaching is parallel teaching. This approach, much like station teaching, lowers the student-teacher ratio in the hope of creating an environment that will “encourage participation, increase peer interaction, and promote hands-on activities” (Hepner & Newman, 2010, p. 69). Much like parallel lines in geometry, each educator uses the same lesson plan to instruct half the students on the same material. While the easiest way to do this approach is to split the class in half, Thousand and associates (2006) described multiple variations of this co-teaching approach. Beyond dividing the classroom in half, these variations involve co-teachers’ rotating among the two groups of students, each co-teacher teaching a different component of the lesson, and cooperative group monitoring (Thousand et al., 2006, p. 243). There is also experiment or lab monitoring, a learning style focus in which “one teacher works with a groups of students using primarily visual strategies, another works with a group using auditory strategies, etc.” (Thousand et al., 2006, p. 243). One final modification to parallel teaching is supplementary instruction, where:

One co-teacher works with most of the class on a concept, skill, or assignment [and] the other co-teacher (a) instructs students to apply or generalize the skills to a relevant community environment, (b) provides extra guidance to students who are self-identified as needing extra assistance in acquiring or applying the learning, or (c) provides advanced enrichment activities. (Thousand et al., 2006, pp. 243-244)

While the variations are almost endless, and verging on other forms of co-teaching, it is entirely up to the co-teaching team as to how to break up the class, as well as what roles each teacher will perform within the classroom.

Alternative or differentiated teaching. A fifth researched and highly effective model of co-teaching is alternative or differentiated teaching. For this approach, one of the teachers, who does not always have to be the special education teacher, takes a small group of students to receive “preteaching, reteaching, review, or accelerated instruction from a co-teacher while the other teacher leads the remaining large group” (Conderman, 2011, p. 27). The main idea is that while this approach can be helpful for special education students, the students who are pulled out for this type of instruction are any students who need extra help on any given topic (Sims, 2008, p. 62).

This approach tends to work quite well with classes that display a wide range of abilities, as well as with pre-teaching vocabulary, structured support for any topic, or even leading higher ability students in discussion or making cross-curricular connections (Hepner & Newman, 2010, p. 69). One key warning is not only to vary the students who are removed from the room, but also the co-teacher who implements the remediation to avoid stigmatizing students.

Team teaching. The sixth and final approach is team teaching. For many, this approach is often viewed as the end goal of co-teaching, where both teachers not only equally share the instructional delivery, but there seems to be “an invisible flow of instruction with prescribed division of authority” (Aliakbari & Bazayar, 2012, p. 59). Not only will co-teachers using this approach present the content together, but they will play off of one another as well as reinforce each other’s ideas (Sims, 2008, p. 62). This approach, like many of the others, requires a lot of planning and trust between the co-teachers, but it requires even more because team teaching is a simultaneous give-and-take relationship between the two co-teachers. For example, in team teaching, “one teacher may explain a concept, while the other teacher demonstrates it; co-teachers may role-play a situation or model types of interactions” (Hepner & Newman, 2010, pp. 69-70). If done correctly, team teaching allows students to experience each co-teacher’s strengths and expertise as well as “the students will view each teacher as their teacher” as opposed to one being the lead teacher, and the other merely a supporter (Thousand et al., 2006, p. 244).

Although there is a dramatic need for research to investigate the implementation of co-teaching at the secondary level, co-teaching has not only been adopted at elementary and middle school levels. It has also been implemented at the collegiate level, mainly in honors programs. At Rogers State University, for example, the honors program has not only used co-teaching for quite some time, but they have also formulated co-teaching approaches to employ even with the financial limitations through which our society is working. These five models are: unpaid overload, guest lectures, “shared assignments,” “the block course,” and “joint meetings” (Ford & Gray, 2011, p. 104). Unfortunately, every instructor is not always able to be fully compensated for his or her efforts, so the five alternative models of co-teaching “can serve as immediate steps toward an ideal system” (Ford & Gray, 2011, p. 104). While it may be difficult to exploit some of these tactics in a school setting outside the collegiate level, these models are an extension of different approaches that can be used to incorporate co-teaching into any classroom.

Potential Benefits

It is often said that imitation is the highest form of flattery. Indeed, the United States has been rigorously trying to replicate Finland’s education system, which has for decades been considered to be the epitome of success in all things academic. While scoring at the top, or close to the top, in international assessments, Finland’s educational system does not particularly emphasize standardized test scores. Research has found that collaborative teaching by educators in multiple capacities permeates the Finnish education system, leading to greater student achievement and teacher effectiveness. While Loertscher and Koechlin (2015) believe that “everyone needs to recognize that a collaborative stance, like that demonstrated in Finnish classrooms, is worth a try,”

the challenge for various school cultures is “how to capture those intersecting opportunities to duplicate that model [of co-teaching] in Finland [in other countries]” (p. 56).

Co-teaching is considered by many to be the vehicle that brings together “people with diverse backgrounds and interests to share knowledge and skills to generate novel methods to individualize learning” (Thousand et al., 2006, p. 241). When instructors work together to “produce a course with uniform purposes, expectations, and ‘look-and-feel’ then the advantages identified by students and instructors can outweigh the disadvantages” (Jones & Harris, 2012, p. 139). When co-teaching is done correctly, an advantage is that it “provides teachers with more confidence about working with a diverse population and allows teachers to see their co-workers and students in new ways and establish positive relationships” (Keefe et al., 2004, p. 37). This confidence in the partnership allows the co-teachers to “structure their classes to use more effectively the research-proven strategies required for NCLB,” and “when teachers collaborate on their planning and teaching, they are better able to meet the needs of diverse students and fulfill their legal responsibilities” that are posed by NCLB (Thousand et al., 2006, pp. 239, 241).

Collaborative planning and teaching “can result in a variety of positive outcomes for the kids we have today as well as the educators who teach these children” (Thousand et al., 2006, p. 246). For example, “the co-teaching model can also be used to support students learning English in mainstream classes, to stretch students with exceptional academic ability, and to make cross-curricular connections between subject areas” (Hepner & Newman, 2010, p. 67). This advantage is often achieved because “multiple professors almost always produce multiple perspectives, enhancing the discussion and ensuring an ongoing conversation” (Ford & Gray, 2011, p. 109). While the task of creating higher-level and independent thinkers quite often baffles and haunts educators, “faculty members working together teach by example, modeling the sort of discussion, listening, and critical response practices that are at the heart of a great seminar” (Ford & Gray, 2011, p. 109). This concept firmly accentuates the ancient proverb that if you give a man a fish, you feed him for a day; show him how to catch a fish, and you feed him for a lifetime.

Lev Vygotsky was an educational psychologist, and he is well-known for developing the educational principle of scaffolding. Beyond this development, Vygotsky (1997) also developed many other important contributions to educational systems that have been implemented around the world, one of the most important being sociocultural theory. This theory posits that learning is determined by a person’s social environment and stresses the interaction of interpersonal, cultural-historical, and individual factors. People’s interactions in their environment stimulate development processes and promote cognitive growth (Rimpola, 2014, p. 42). Based on Vygotsky’s sociocultural theory, “learning is perceived as an act that is embedded in social and cultural contexts,” and it is because of this notion that co-teaching is advantageous because “the interactions of persons, which are conducted through collaboration, stimulate the developmental processes and foster cognitive growth” (Rimpola, 2014, p. 42).

Co-teaching puts Vygotsky’s sociocultural theory principles into action. For example, “coteaching provides a greater opportunity to capitalize on unique, diverse, and specialized knowledge of each instructor” (Thousand et al., 2006, p. 241). Specifically, with complementary

teaching, “teaching partners have experience in other areas ... that can be readily used to complement and supplement the expertise of the content area teacher” (Thousand et al., 2006, p. 244). Another distinct advantage of co-teaching is that “through planning and teaching together, all members of the team have an opportunity to acquire new skills,” whether it be on how to better differentiate instruction or learning new material specific to a certain content area (Thousand et al., 2006, p. 244).

From a student perspective, one of the greatest advantages of co-teaching is that it makes “‘the class more fun’” (Jones & Harris, 2012, p. 137). Students who learn in a co-taught classroom are exposed to multiple instructors at one time, and when done effectively, they report that “[instructors] working together enriched the class; they could bounce ideas off each other,’ and ‘... you could see how they interacted ...’ [which] showed that students recognize true team teaching as bringing aspects of expert thinking, communication and discussion into the class” (Jones & Harris, 2012, p. 136). These interactions are important to the overall development of students not only in the classroom, but also to become contributing members of society in the present and future. The skills that they develop are further strengthened because “coteaching allows students to experience and imitate the cooperative and collaborative skills that teachers show when they coteach” (Thousand et al., 2006, p. 241). Since these types of skills are essential for success in the 21st century, both inside and outside academia, co-teaching appears to be the advantageous bridge to get students from being isolated learners to collaborative and cooperative learners. Although it may be expensive in terms of time and energy, “multiple instructors working together in a classroom can be especially effective at meeting high level learning goals related to improving expert-like understanding and behaviors” (Jones & Harris, 2012, p. 139).

Furthermore, Conderman (2011) found that “the most frequent favorite aspect of co-teaching as noted by 57 students, was the amount of help they received,” while “learning more was the second most frequently noted advantage of a co-taught class” (p. 30). Jones and Harris (2012) noted that “multiple instructor models may increase flexibility” (p. 137). This increased flexibility makes it possible for “students to experience less wait time for teacher attention and increased time on task, an important factor documented to increase academic productivity (Thousand et al., 2006, p. 241). Thus, co-teaching may also result in increased student performance on high-stakes assessments. As found within many co-taught classrooms in Howard County, Maryland, “students with disabilities increased proficiency in reading at twice the rate (22%) as did students overall (11%) and nearly twice the rate (22%) in mathematics compared with students overall (13%)” (Walsh, 2012, p. 33). Similar to what happened in Howard County, after one year of co-teaching in Shelby County, Tennessee, “the percentage of participating special education students passing the Gateway English test increased from 20% to 40%” (Thousand et al., 2006, p. 240).

While a prime focus has always been on co-teaching’s effects on students, “co-teaching seems to influence areas other than students’ learning and achievement as well” (Aliakbari & Bazayr, 2012, p. 62). Instructors consistently identify “collaboration and mentoring as a potential advantage” to using co-teaching in the classroom (Jones & Harris, 2012, p. 137). Collaboration can also be extremely beneficial because for many teachers, today’s educational system places limitations

on intellectual collaboration with other colleagues (Jones & Harris, 2012, p. 138). For many co-teachers, “everything becomes more manageable and new ideas seem more attainable when there is a partner in the room to plan and teach with you” (Sims, 2008, p. 61).

Even with this benefit in mind, some teachers are hesitant to institute co-teaching because it takes them outside their specialization and comfort zone in relation to subjects taught. While some may view branching out from one’s specialization as a disadvantage to teacher effectiveness, “teaching somewhat outside one’s own specialization can be considered an opportunity rather than a problem..., especially at the first- or second-year level” (Jones & Harris, 2012, p. 138). U.S. students consistently score lower on international standardized tests than their peers in other developed countries. While the standardized tests have evolved throughout the years, educational models within the United States have been quite stagnant. When a classroom teacher teaches alone, “a certain success rate can be expected, but when two adults combine their expertise, the percent of students achieving adult expectations skyrockets” (Loertscher & Koechlin, 2015, p. 56).

Many studies have shown the general advantages reaped by educators and students alike because of co-teaching. Schwab Learning (2003) acknowledged that co-teaching’s

results included decreases referrals to intensive special education services, increased overall student achievement, fewer disruptive problems, less paperwork, increased number of student qualifying for gifted and talented education services, and decreased referrals for behavioral problems. In addition, teachers reported being happier and not feeling so isolated. (Schwab Learning, 2003, as cited by Thousand et al., 2006, p. 240)

Walther-Thomas’ 1997 evaluation of co-teaching found that “positive outcomes included improved academic and social skills for low-achieving students, improved attitudes and self-concepts reported by students with disabilities, and more positive peer relationships” (Walter-Thomas, 1997, as cited by Thousand et al., 2006, p. 240). From a student perspective, they believed that more teacher time and attention was able to be paid to them, thus resulting in the aforementioned improvements (Thousand et al., 2006, p. 240).

Potential Disadvantages

Although “the beneficiary effect of co-teaching has been supported by some studies, there are voices that cast doubt on the usefulness of co-teaching models” (Aliakbari & Bazayr, 2012, p. 61). A caution against using supportive teaching is that whoever is playing the support role must not latch onto individual students, or they may actually stifle the students’ interactions with other students (Thousand et al., 2006, p. 243). This relationship could lead to stigmatization of not only the students that are being assisted, but also of the support teacher as well—which, in turn, could drastically alter the student perceptions of both groups (Thousand et al., 2006, p. 243). Similarly, with parallel teaching, “there is the possibility of creating a special class within a class by routinely grouping the same students in the same group with the same cotl teacher” (Thousand et al., 2006, p. 244). As a result, groups should be heterogeneous whenever possible to avoid stigmatization, allow both educators to be familiar with all students, and assist in problem solving on multiple fronts (Thousand et al., 2006, p. 244). Lastly, a common and often unavoidable concern with

complementary teaching, particularly at the secondary level, is that “those coteachers who are not the content area teachers do not have the same level of content mastery as the content teacher” (Thousand et al., 2006, p. 244). While going outside one’s specialization may be viewed as a distinct opportunity for improvement, many co-teachers find the experience uncomfortable due to lack of fundamental knowledge on the subject being presented.

Additional difficulties and disadvantages of co-teaching include “incompatibility within the team, poor communication, or reduced freedom to teach as one pleases” (Jones & Harris, 2012, pp. 137-138). Incompatibility can be quite hazardous because “multiple instructors teaching alone and rarely interacting with each other” is the least effective model of co-teaching partnership (Jones & Harris, 2012, p. 139). In relation to co-teaching, “if you will not bend, your students will break” (Sims, 2008, p. 60). This same mentality also carries over into the educators because “maintaining teaching quality and enthusiasm, lack of commitment or freedom, and poorer connection with students (especially when teaching only small portions of a course) were all recognized as challenges” (Jones & Harris, 2012, p. 138). Some teachers are very recalcitrant against giving up leadership in their classrooms, and if two teachers find themselves in such a situation, the final outcome could be problematic.

Buckley (2000) cautioned that “there is no universal approach to team teaching” (as cited by Aliakbari & Bazyar, 2012, p. 60). One major disadvantage involves the extensive amount of time, energy, and planning that is needed to produce a successful co-teaching relationship and classroom. While there may be more flexibility for educators who are implementing co-teaching, it comes at a cost as “the total time commitment also increases because of the need for planning and coordination” (Jones & Harris, 2012, p. 137). Many schools do not build in common planning time, so co-teachers are forced to make alternative arrangements to meet and coordinate lesson plans, assignments, grading procedures, etc. This strain is not only taxing on the instructors, but also on students and administrators. This disadvantage is heightened even more due to many educators’ claim that “the most frequently mentioned drawback was the lack of staff development to learn how to be more effective coteachers” (Walter-Thomas, 1997, as cited by Thousand et al., 2006, p. 240). As was previously mentioned, if the essential training, preparation, and development are not instituted well before the school year begins, a co-teaching relationship could have problems before it even starts.

Many students have been brought up through the educational system simply having only one educator/authority figure in the room to whom they are accountable. This arrangement is not very realistic in the real world, and co-teaching attempts to bridge the gap between real-world expectations and those imposed on students at the academic level. Herein lies another distinct disadvantage which is no fault of co-teachers: “students who are used to lecture-based instruction may resist the team-teaching approach” (Gaytan, 2010, p. 85). It is quite an endeavor to modify one’s overall approach to a class year in and year out. While teachers must adjust to the students who are assigned to them, from a student perspective, “adjusting to the different instructors was identified as the main disadvantage” of co-teaching (Jones & Harris, 2012, p. 136). As this confusion can be felt with students trying to identify which teacher holds authority, many co-teachers have

acknowledged that a major barrier to successful co-teaching “resulted from the lack of parity felt between general education and special education teachers” (Keefe et al., 2004, p. 37).

Summary and Conclusions

Summary

This review focused on co-teaching and the positive and negative effects it has on both educators and students. While many teachers are quite capable of teaching in isolation from their peers, recent trends have suggested a distinct shift to the simultaneous employment of multiple instructors in one classroom. Although this educational strategy is being performed, many educators are not equipped with the knowledge necessary to effectively implement one or more co-teaching models. Clearly, preliminary steps are needed before implementing co-teaching.

Co-teaching requires “careful planning and attention, and to neglect these strong recommendations would diminish the effectiveness of a promising practice” (Nierengarten, 2013, p. 82). Beyond planning, attention must be paid to four essential areas for “creating and maintaining co-teaching relationships” (Keefe et al., 2004, p. 37). These four essential areas are to “(a) know yourself, (b) know your partner, (c) know your students, and, (d) know your ‘stuff’” (Keefe et al., 2004, p. 37). This preparation is much more effective when professional development is implemented in the school as well as when the administration collaborates with the staff during the co-teaching implementation process.

Genuine understanding of co-teaching is only one key component of the co-teaching equation. While grasping the four essential areas for creating and maintaining a successful co-teaching relationship is important, it is just as important that general and special education teachers “rely on research-based methods that will lay a foundation for a strong partnership, thereby increasing the chance that students will academically achieve in co-teaching environments” (Brown et al., 2013, pp. 89-90). This review of literature has revealed that there are six research-based co-teaching models that have been proven to be successful; they are equal in theory and are only as good as the educators implementing them. Along with these models, each co-teacher must be willing to adopt multiple roles in the classroom as must be willing to branch out of his or her comfort zone to make sure the students come before any professional discrepancies. Co-teachers must share responsibility and seamlessly shift between the leading and passive roles that successful co-teaching requires.

Co-teaching creates tensions. These tensions can be seen as opportunities, as well as constraints, when considering what co-teaching affords teachers individually and as a collective entity (Bouck, 2007, pp. 48-49). Many co-teachers have used these tensions to become better educators, which proves to be just one of the many advantages that can be found with the implementation of co-teaching in the classroom. Schools within the United States, such as Howard County, Maryland, have proven that, when adapted to fit U.S. culture, co-teaching can raise student achievement across the spectrum, including among ESL students. This achievement leads to not only more confident students both in and out of the classroom, but also more confident educators. It also brings multiple instructor perspectives into classrooms that are generally limited to just one. While co-teaching

fulfills the fundamental principles established in Lev Vygotsky's sociocultural theory, successful co-teaching has also been reported to make class more enjoyable and present students with a model of the collaboration skills that will be essential to their future accomplishments outside the realm of academia. Having two educators in the room at all times may also result in fewer behavioral issues, which can lead to stronger emphasis on helping students through confusing material.

While "student feedback, along with other assessment measures such as student pre- and post-test scores, administrators' observations, parent comments, and teacher journal entries validated the success of the co-teaching experience, the feedback also revealed areas for future refinement" (Conderman, 2011, p. 31). Like every yin has its yang, and every sunrise its sunset, co-teaching also does present certain drawbacks for students and co-teachers alike. While each co-teaching model presents specific advantages, each also possesses certain disadvantages that could, if not monitored, hinder both student and educator achievement. One distinct disadvantage is that teachers who are forced into co-teaching could present a disconnect in many ways. Such disconnects between co-teachers can increase student confusion exponentially, as many students are not familiar with having more than one authoritative presence in the room at one time. Among co-teachers for whom communication has not been maintained throughout the endeavor, many have experienced a lack of freedom, and have consequently lost enthusiasm, hampered their connection to the students, and committed less to the class than they would have under other circumstances. Lastly, a major disadvantage reported by educators involves the extensive amount of time, energy, and planning that are needed to produce a successful co-teaching relationship and classroom. While there may be more flexibility for co-teaching educators, it comes at a cost. Lack of preparation from a scheduling standpoint can lead to co-teachers' spending long hours, both in and out of school, working on creating a positive co-taught classroom.

Conclusions

The sources that were reviewed in the making of this article accentuated the evolution of co-teaching both in the United States and abroad. The articles chosen were all peer-reviewed pieces from prestigious academic journals, and most had been published within the last decade (2006 to the present) to make sure that the information included was as current as possible. Some older articles were used to show the history of co-teaching, testimonials from teachers and administrators on the concept and application of co-teaching, and to help the reader better understand the fundamental components of co-teaching.

The authors concur with scholars of co-teaching that "future researchers should continue to examine co-teaching relationships, particularly with respect to potential of co-teaching relationships to improve student outcomes" (Bouck, 2007, p. 50). Furthermore, more data must be collected to "clarify the relationship between co-teaching classrooms and improvements in student outcomes" (Bouck, 2007, p. 50).

For many of the co-teaching partnerships that were examined in the articles presented in this article, "it is not unusual for co-teaching partners to require 2-3 years to become acclimated and establish predictable routines.... Clearly, co-teaching is an effort that takes time and patience"

(Nierengarten, 2013, p. 81). While it is possible to follow the lead of countries such as Finland to implement co-teaching and adapt their techniques to U.S. culture, if it is not done, there is no telling how far U.S. education will fall. In practice, while “successful co-teaching is not easily attainable,” that does not mean that it should be quickly, and easily, discarded (Aliakbari & Bazyar, 2012, p. 56).

References

- Aliakbari, M., & Bazyar, A. (2012). Exploring the impact of parallel teaching on general language proficiency of EFL learners. *Journal of Pan-Pacific Association of Applied Linguistics*, 16(1), 55-71.
- Bouck, E. C. (2007). Co-teaching ... not just a textbook term: Implications for practice. *Preventing School Failure*, 51(2), 46-51. doi:10.3200/PSFL.51.2.46-51
- Brown, N. B., Howerter, C. S., & Morgan, J. J. (2013). Tools and strategies for making co-teaching work. *Intervention in School and Clinic*, 49, 84-91. doi:10.1177/1053451213493174
- Buckley, F. J. (2000). *Team teaching: What, why, and how?* Thousand Oaks, CA: Sage.
- Conderman, G. (2011). Middle school co-teaching: Effective practices and student reflections. *Middle School Journal*, 42(4), 24-31. doi:10.1080/00940771.2011.11461771
- Ford, J., & Gray, L. (2011). Team teaching on a shoestring budget. *Honors in Practice—Online Archive* (Paper No. 137). Retrieved from <http://digitalcommons.unl.edu/nchchip/137/>
- Friend, M., & Cook, L. (2010). *Interactions: Collaboration skills for school professionals* (6th ed.). Boston, MA: Pearson.
- Gately, S. E., & Gately, F. J. (2001). Understanding co-teaching components. *Teaching Exceptional Children*, 33(4), 40-47. doi:10.1177/004005990103300406
- Gaytan, J. (2010). Instructional strategies to accommodate a team-teaching approach. *Business Communication Quarterly*, 73(1), 82-87. doi:10.1177/1080569909358097
- Hepner, S., & Newman, S. (2010). Teaching is teamwork: Preparing for, planning, and implementing effective co-teaching practice. *International Schools Journal*, 29(2), 67-81.
- Huston, T. (2009). *Teaching what you don't know* (1st ed.). Cambridge, MA: Harvard University Press.
- Jones, F., & Harris, S. (2012). Benefits and drawbacks of using multiple instructors to teach single courses. *College Teaching*, 60(4), 132-139. doi:10.1080/87567555.2012.654832
- Keefe, E. B., Moore, V., & Duff, F. (2004). The four “knows” of collaborative teaching. *Teaching Exceptional Children*, 36(5), 36-42. doi:10.1177/004005990403600505
- Loertscher, D. V., & Koechlin, C. (2015). Finland, collaboration and co-teaching. *Teacher Librarian*, 42(3), 56-57.
- Nierengarten, G. (2013). Supporting co-teaching teams in high schools: Twenty research-based practices. *American Secondary Education*, 42(1), 73-83.

- Rimpola, R. C. (2014). Collaborative planning and teacher efficacy of high school mathematics co-teachers. *Educational Planning*, 21(3), 41-53. Retrieved from http://isep.info/wp-content/uploads/2016/02/21-3_4CollabortativePlanning.pdf
- Schwab Learning. (2003). Collaboratively speaking: A study on effective ways to teach children with learning differences in the general education classroom. *The Special Edge*, 16(3). Retrieved from <http://www.calstat.org/publications/pdfs/2003sumEinsert.pdf>
- Sims, E. (2008). Sharing command of the co-teaching ship: How to play nicely with others. *English Journal*, 97(5), 58-63.
- Thousand, J. S., Villa, R. A., & Nevin, A. I. (2006). The many faces of collaborative planning and teaching. *Theory into Practice*, 45, 239-248. doi:10.1207/s15430421tip4503_6
- Vygotsky, L. S. (1997). *Educational psychology* (V. Davidov & R. J. Silverman, Trans.). Boca Raton, FL: St. Lucie Press.
- Walsh, J. M. (2012). Co-teaching as a school system strategy for continuous improvement. *Preventing School Failure*, 56, 29-36. doi:10.1080/1045988X.2011.555792
- Walther-Thomas, C. (1997). Co-teaching experiences: The benefits and problems that teachers and principals report over time. *Journal of Learning Disabilities*, 30, 395-407. doi:10.1177/002221949703000406

About the Authors

Anthony Preston is a 10th- and 12th-grade high school English teacher at Millville Junior/Senior High School in Millville, PA. After receiving his bachelor's degree from Bloomsburg University in 2009, he started teaching at Millville. Within that time, he has also gone back to Bloomsburg University to earn his M.Ed. in curriculum and instruction. Beyond teaching, he is also involved in the drama department and is head coach for junior high and varsity boys' soccer, junior class co-advisor, and the National Honor Society advisor. He can be reached at anthony.preston03@gmail.com.

Daniel Roesch, Ed.D., is an assistant professor at Bloomsburg University. He spent 10 years as a secondary building principal and four years as assistant principal in five different schools, including five years as the middle school principal in the Camp Hill School District. He began his career as a science teacher at the Dauphin County Technical School in Harrisburg, PA. In 2008 he earned a doctorate in educational administration from Temple University. He can be reached at droesch@bloomu.edu.

*Dr. Michael Patte is a professor of education at Bloomsburg University. Dr. Patte prepares undergraduate and graduate students for careers in education. He teaches various courses and supervises students in a variety of field placements. During his 20-year career in education he has shared his scholarship through publications, international and national conference presentations, and advocacy projects. Dr. Patte is a Fulbright scholar; co-editor of the *International Journal of Play*; past president of the Association for the Study of Play; board member of the International Council for Children's Play; and member of the Pennsylvania Governor's Early Learning Council, responsible for planning the expansion of effective early learning and development services for Pennsylvania's young children and families.*

Perceptions of Teacher and Principals: Gender Comparisons of Leadership Actions

Karen H. Larwin
Youngstown State University

Linda Lorei
Northwest Tri-County IU5

The impact of principal actions upon educator effectiveness is a prevailing topic of interest in educational research. The existing literature has investigated influences on a school's projected success stemming from a principal's actions. However, the majority of research on school administrators lacks any specific inquiry into gender differences, while an increasing number of women seek school leadership roles. This quantitative study sought to determine perceived leadership actions and gender differences using two validated surveys for data collection: the Principal Instructional Management Rating Scale (PIMRS) for teachers and the PIMRS for principals. Data were collected from 505 teachers and principals. Findings include a significant relationship between the globally-measured teachers' and principals' perceptions of instructional leadership in PIMRS, with implications for future research.

Positive student achievement stands in the foreground of many outcomes that effective school principals desire to accomplish in the current era of educator accountability. The leadership practices a principal demonstrates with staff, students, and the community potentially impact student outcomes. Principal practice and principal impact are two components of leadership behaviors that are incorporated in newly-revised state principal evaluation policies (Clifford, Behrstock-Sherratt, & Fetters, 2012). Although specific leadership actions have been identified to promote school success, many questions remain regarding their long-term efficacy and usage (Louis, Leithwood, Wahlstrom, & Anderson, 2010).

The concept of leader efficacy has been examined in detail as the ever-evolving responsibilities of today's school leaders demand their understanding of successful actions for leading others forward (Louis, Leithwood, Wahlstrom, & Anderson, 2010; Tschannen-Moran & Gareis, 2004; Wahlstrom & Louis, 2008). While the daily actions of a school leader continue to receive considerable attention in educational research, new insights regarding principal and teacher perceptions of these actions are timely. Additionally, attention to teachers' and their school leader's respective genders provides necessary insights into empirical research literature on leadership and for practitioners who are considering school improvements.

Gender

Research on women in the evolving role of the principal appears infrequently in the education literature. Rousmaniere (2013) depicts the principal's role in early America as a lonely position, requiring considerable support and assurance from the surrounding community, without a clear job description and lacking overall representation by females. The details of the work of a young male administrator from the 1920s promoted from teacher to principal to superintendent while still at a noticeably young age emphasize the influence of gender in appointment to this leadership role (Rousmaniere, 2013). Due to the lack of men working in elementary education, women found opportunities to hold leadership roles there, even though the positions also included teaching, leading clubs, coaching athletics, and working with the community (Rousmaniere, 2013).

Barriers exist against women to obtain principal positions beyond elementary schools. Examples include high levels of stress and responsibility compared to compensation as well as access to social networks that can lead to hiring (Morrison, 2012). Reflecting upon the number of women currently in educational leadership roles, Morrison (2012) discussed the deterring effect of long-held stereotypes on those considering the role. Lemasters and Roach (2012) addressed barriers to females' occupying the educational superintendent role, stating, "Statistics indicate that the female superintendent operates in a world not of her making and in a paradigm designed around men" (p. 2). The tension between balancing family responsibilities and holding a leadership role is the most significant issue that female leaders face, with some scholars calling for development of work-family policies and flexible working arrangements to address the issue (Grupton, 2009).

Women Leaders

Gilligan's (1982) exploration of gender and varying leadership approaches by men and women continues to influence the evolution of females in all types of leadership positions. Discussing psychological theory and women's development in defining the role of mother vs. self, Gilligan (1982) asserted, "the problem of interpretation that shadows the understanding of women's development arises from the differences observed in their experiences of relationships" (p. 24). Opposing traditional masculine styles, women educational leaders share leadership and collaborate on issues of equity and diversity in similar ways to social justice organizations (Grogan & Shakeshaft, 2011). Discussing the leadership research literature, Grogan and Shakeshaft (2011) reported, "women were described as forming webs, rather than pyramids, in their institutions, especially when institutional governance structures created the necessary spaces" (p. 43). Considering perceptions of female leadership in direct opposition to traditional male norms of school management permits innovative outlooks for school reforms (Grogan & Shakeshaft, 2011).

Today's school administrators must address matters of race, gender, and culture within the public school system, in addition to meeting standards of accountability in current educational reform policies. In this context, it is of paramount importance that principal preparatory programs are revised to reflect new theories of leadership styles that address social justice issues (Jean-Marie, Normone, & Brooks, 2009). These leadership preparation theories include constructivist methods, connected to feminist and critical theory, which assert that leaders address the importance of social issues affecting students today such as bullying, racism, and homophobia (Jean-Marie et al., 2009).

Gender Differences in Leadership Styles

Defining leadership styles through repeating actions, either tasks or relationships, Cuadrado, Navas, Molero, Ferrer, and Morales (2012) linked perceptions of masculinity and femininity to leadership actions, identifying females with relationship approaches and males with autocratic styles. Their survey of autocratic and democratic leadership styles indicated that female leaders were reported to demonstrate autocratic leadership styles more frequently when the subordinate survey participant was male (Cuadrado et al., 2012). Overall, study results indicated both genders employed democratic leadership styles, with a lack of noticeable differences in overall management between males and females regarding change initiatives (Cuadrado et al., 2012).

Outlining the steps of transformational change through cognitive shifts, Grogan and Shakeshaft (2011) emphasized the approach of the female leader to reframe problems in pursuit of viable solutions, also acknowledging the absence of reliable research methods to collect measurable data of leadership actions beyond reporting perceptions and beliefs. However, leaders of both genders can gain a variety of skills to address numerous challenges in administrative roles, as positive evaluations result when leaders of either gender perform in alignment to preconceived expectations (Pounder & Coleman, 2002).

Actions/Perceptions of Actions

Zaccaro (2012) identified three tipping points in the research literature on differences among leadership styles. The first occurred from the late 1940s through the mid-1970s, when research discussion focused on conditions that leaders create instead of discrete variances in a leader's actions. The second tipping point began in the late 1970s, when use of meta-analyses examining various known management models began to appear in research studies (Zaccaro, 2012). Identifying the necessity for examining multidimensional leadership methods, including specific leader variances and resulting outcomes, Zaccaro (2012) classified the third tipping point as an emerging research model that uses multivariate investigations of leader characteristics, procedure examples, and distinctive habits among successful leaders.

The study of leadership characteristics concerning motivational, cognitive, social and personality influence over management performance provides researchers with opportunities to address variable biases and allows patterns of connection among the variables to emerge (Zaccaro, 2012). Individual variances among leadership behaviors in supervision roles that are emerging from multivariate investigations of leadership suggest that this trend is a renaissance for leadership theory (Antonakis, Day, & Schyns, 2012).

Leadership Actions, Perceptions, and Gender

Leadership actions for lasting second-order change in today's schools as, Marzano, Waters, and McNulty (2005) describe, involve a leader's knowledge of curriculum, instruction, and assessment; comprehending the research and theory behind system-level change; challenging old beliefs; analyzing reform effects; altering reforms as necessary; and implementing reforms according to their design (Harvey, 2011; Louis, Leithwood, Wahlstrom, & Anderson, 2010; Marzano, Frontier, & Livingston, 2011, pp. 70-72). Emphasizing the importance of the principal to use data as one

necessary change component for school reforms, Harvey (2011) stated, “Effective leaders view data as a means not only to pinpoint problems but to understand their nature and causes” (p. 12).

Although actions of a leader are a topic of research, gaps exist in the literature regarding the perceptions of teachers and principals and gender in examining effective school leadership. Wahlstrom and Louis (2008) investigated relationships between teachers and principals and possible influence upon instructional practices and revealed connections between perceptions of shared leadership and trust among teachers. Providing frequent feedback, emphasizing academics, and affirming teacher competency through communal decision-making all influence teacher beliefs (Ross & Gray, 2006). Most importantly, teachers who commit to the school community identify their role as an instructional team member and increase actions of personal accountability towards school outcomes (Ross & Gray, 2006). Principals’ beliefs regarding their own effectiveness also influence teachers’ perceptions of a leader’s success (Campbell, 2012). Providing settings for teachers to share experiences of successful instructional practices, supporting collaborative participation of teachers in school improvement planning, and reducing teacher stresses are actions a leader can use to improve teacher efficacy perceptions (Ross & Gray, 2006).

Perceptual Significance

Englert, Fries, Marin-Glenn, & Douglas (2007) note discrepancies among principal and teacher perceptions of high expectations for students in lower-performing schools. These include contradictions regarding beliefs that students can achieve within the school culture when asking the principals relative to the teachers (Englert et al., 2007). However, in schools that are making gains in achievement outcomes, teachers’ and principals’ perceptions were in accord regarding beliefs in students’ success and positive feelings among staff members (Englert et al., 2007). Englert and associates (2007) stated, “This finding is especially noteworthy because it is a fundamental component of the standards based reform movement” (p. 9).

Educational research includes examination of the perceptions that teachers hold regarding leadership abilities for creating trusting school cultures, yet reports of principals’ levels of trust toward the teachers they manage is absent in the literature (Louis, Dretzke, & Wahlstrom, 2010). Investigations of principals’ perceptions of leadership can expand the research literature during a time of education system reform for increased accountability and effectiveness of outcomes (Louis, Dretzke, & Wahlstrom, 2010; Provost, Boscardin, & Wells, 2010).

This investigation addressed the gap in principal leadership research by examining gender differences among principals’ perceptions of specific leadership actions in comparison to teachers’ perceptions. The intentional exploration of perceptions by gender is meaningful to the existing concepts of leadership theory—most importantly, regarding the expansion of female leaders in the principal role. This study sought to answer three research questions:

1. Given the important leadership actions of a principal, do the perceptions of principal application of these actions differ between teachers and principals?
2. If differences exist in perceptions of leadership, are these differences moderated by the gender of the teacher or principal respondent?

3. Does the type of school (public/private), level of school (elementary, middle, or high school), or size of school moderate the perceptions between teachers and principals?

Methods

The data used in this study were collected via surveys of principals and teachers in northwestern Pennsylvania. Instrumentation for the three research questions included both the teacher and principal versions of the Principal Instructional Management Rating Survey (PIMRS; Hallinger, 2008). The PIMRS examines three themes of principal leadership actions that have been used in numerous studies to capture perceptions of leadership actions (Hallinger, 2008). Each of these themes—framing the school goals, managing the instructional program, and developing the school learning climate—are timely and reflect the research literature discussion.

The three PIMRS themes contain additional subsets for measurement. The first theme of the survey is framing and communicating the school’s goals for defining the school mission (Hallinger, Wang, & Chen, 2013). Managing the instructional program is the second theme, which encompasses coordination of the curriculum, supervising and evaluating instruction, and monitoring student progress (Hallinger et al., 2013). The third theme, developing the school learning climate, includes the leader’s protection of instructional time, provision of incentives for teachers and for learning, promotion of professional development, and maintenance of high visibility (Hallinger et al., 2013). As Hallinger and colleagues (2013) explained, “The instrument is scored by calculating the mean for the items that comprise each subscale. This results in a data-based profile of principal performance” (p. 277). They addressed the self-assessment aspect of the principal’s survey version through discussion of the use of Cronbach’s alpha test for reliability assessment, additionally highlighting benchmarks for content validity, discriminant validity, and construct validity for both sub-scale inter-correlation and using documentary support to meet instrument internal validity concerns.

Results

Descriptive Statistics

Participant responses were drawn from a total of 84 K-12 schools. A total of 505 respondents included 402 teachers and 103 principals. Among the 505 respondents, 30.49% identified as male, and 69.50% identified as female. Among the 402 teacher respondents, 21.6% were male, and 78.4% were female, while among the 103 principal respondents, 65% were male, and 35% female.

Reliability Analysis

To verify the stability of the survey questions, analysis for reliability of the survey participant responses was completed on each of the factor areas for principal leadership actions. The PIMRS contains 50 questions which are separated into 10 areas of principal leadership action. Reliability estimates were computed for each of the 10 areas using the Cronbach’s alpha test, reported in Table 1.

Table 1
Reliability Estimates for Factors

Factor	Principal	Teacher
Frame School Goals	.75	.92
Communicate School Goals	.81	.90
Supervise and Evaluate Instruction	.71	.86
Coordinate the Curriculum	.77	.93
Monitor Student Progress	.72	.88
Protect Instructional Time	.66	.84
Maintaining High Visibility	.73	.85
Provide Incentives for Teachers	.76	.92
Promote Professional Development	.74	.88
Provide Incentives for Learning	.76	.88

The means for each factor were calculated for the teacher and the principal respondents separately. These values are presented in Table 2.

Table 2
Mean Response Across Each Factor

Factor	Principal	Teacher
Frame School Goals	4.11	3.86
Communicate School Goals	3.45	3.60
Supervise and Evaluate Instruction	4.13	3.79
Coordinate the Curriculum	4.13	3.79
Monitor Student Progress	3.82	3.54
Protect Instructional Time	4.04	3.65
Maintaining High Visibility	3.73	3.11
Provide Incentives for Teachers	3.39	3.06
Promote Professional Development	4.15	3.77
Provide Incentives for Learning	3.51	3.41

As indicated in Table 2, average principal responses were higher on all factors relative to teacher responses, with the exception of “Communicate School Goals.”

Research question 1. Are principals’ and teachers’ perceptions of application of leadership actions different? The mean score for the 10 leadership action factors was computed across the two groups of participants. Data analysis indicates that principals’ leadership action scores ($M = 3.86, sd = .45$) were slightly higher than teachers’ scores for their principal’s leadership actions ($M = 3.57, sd = .86$). The results of an independent samples t-test indicate that these differences are statistically significant, $t(254) = 4.17, p < .001$. Specifically, principals have a higher evaluation of their leadership actions on the global measure of the PIMRS relative to teachers’ perceptions of their principal’s leadership actions.

Research question 2. If differences exist in perceptions of leadership, are these differences moderated by the gender of the teacher or principal respondent? Specifically, are there differences in these perceptions of leadership actions among male and female teachers and principals? A factorial ANOVA of gender by role on the global measure of PIRMS was conducted. The results for this analysis indicate no significant interaction between gender and role. In the respondents’ response to the PIRMS inventory, however, a significant main effect was found for role (principal vs. teacher), and small differences were revealed across gender of participants. While there are slight differences in the role by gender responses on the global measure of PIRMS, these differences are not large enough to be considered significant. Figure 1 provides a graphical image of these differences, in which the solid line represents teacher responses by gender, and the dashed line represents principal responses by gender.

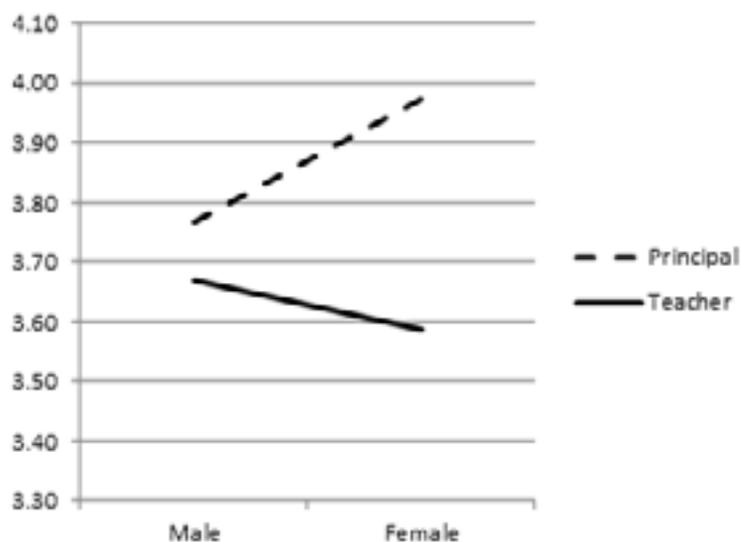


Figure 1. Gender by role differences.

Research question 3. Does type of school (public/private), level of school (elementary, middle, or high school), or size of school moderate the perceptions between teachers and principals? For this analysis, the sizes of the districts reporting were broken into three equal groups so that schools with fewer than 250 students were considered small, schools with 250-450 students were considered medium, and schools with more than 450 students were considered large. Results indicate that there were no significant interactions or main effects for school size, school type, or school level.

Discussion

Responses revealed significant differences among several PIMRS factors in the matching group sample of teachers and principals from the same school buildings, with the largest variance relating to a principal's actions in maintaining high visibility in the school setting. The PIMRS factors of supervision and evaluation of instruction and coordinating curriculum contained the next largest discrepancies. Conversely, the factors of protecting instructional time and providing incentives for learning were highly endorsed by both teachers and principals. These findings support the necessity of today's principal to display intentional visibility to teachers. Louis, Leithwood, Wahlstrom, and Anderson (2010) state:

Teachers described a clear difference in principal behavior between those who *popped in* or *were visible*, as compared with principals who were very intentional about each classroom visit and conversation, with the explicit purpose of engaging with teachers about well-defined instructional ideas and issues. (p. 13)

These findings suggest that the visible support that a principal exhibits impacts teachers' level of perceived instructional leadership. The survey questions for maintaining high visibility assess perceptions of principal interactions with students regarding instruction and providing support in the classroom. Wahlstrom and Louis (2008) note the building principal's challenge to interact directly, in a "visible" way, on a daily basis in the school setting. Sharing leadership with teachers could alleviate this issue. Wahlstrom and Louis (2008) connect teacher commitment to instructional practices and to involvement in making school decisions. The results of the present study indicate a gap among perceptions of visible actions and a need for principal awareness and skill sets to maintain instructional improvements and authentic visibility in the school setting.

The most notable differences in gender were found between female principals and female teachers and male teachers for the factor of promoting professional development. Questions from this factor surround obtaining complete staff participation in professional development, actively supporting the implementation of newly acquired skills in the classroom, and aligning professional development to school goals. This finding may indicate an area of potential deficiency for female principals, who often spend extensive time in the classroom prior to assuming a principalship. They may lack experience leading successful professional development initiatives or achieving school improvement planning processes without mentors to support efforts once in the principal role.

Developing staff cultures that promote perceptions of efficacy is an arduous endeavor for any school leader. Leithwood and Jantzi (2008) describe a leader's emotional intelligence with reference

to a principal's actions for sharing continual and meaningful feedback, stimulating professional and intellectual growth, and providing individual support to teachers. Robinson, Lloyd, and Rowe (2008) outline the importance of making instructional improvements a prioritized goal, maintaining first the establishment of a safe learning environment. Creating authentic professional learning communities within the school is a viable way for principals to build teacher trust and enhance honest discussions of instructional strengths and areas of need (Wahlstrom & Louis, 2008). Female principals who create original scripts that respond to problems in a gender-free style could allow teachers to establish alternative beliefs about female principals.

School leaders need to provide mentors for all new principals and openly acknowledge issues that female leaders face in the role of school principal. The development and support of gender-specific school leader networks would provide forums in which to discuss challenges and successes. Grogan and Shakeshaft (2011, p. 68) recommend leadership practice communities that aim to develop members' proficiencies in monitoring and facilitating instructional classroom improvements with teachers. School leaders who are aware and willing to create similar groups for principals to reflect upon the issues that they face and identify potential solutions will reap the benefits in their school communities.

All principals benefit from ongoing professional development to improve professional capacity and embrace innovations and best practices that are introduced, implemented, and encouraged by the educational community. Customizing professional development to include opportunities for principals to reflect on current practices can nurture future actions, leading to positive perceptions of leadership actions for their teachers and themselves. The principal's actions for designing goals for the school, communicating those goals to all stakeholders, managing the instructional process, coordinating curriculum, planning aligned staff professional development, and providing incentives for students and teachers require great finesse and an advanced leadership skill set. Although this study addressed important actions for school principals to consider for building and sustaining teacher and self-efficacy, additional research is warranted.

Studies that explore the experiences of females in the principal role would be of value in considering the differences reported regarding the promotion of professional development. Investigation of professional development training opportunities connected to the gender of the principal may provide additional understandings of any gender differences in approach. Do student beliefs also perpetuate antiquated views regarding the principal's gender? Collection of student perceptions regarding principal leadership actions in relation to the principal's gender would allow another level of inquiry about the role of gender in school leadership. Finally, further investigation of collective, androgynous leadership actions and impacts on instruction would add to the research. Do these new leadership approaches impact principals' and teachers' perceptions of leader efficacy?

Conclusion

Facilitating the creation of a school climate where a principal enacts leadership actions that positively influence teachers' perceptions in multiple areas is paramount for success in today's complex school environments. Generally speaking, teachers' perceptions surrounding a principal's

actions to support instructional practices are not in accord with a principal's perceptions. With heightened emphasis on educator performance outcomes occurring nationally, more than ever before, teachers need support from their principal regarding instruction. Even the most effective and experienced principals realize and openly acknowledge the responsibility to improve instructional practices. Innovative styles of school leadership that include sharing responsibility and open communication can lead to improved perceptions for all.

References

- Antonakis, J., Day, D. V., & Schyns, B. (2012). Leadership and individual differences: At the cusp of a renaissance. *The Leadership Quarterly*, 23, 643-650. doi:10.1016/j.leaqua.2012.05.002
- Campbell, W. L. (2012). *Correlating principals' self-efficacy ratings with ratings of their efficacy by their teachers: Perceptions of leadership* (Doctoral dissertation). Retrieved from OhioLINK Electronic Theses & Dissertations Center. (ysu1341003286)
- Clifford, M., Behrstock-Sherratt, E., & Feters, J. (2012). *The ripple effect: A synthesis of research on principal influence to inform performance evaluation design*. Retrieved from American Institutes for Research website: http://www.air.org/sites/default/files/downloads/report/1707_The_Ripple_Effect_d8_Online_0.pdf
- Cuadrado, I., Navas, M., Molero, F., Ferrer, E., & Morales, J. (2012). Gender differences in leadership styles as a function of leader and subordinates' sex and type of organization. *Journal of Applied Social Psychology*, 42, 3083-3113. doi:10.1111/j.1559-1816.2012.00974.x
- Englert, K., Fries, D., Martin-Glenn, M., & Douglas, B. (2007). Accountability systems: A comparative analysis of superintendent, principal, and teacher perceptions. *International Journal of Education Policy & Leadership*, 2(4), 1-12. Available from http://www.researchgate.net/publication/26636168_Accountability_Systems_A_Comparative_Analysis_of_Superintendent_Principal_and_Teacher_Perceptions
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Grogan, M., & Shakeshaft, C. (2011). *Women and educational leadership*. San Francisco, CA: Jossey-Bass.
- Grupton, S. L. (2009). Women in educational leadership in the U.S. Reflections of a 50 year veteran. *Forum on Public Policy*, 2009(2). Retrieved from <http://forumonpublicpolicy.com/summer09/archivesummer09/guption.pdf>
- Hallinger, P. (2008). *PIMRS: Making change happen*. Retrieved from <http://philiphallinger.com/old-site/pimrs.html>
- Hallinger, P., Wang, W.-C., & Chen, C.-W. (2013). Assessing the measurement properties of the principal instructional management rating scale: A meta-analysis of reliability studies. *Educational Administration Quarterly*, 49, 272-309. 10.1177/0013161X12468149
- Harvey, J. (2011). *The school principal as leader: Guiding schools to better teaching and learning*. Retrieved from Wallace Foundation website: <http://www.wallacefoundation.org/knowledge-center/school-leadership/effective-principal-leadership/Documents/The-School-Principal-as-Leader-Guiding-Schools-to-Better-Teaching-and-Learning.pdf>

- Jean-Marie, G., Normone, A., & Brooks, J. (2009). Leadership for social justice: Preparing 21st century school leaders for a new social order. *Journal of Research on Leadership Education*, 4(1), 1-31. Retrieved from <http://files.eric.ed.gov/fulltext/EJ875408.pdf>
- Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly*, 44, 496-528. doi:10.1177/0013161X08321501
- Lemasters, L., & Roach, V. (2012). 3-Dimensional portrait of the female CEO. *International Journal of Educational Leadership Preparation*, 7(1), 1-12. Retrieved from <http://eric.ed.gov/?id=EJ971686>
- Louis, K. S., Dretzke, B., & Wahlstrom, K. (2010). How does leadership affect student achievement? Results from a national US survey. *School Effectiveness and School Improvement*, 21, 315-336. doi:10.1080/09243453.2010.486586
- Louis, K. S., Leithwood, K., Wahlstrom, K. L., & Anderson, S. E. (2010). *Learning from leadership: Investigating the links to improved student learning*. Retrieved from Wallace Foundation website: <http://www.wallacefoundation.org/knowledge-center/school-leadership/key-research/Documents/Investigating-the-Links-to-Improved-Student-Learning.pdf>
- Marzano, R. J., Frontier, T., & Livingston, D. (2011). Chapter 2: A brief history of supervision and evaluation. In *Effective supervision: Supporting the art and science of teaching*. Retrieved from Association for Supervision and Curriculum Development website: <http://www.ascd.org/publications/books/110019/chapters/A-Brief-History-of-Supervision-and-Evaluation.aspx>
- Marzano, R. J., Walters, T., & McNulty, B. (2005). *School leadership that works from research to results*. Aurora, Co: McREL Mid-continent Research for Education and Learning.
- Morrison, M. H. (2012). *Gender and leadership: Educational leadership through feminine eyes: Have the barriers in acquiring educational administrative positions for women changed in the last fifteen years?* (Doctoral dissertation). Retrieved from DSpace/Manakin Repository website: <http://hdl.handle.net/2069/755>
- Pounder, J., & Coleman, M. (2002). Women—better leaders than men? In general and educational management it still “all depends.” *Leadership & Organizational Development Journal*, 23, 122-133. doi:10.1108/01437730210424066
- Provost, J., Boscardin, M., & Wells, C. (2010). Perceptions of principal leadership behaviors in Massachusetts in the era of education reform. *Journal of School Leadership*, 20, 532-560.
- Robinson, V., Lloyd, C., & Rowe, K. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly*, 44, 635-674. doi:10.1177/0013161X08321509

- Ross, J., & Gray, P. (2006). School leadership and student achievement: The mediating effects of teacher beliefs. *Canadian Journal of Education*, 29, 798-822. Retrieved from <http://files.eric.ed.gov/fulltext/EJ756123.pdf>
- Rousmaniere, K. (2013). The principal: The most misunderstood person in all of education. *The Atlantic*. Retrieved from <http://www.theatlantic.com/education/archive/2013/11/the-principal-the-most-misunderstood-person-in-all-of-education/281223/>
- Tschannen-Moran, M., & Gareis, C. (2004). Principals' sense of efficacy: Assessing a promising construct. *Journal of Educational Administration*, 42, 573-585. doi:10.1108/09578230410554070
- Wahlstrom, K., & Louis, K. (2008). How teachers experience principal leadership: The roles of professional community, trust, efficacy, and shared responsibility. *Educational Administration Quarterly*, 44, 458-495. doi:10.1177/0013161X08321502
- Zaccaro, S. (2012). Individual differences and leadership: Contributions to a third tipping point. *The Leadership Quarterly*, 23, 718-728. doi:10.1016/j.leaqua.2012.05.001

About the Authors

Karen Larwin earned her Ph.D. from Kent State University in evaluation, measurement, and statistics. She currently serves as a professor at Youngstown State University. She has participated as the evaluator on multiple federal and statewide grant-supported projects over the past decade. Her primary teaching focus is in the area of research methods, quantitative methods, evaluation, and measurement. She is currently a chair for the American Evaluation Association's Quantitative Methods: Theory and Design TIG. Her e-mail address is khlarwin@ysu.edu.

Linda Lorei, Ed.D., is an assistant director of curriculum, instruction, and assessment at Northwest Tri-County Intermediate Unit #5. With 20 years of experience in education, she has also held positions as a classroom teacher, reading specialist, and middle school principal. She earned her B.S. in Elementary Education from Youngstown State University; her master's degree in curriculum, principal certification, and curriculum supervisory certification from Gannon University; and her doctorate in educational leadership from Youngstown State University. She is passionate about helping principals lead with success. Her e-mail address is Linda_Lorei@iu5.org.

Getting the House in Order: Lessons from Multicultural Education for Principals Leading Today's Diverse Schools

Bruce Campbell
Arcadia University

Kristine S. Lewis Grant
Drexel University

In line with U.S. census projections for population change, public schools are witnessing a transformation in student diversity. With little preparation on how to support and engage diverse learners, many principals and educational leaders are ill-equipped for the new wave of students and families. The question becomes how best to welcome new students and families into the proverbial schoolhouse. In other words, how can principals get the “house” in order? The purpose of this conceptual work is to present multicultural education as a foundational theoretical framework for principals’ growth and development as culturally-responsive school leaders. This article offers core principles and concrete practices inspired by multicultural education, which help to cultivate the development of culturally-responsive school leaders.

Based on the 2010 census, the population of the United States is forecasted to both rapidly expand and diversify (U.S. Census Bureau, 2012). What will the U.S. population look like in the years to come? According to Colby and Ortman (2015), the country will officially become a “majority minority” nation in 2044, when Whites will cease to make up more than half of the population (p. 9). They noted that the fastest growing group in the country now is comprised of people who report more than one racial or ethnic background (p. 9). Asians and Hispanics are expected to be the two other fastest-growing groups (p. 9). These demographic changes indicate one notable likelihood when it comes to schools: diversity. The U.S. Census Bureau’s (2012) population projections indicated that the population aged 6 to 17 will also become increasingly diverse in future years.

Indeed, public schools are already witnessing the transformation of their student populations. With little preparation for how to support and engage diverse learners, many principals and educational leaders are ill-equipped for this new wave of students and families. The question becomes how to best welcome new students and families into the proverbial schoolhouse. In other words, how can principals get the “house” in order?

Shifting demographics bring transformations in the nation’s social fabric and economy, and public schools are in the forefront of these changes. The challenge for principals will be to meet the needs of a student population that includes increasing numbers of minorities and English language

learners. Unfortunately, many principals and educational leaders are poorly equipped to address this population shift. Hansman, Grant, Jackson, & Spencer (1999) indicated that principals of color are underrepresented, and most principals—regardless of background—lack the knowledge and experience to effectively lead a diverse school community. Most educational leadership programs do not include courses on diversity, culturally-relevant pedagogy, or multicultural education (Grove, Schmersahl, Perry, & Henry, 2002; McCray, Wright, & Beachum, 2004; Tillman & Scheurich, 2013). Few school districts offer sustained training to facilitate principals’ growth and transformation. Without adequate preparation, many principals and educational leaders find it difficult to navigate changes in their school communities. Principals are not at fault for this problem, but they do have the power to change the outcomes in their schools. Striving to be a culturally-responsive school leader, informed by multicultural education, is one way to address this demographic shift in schools.

Emerging after the Civil Rights Movement and shaped by lessons from the desegregation of schools, multicultural education offers a philosophy, principles, and practices that can address the layered and multifaceted dynamics of changing school communities. Multicultural education provides: a language to discuss equity, access, and social justice; a framework to envision what an inclusive, diverse school community might look like; and a set of practices to implement cultural content and relevance from the curriculum to school policies (Banks, 1997, 1998). Multicultural education can transform a school into a welcoming environment where teachers thrive, families collaborate, and students excel.

The purpose of this conceptual work is to present multicultural education as a foundational theoretical framework for principals’ growth and development as culturally-responsive school leaders. We do not purport to offer a “silver bullet,” recipe, or manual for school transformation. Instead, we offer school leaders a way to think about and approach the opportunity to embrace a more diverse school community. The article begins with a primer on multicultural education and culturally-responsive school leadership. From there, we examine culturally-responsive approaches to fostering a vibrant school culture and climate, supporting teachers, and forging relationships with diverse families. Taken together, these approaches can bring principals one step closer to getting the schoolhouse in order to embrace a more diverse school community.

Multicultural Education and Culturally-Responsive School Leadership

In this section, we define and relate the theoretical frameworks of multicultural education and culturally responsive school leadership. First, we review Banks’ (2004, 2010) five dimensions of multicultural education. Second, we explore and define the origins of culturally-responsive school leadership. Third, we explain how multicultural education provides the foundation for development of culturally responsive school leaders.

Banks (2010) defined multicultural education as an idea, an educational reform movement, and a process:

Multicultural education is an idea stating that all students, regardless of the groups to which they belong, such as those related to gender, ethnicity, race, culture, language social

class, religion or exceptionality, should experience educational equality in the schools.... Multicultural education is also a reform movement designed to bring about a transformation of the school so that students from both genders and from diverse cultural, language and ethnic groups will have an equal chance to experience school success.... Multicultural education is a continuing process because the idealized process it tries to actualize—such as educational equality and the eradication of all forms of discrimination —can never be fully achieved in human society. (p. 25)

In this definition, Banks offers a vision of a multicultural school. He establishes the idea that all students “should experience educational equality.” He then positions multicultural education as a reform movement “designed to bring about a transformation of the school.” Finally, he acknowledges that his vision is an ongoing and idealized process that “can never be fully achieved in human society,” yet remains a goal worthy of pursuit.

Banks (2010) elaborated on this definition by outlining five dimensions of multicultural education: content integration, knowledge construction, prejudice reduction, equity pedagogy, and an empowering school culture (p. 15). These five dimensions, explained in detail below, provide a set of practical concerns for principals and other educational leaders who endeavor to create school contexts that are conducive to multicultural education. Consider them with Banks’ vision of multicultural education, and a sound theoretical framework begins to emerge for how school principals can, and should, challenge themselves to become culturally-responsive school leaders, especially given our nation’s changing demographics.

While largely intended for teachers, Banks’ (2004, 2010) five dimensions of multicultural education have clear implications for principals. Content integration is the extent to which teachers use examples and content from a variety of cultures in their teaching (Banks, 2010, p. 15). Content integration and knowledge construction extend beyond teaching, learning, and the curriculum to inform the ways principals lead and co-construct knowledge with members of the school community. Content integration can be seen in school policies and procedures. Principals would endeavor to help teachers achieve a high level of content integration for the rapidly-diversifying U.S. student body. In the same way, knowledge construction is concerned with how multicultural educators help “students to understand, investigate, and determine how the implicit cultural assumptions, frames of reference, perspectives, and biases within a discipline influence the ways knowledge is constructed” (Banks, 2010, p. 15). Knowledge construction is evident in the way principals foster school culture and climate for teachers, families, and students.

Prejudice reduction focuses on the characteristics of students’ racial attitudes and how they can be modified by teaching methods and materials (Banks, 2010, p. 15). Principals can facilitate prejudice reduction in schools by helping teachers and other members of the school community to unlearn racism. Having open discussions about issues of race and ethnicity traditionally occurs in classrooms. Principals can also use assemblies, extracurricular activities, and informal conversations with students to model the discourse they want to have in their buildings.

Similarly, equity pedagogy extends beyond the classroom to encompass the entire school and its wider community. Banks (2010) wrote that an equity pedagogy exists when teachers modify their teaching in ways that will facilitate the academic achievement of students from diverse racial, cultural, gender, and social-class groups (p. 15). Just as teachers can use equity pedagogy to empower students, principals can employ equity pedagogy in their interactions with teachers, staff, and families. Principals can lead school community members in tackling issues within the educational opportunity gap. Equity pedagogy as a pedagogy of empowerment is intended to help every member of the school community to become a reflective, thoughtful citizen dedicated to social change and justice (Ball, 2000; Banks, 1998; Westheimer & Kahne, 2004).

Empowering school culture is Banks' (2004, 2010) final dimension of multicultural education. This dimension aims to “empower students from diverse racial, ethnic, and gender groups by examining social grouping and labeling practices, sports participation, disproportionality in achievement, and the interaction of the staff and students across ethnic and racial lines” (Banks, 2010, p. 15). It is an attempt to shape the social experience of the school so that social norms and expectations support equity practices. So, for example, Zirkel (2008) explained that “[a]n empowering school culture is one that directly and forcefully addresses the ways that racism is encoded in school policies and practices, from disciplinary procedures and special education assessments to students’ relationships with teachers in the classroom” (p. 1160). Principals often inherit a school culture that does not address multicultural education for their students and school community. But, as leaders responsible for creating and maintaining school policies and practices, principals have the power and authority to transform school culture to meet the needs of the school community. Banks' (2010) call to charge ever forward suggests that they should be taking on culture, even that which they inherit.

The above explanation of multicultural education’s core tenets illustrates a theoretical framework that is open to all educators striving for equity in schools. These same principles inform theorizing around culturally-grounded pedagogies. Scholars have employed multiple terms and concepts in their efforts to characterize teaching that reflects the complex identities of their students including culturally relevant pedagogy (Ladson-Billings, 1992, 1995), culturally responsive pedagogy (Gay, 2010), and culturally sustaining pedagogy (Paris, 2012). Khalifa, Gooden, and Davis (2016) identified the multicultural principle that connects these pedagogies:

Yet, in essence, they all share a common, central point: the need for children’s educators and educational contexts to understand, respond, incorporate, accommodate, and ultimately celebrate the entirety of the children they serve—including their languages and literacies, spiritual universes, cultures, racial proclivities, behaviors, knowledge, critical thought, and appearances. (pp. 6-7)

Collectively, these culturally grounded pedagogies build on the foundation of multicultural education to guide the philosophy and practices of educators and school leaders. Khalifa and associates (2016) asserted that the term “culturally responsive school leadership” is most fitting for the work of school leaders. They argued, “by emphasizing the word responsive, we capture an important action-based and even urgent aspect of the term, the ability of school leaders to create

school contexts and curriculum that responds effectively to the educational, social, political, and cultural needs of students” (Khalifa et al., 2016, p. 7).

The transformative power of cultural responsiveness is more than what happens in multiculturally-focused classrooms. School administrators can play a role in facilitating what Gay (2010) defined as “the process of using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students, teachers and administrators to make learning encounters more relevant to and effective for them” (p. 29). School administrators are the individuals whom the rest of the school community expects to model visions for the norms of their school. When a principal deliberately tailors his or her actions and language in response to the needs of diverse students in a way that helps both teachers and students, there is a sense of cultural validation and affirmation (Gay, 2010). This impression is the impact of culturally-responsive leading.

To conclude, culturally-responsive school leadership grows out of multicultural education. Where multicultural education concentrates on the role of teachers, culturally-responsive school leadership centers on a principal’s responsibility to establish the conditions in which teachers can create rich and vibrant learning environments for all students. Culturally-responsive school leadership is what can happen when principals apply the critical perspective of multicultural education in response to the needs of culturally-diverse groups of students. It is a benefit of adopting the perspective that increasing diversity in schools is an opportunity for growth, rather than seeing this as a “challenge” or a “problem.” Encouraging school leaders to take up this mantle by claiming and developing their own identities as culturally-responsive school leaders is the main objective of this article. To this end, the following three sections examine the roles principals can play in developing school culture and climate; teachers, curriculum, and learning; and family engagement.

Foster School Culture and Climate

The culture and climate of a school are interrelated components connecting all stakeholders in the educational community. Peterson (2002) explained, “School culture is the set of norms, values and beliefs, rituals and ceremonies, symbols and stories that make up the ‘persona’ of the school” (p. 10). The National School Climate Council defined school climate as the quality and character of school life (National School Climate Center, 2016). Gruenert (2008) made this clear differentiation between the two concepts:

An organization’s culture dictates its collective personality. Continuing this analogy, if culture is the personality of the organization, then climate represents that organization’s attitude. It is much easier to change an organization’s attitude (climate) than it is to change its personality (culture). (pp. 57-58)

Principals need to understand these two concepts and how they work together to impact the school community. In an effort to “get the house in order,” principals should focus on changing school climate (short-term initiatives) with an eye toward influencing school culture (long-term goals). Toward this end, culturally-responsive school leaders can employ these practices: sharing and

implementing a vision of a welcoming, multicultural school, and developing and expressing a genuine passion for and faith in multicultural education.

First, to create a welcoming, multicultural school, a culturally-responsive leader should have a vision of what a multicultural school is. Principals should take a collaborative approach and co-construct a shared vision with members of the school community. Kose (2011) provided a clear example of this practice in his research on nine school principals and vision development. He argued that principals play a central role in shaping and articulating the school's vision. Kose discovered that principals with inclusive vision statements had "explicit discussion of transformative ideas during vision statement development and intentional inclusion of traditionally marginalized groups" (p. 131). Aligned with Kose's example, culturally-responsive school leaders should stand as the driving force in the development of a strong, diverse, and equitable school vision.

Second, school culture and climate can also be transformed by the principal's genuine passion for and faith in multicultural education. Day (2004) found passion to be a fundamental aspect of school change: "a passion that becomes reflected in enthusiasm for the achievement of students and school staff, in the care for them, and in collaboration and inclusivity in the school community" (p. 183). Adalbjarnardottir and Runarsdottir (2006) presented the case of a principal who led with passion. Principal Magnus was a culturally-responsive school leader who successfully led a change initiative in his school. The change initiative was developed in response to a population shift, and Principal Magnus transformed his school into a more welcoming and inclusive space for the influx of diverse students and families. Adalbjarnardottir and Runarsdottir (2006) cited passion as one of Principal Magnus' defining characteristics. His care for members of the school community and faith in the promise of multicultural education fueled his passion for change. Principal Magnus provides a model for how school leaders can adopt and implement culturally responsive school leadership.

Cultivate Culturally Responsive Teachers

Despite the increasing diversity of students in U.S. public schools, the teaching faculty remains predominantly White. According to the Goldring, Gray, Bitterman, and Broughman (2013), 48% of students are of color, whereas 82% of teachers are White. Boser (2014) referred to this situation as a "diversity gap." In a recent report, Boser (2014) examined this diversity gap by generating a teacher diversity index which looks at how diverse a state's teaching corps is compared to the diversity of its students. In his model, a larger index score would indicate a teaching corps that is far less diverse than its student body, while a smaller number would indicate a teaching corps that has a similar level of diversity to its students. He determined that this gap was significant in almost every state. For example, in Pennsylvania, the teacher diversity index was 25. The diversity gap was widest in California at 44. Nationally, the teacher diversity index is 30. The diversity gap between students and teachers has direct implications for teaching and learning. In light of this fact, culturally-responsive school leaders can consider these practices to promote teacher diversity and enhance teaching and learning: recruit and retain a diverse teaching faculty, and provide professional development in multicultural education.

A culturally-responsive school leader would endeavor to recruit and retain a faculty that is representative of the student body. Research has shown that teachers of color can make a difference in the academic achievement of students of color. Teachers of color can share a deep cultural understanding of students of color and serve as viable role models (Irvine, 1988; Villegas & Irvine, 2010). Culturally-responsive school leaders recognize and seek to capitalize on this cultural synchronization by hiring a representative faculty. If principals are to hire a representative faculty, the pool of applicants should include a sufficient number of teachers of color. Given the shortage of teachers of color, principals must actively encourage their districts to cast a wide net (Ingersoll & May, 2011). Upon hiring, culturally-responsive school leaders would provide mentoring and additional support to promote the success of new faculty members.

In addition, school leaders should cultivate teacher professional development that builds culturally-responsive teaching. All teachers—regardless of race, ethnicity, gender, and class—require training to develop in-depth knowledge of the subject matter and pedagogical preparation (Gay, 2003; Ladson-Billings, 2009; Villegas & Irvine, 2010). Khalifa et al. (2016) underscored the importance of professional development and emphasized the role that culturally-responsive leaders play in making it happen:

Effective leaders must be capable of promoting and sustaining an environment stable enough to attract, maintain, and support the further development of good teachers. Additionally, the right leader will hold an understanding of the need to recruit and sustain culturally responsive teachers who are better prepared to work with poor children of color. (p. 2)

To nurture teacher development as culturally-responsive educators, principals can offer sustained training on multicultural education, create time for critical reflection, and foster supportive professional learning communities (Jason, 2000; Vavrus, 2002). Teachers will thrive under the leadership of culturally-responsive principals who set the tone and create conditions for their success.

Establish Meaningful and Productive Family-School Partnerships

Research has consistently shown that family-school partnerships positively contribute to children's academic achievement and attitudes about school (Henderson & Mapp, 2002; Henderson, Mapp, Johnson, & Davies, 2007; Jeynes, 2005; Riehl, 2000; Sheldon, 2003). Henderson and her colleagues (2007) concluded that genuine relationships between families and schools resulted in students who “tend to do better in school, stay in school longer and like school more” (p. 2). Culturally-responsive school leaders recognize the importance of families. These leaders can adopt effective strategies to establish authentic family-school partnerships and facilitate family involvement in their children's education. These include recognition of cultural differences about the role of family in children's education, acknowledgment that families are involved in their children's education in ways that may not be recognized by the school, and establishment of family-school partnerships by inviting families into the school and creating meaningful opportunities for parent involvement.

Culturally-responsive principals strive to become aware of the cultural differences that may exist between schools and families. Ethnic and socioeconomic factors contribute to differences in the ways in which families interact with teachers and schools. For example, Valdés (1996) explored the incongruence between school culture and that of Mexican immigrant families. What teachers perceived as parents' disinterest belied the parents' true aspirations for their children's academic success. Similarly, Lareau (2000) examined the disconnect between school culture and social class. She found that working-class families respected teachers as professionals and trusted them to have their children's best interest at heart. This deference to the teacher's authority contributed to the school's perception of working-class families' lack of involvement when, in fact, the working-class families supported their children's education in ways unrecognized by the schools. A continued focus on equity with the core ideals of multicultural education in mind can motivate culturally-responsive leaders to be constantly aware that these kinds of misunderstandings will happen, and that part of their job is finding ways to root them out and learn from them. Culturally-responsive school leaders "recognize and acknowledge that most families are involved in their children's education through the values they foster at home and in the implicit and explicit expectations they have of their children" (Nieto & Bode, 2015, p. 138). By understanding families' culture and acknowledging their support for their children's education, culturally-responsive principals place the school in a position to build partnerships that capitalize on the families' strengths.

Finally, culturally-responsive school leaders are responsible for establishing and shepherding family-school partnerships on a continuing basis. For many families, schools can feel alienating, foreign, and distant. By reaching out and taking the first step, principals can begin to change this perception (Epstein, 2011; Henderson et al., 2007; Riehl, 2000). Instead of mass emails and flyers, a personal invitation requesting parents' presence in the school does more to make families feel welcome (Barton, Drake, Perez, St. Louis, & George, 2004; Halsey, 2005). Moreover, proactive steps by principals can positively influence families' connections to the school and increase their volunteerism (Machen, Wilson, & Notar, 2005). Culturally-responsive school leaders should create opportunities for parents to assume leadership and advisory roles within the school and influence decision making. By creating and sustaining authentic partnerships with parents and families, culturally-responsive school leaders foster school communities where diverse families feel valued and appreciated.

Conclusion

How we educate a racially- and ethnically-diverse student body has been a subject of great debate for a long time. It takes on renewed meaning these days, given the national shift in population demographics. As principals contemplate what these changes mean for leadership of their school communities, multicultural education offers viable approaches to establish a vibrant school community where students, families, teachers, and staff can thrive. Banks' (2010) theoretical and practical contributions to this subject shed light on the roles culturally-responsive leaders can play with school culture and climate, teachers, and family-school partnerships.

Ultimately, the change in the school community begins with the principal: "An administrator must look at one's own values, attitudes, and traditions first, which would allow them to better

understand their students and staff values, attitudes, and traditions” (Grove et al., 2002, p. 209). Becoming a multicultural leader is vital for the success of the school community. According to Yeung, Lee, and Yue (2006), “Successful schools need capable leaders to achieve excellence and strive for re-culturing by activating and deepening moral purpose through connecting people and bringing them into changes” (p. 122). School principals must be the active leaders who co-create and implement multicultural concepts and ideas for their teachers, students, and families. Regardless of the cultural diversity within a school, the principal is responsible for establishing and maintaining the schoolhouse so that every member of the community can learn from and with one another, grow, and achieve success. Like multicultural education, claiming the identity of a culturally-responsive school leader is at once an idea, a reform movement, and a continuing process. Keeping the powerful implications of these three charges in mind may seem overwhelming in addition to the countless day-to-day details of the job, but the lessons and values of multicultural education can help illuminate some of the difficult terrain. And if school leaders take up this challenge, Banks’ (2010) beautifully impossible view of true equality in schools will be that much closer at hand.

References

- Adalbjarnardottir, S., & Runarsdottir, E. (2006). A leader's experiences of intercultural education in an elementary school: Changes and challenges. *Theory into Practice, 45*, 177-186. doi:10.1207/s15430421tip4502_10
- Ball, A. F. (2000). Empowering pedagogies that enhance the learning of multicultural students. *Teachers College Record, 102*, 1006-1034.
- Banks, J. A. (1997). *Educating citizens in a multicultural society*. New York, NY: Teachers College Press.
- Banks, J. A. (1998). Approaches to multicultural curricular reform. In E. Lee, D. Menkart, & M. Okazawa-Rey (Eds.), *Beyond heroes and holidays: A practical guide to K-12 antiracist, multicultural education and staff development* (pp. 73-75). Washington, DC: Network of Educators on the Americas.
- Banks, J. A. (2004). Multicultural education: Historical development, dimensions, and practice. In J. A. Banks & C. A. M. Banks (Eds.), *Handbook of research on multicultural education* (2nd ed., pp. 3-29). San Francisco, CA: Jossey-Bass.
- Banks, J. A. (2009). *Multicultural education: Issues and perspectives* (7th ed.). Hoboken, NJ: Wiley.
- Banks, J. A. (2010). Multicultural education: Characteristics and goals. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (7th ed., pp. 3-32). Hoboken, NJ: Wiley.
- Barton, A. C., Drake, C., Perez, J. G., St. Louis, K., & George, M. (2004). Ecologies of parent involvement in urban education. *Educational Researcher, 33*(4), 3-12. doi:10.3102/0013189X033004003
- Boser, U. (2014). *Teacher diversity revisited: A new state-by-state analysis*. Retrieved from Center for American Progress website: <https://cdn.americanprogress.org/wp-content/uploads/2014/05/TeacherDiversity.pdf>
- Colby, S. L., & Ortman, J. M. (2015). *Projections of the size and composition of the U.S. population: 2014 to 2060* (Current Population Report No. P25-1143). Retrieved from <https://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1143.pdf>
- Day, C. (2004). The passion of successful leadership. *School Leadership and Management, 24*, 425-437. doi:10.1080/13632430410001316525
- Epstein, J. L. (2011) *School, family, and community partnership: Preparing educators and improving schools* (2nd ed.). Boulder, CO: Westview Press.

- Gay, G. (2003). *Becoming multicultural educators: Personal journey toward professional agency*. San Francisco, CA: Jossey-Bass.
- Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice* (2nd ed.). New York, NY: Teachers College Press.
- Goldring, R., Gray, L., Bitterman, A., & Broughman, S. (2013). *Characteristics of public and private elementary and secondary school teachers in the United States: Results from the 2011-12 schools and staffing survey* (NCES 2013-314). Retrieved from U.S. Department of Education, National Center for Education Statistics website: <https://nces.ed.gov/pubs2013/2013314.pdf>
- Gruenert, S. (2008). School culture, school climate: They are not the same thing. *Principal*, 87(4), 56-59. Retrieved from National Association of Elementary School Principals website: <https://www.naesp.org/resources/2/Principal/2008/M-Ap56.pdf>
- Growe, R., Schmersahl, K., Perry, R., & Henry, R. (2002). A knowledge base for cultural diversity in administrator training. *Journal of Instructional Psychology*, 29, 205-212.
- Halsey, P. A. (2005). Parent involvement in junior high schools: A failure to communicate. *American Secondary Education*, 34(1), 57-69.
- Hansman, C.A., Spencer, L. E., Grant, D. F., & Jackson, M. H. (1999). Beyond diversity: Dismantling barriers in education. *Journal of Instructional Psychology*, 26(1), 16-22.
- Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Retrieved from Southwestern Educational Development Laboratory website: <http://www.sedl.org/connections/resources/evidence.pdf>
- Henderson, A. T., Mapp, K. L., Johnson, V., & Davies, D. (2007). *Beyond the bake sale: The essential guide to family-school partnerships*. New York, NY: New Press.
- Ingersoll, R., & May, H. (2011). *Recruitment, retention and the minority teacher shortage* (CPRE Research Report No. RR-69). Retrieved from Consortium for Policy Research in Education website: http://www.cpre.org/sites/default/files/researchreport/1221_minorityteachershortagereportrr69septfinal.pdf
- Irvine, J. J. (1988). An analysis of the problem of the disappearing Black educator. *Elementary School Journal*, 88, 503-514. doi:10.1086/461553
- Jason, M. H. (2000). The role of the principal as transformational leader in a multicultural learning community. *The High School Journal*, 83(3), 1-9.
- Jeynes, W. H. (2005). Parent involvement and student achievement: A meta-analysis. *Family Involvement Network of Educators (FINE) Research Digest*. Retrieved from Harvard

Family Research Project website: <http://www.hfrp.org/publications-resources/browse-our-publications/parental-involvement-and-student-achievement-a-meta-analysis>

- Khalifa, M. A., Gooden, M. A., & Davis, J. E. (2016). Culturally responsive school leadership: A synthesis of the literature. *Review of Educational Research*. Advance online publication. doi:10.3102/0034654316630383
- Kose, B. W. (2011). Developing a transformative school vision: Lessons from peer-nominated principals. *Education and Urban Society*, 43, 119-136. doi:10.1177/0013124510380231
- Ladson-Billings, G. (1992). Reading between the lines and beyond the pages: A culturally relevant approach to literacy teaching. *Theory into Practice*, 31, 312-320. doi:10.1080/00405849209543558
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32, 465-491. doi:10.3102/00028312032003465
- Ladson-Billings, G. (2009). *The dreamkeepers: Successful teachers of African American children* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Lareau, A. (2000). *Home advantage: Social class and parental involvement in elementary education* (2nd ed.). Lanham, MD: Rowman & Littlefield.
- Machen, S. M., Wilson, J. D., & Notar, C. E. (2005). Parental involvement in the classroom. *Journal of Instructional Psychology*, 32(1), 13-16.
- McCray, C. R., Wright, J. V., & Beachum, F. D. (2004). An analysis of secondary school principals' perceptions of multicultural education. *Education*, 125, 111-120.
- National School Climate Center. (2016). *School climate*. Retrieved from www.schoolclimate.org/climate
- Nieto, S., & Bode, P. (2015). *Affirming diversity: The sociopolitical context of multicultural education* (6th ed.). Boston, MA: Pearson.
- Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, 41(3), 93-97. doi:10.3102/0013189X12441244
- Peterson, K. (2002). Positive or negative? *Journal of Staff Development*, 23(3), 10-15.
- Riehl, C. J. (2000). The principal's role in creating inclusive schools for diverse students: A review of normative, empirical, and critical literature on the practice of educational administration. *Review of Educational Research*, 70(1), 55-81. doi:10.3102/00346543070001055
- Sheldon, S. (2003). Linking school-family-community partnerships in urban elementary schools to student achievement on state tests. *The Urban Review*, 35, 149-164. doi:10.1023/A:1023713829693

- Tillman, L. C., & Scheurich, J. J. (Eds.). (2013). *Handbook of research on educational leadership for equity and diversity*. New York, NY: Routledge.
- U.S. Census Bureau. (2012). *U.S. Census Bureau projections show a slower growing, older, more diverse nation a half century from now* [Press release]. Retrieved from <http://www.census.gov/newsroom/releases/archives/population/cb12-243.html>
- Valdés, G. (1996). *Con respeto: Bridging the distances between culturally diverse families and schools*. New York, NY: Teachers College Press.
- Vavrus, M. J. (2002). *Transforming the multicultural education of teachers: Theory, research and practice*. New York, NY: Teachers College Press.
- Villegas, A. M., & Irvine, J. J. (2010). Diversifying the teaching force: An examination of major arguments. *The Urban Review*, 42, 175-192. doi:10.1007/s11256-010-0150-1
- Westheimer, J., & Kahne, J. (2004). What kind of citizen? The politics of educating for democracy. *American Educational Research Journal*, 41, 237-269. doi:10.3102/00028312041002237
- Yeung, A. S.-W., Lee, Y., & Yue, K. W. R. (2006). Multicultural leadership, sustainable total school environment. *Education Research for Policy and Practice*, 5, 121-131. doi:10.1007/s10671-006-9000-z
- Zirkel, S. (2008). The influence of multicultural educational practices on student outcomes and intergroup relations. *Teachers College Record*, 110, 1147-1181.

About the Authors

Bruce Campbell is an assistant professor of education at Arcadia University. He is also the director of the master's in educational leadership and the education supervisory certification programs. His fields of specialization are social justice, educational leadership and organizational change, program evaluation, and urban education. Dr. Campbell's e-mail address is campbellb@arcadia.edu.

Kristine S. Lewis Grant is associate clinical professor of multicultural and urban education at Drexel University. She serves as the vice president of the Pennsylvania chapter of the National Association for Multicultural Education. Her research interests include the recruitment and retention of teachers of color, family engagement in Title I schools, and teaching and learning diversity in online courses. Dr. Grant's e-mail address is ksl33@drexel.edu.

The authors thank Christina Russo for her assistance with the collection and assembly of relevant literature. They also thank Patrick Cobbs and the PEL reviewers for offering such thoughtful comments and critiques on earlier versions of this manuscript.

Practitioner’s Page: Confronting Inequality: Actions for Public Education

Vito A. Forlenza
Educational/Organizational Consultant

Inequality of opportunities and outcomes between U.S. citizens is a major societal problem that threatens our democracy as we know it. The inequality gap between rich and poor is at historic levels and is greater in the United States than in any of the world’s developed countries (Atkinson, 2015; Lepore, 2015; Stiglitz, 2012). This divide is exacerbated by the increasing number of students who are living in poverty, many of whom experience periods of homelessness, hunger, and malnutrition. Countless public schools are overwhelmed by nested inequalities that are rooted in poverty that create multiple barriers to learning (Layton, 2015; Layton & Brown 2015; Suitts, 2015).

Education practitioners should be familiar with inequality concerns (Gamoran, 1986; Oakes, 1985; Page, 1992; Slavin, 1987). Without dealing with poverty primarily, the revolutionary works of Gamoran (1986), Oakes (1985), Page (1992), and Slavin (1987) focus on tracking and ability grouping of students and the deficiencies of curriculum and instruction within lower-track ability groups system-wide. More recently, the Association for Supervision and Curriculum Development (ASCD) examined the effects that poverty has on inequality in public schools, pinpointing intervention areas and suggesting legislation that should be considered to alleviate these challenges (ASCD, 2015a, 2015b). Additionally, the Southern Education Foundation (SEF) has framed the issue of poverty in U.S. public schools nationally and state-by-state (Suitts, 2015).

Situating Inequality Locally

Obligations for diminishing inequality to advance the moral purpose of society fall on all citizens, agencies, and organizations—individually and collectively. Nevertheless, given the persistent deepening of inequality, no organization has more urgency or worthier reasons to confront inequality than public schools. Through the sensible consumption of credible research situated locally (Wijekumar & Forlenza, 2012), this article examines everyday underpinnings of inequality to facilitate a school’s intervention preferences to advance learning for all students.

The process of confronting inequality and generating meaningful change requires school districts to intensify accountability by shifting from external to internal yardsticks for assessing institutional policies, protocols, and traditional schooling practices that normally go unquestioned. Paradoxically, these same policies, protocols, and practices likely recycle and accumulate inequality in the guise of providing all students with a thorough and efficient education.

The needs-sensing process proposed herein filters the complexities of schooling through multiple social factors and routine interactions fundamental to learning—an essential prerequisite to successful interventions. Absent this awareness, analyses of achievement data and interventions to improve learning for all students appear shallow since they overlook social processes, human behaviors, subtle interactions, and daily practices that create unequal opportunities and disparate outcomes for students (Pollock, 2012). The most severe consequences to learning are psychological, not cognitive: Learning cannot be captured in a number or an equation.

This approach can potentially lead to an appreciation that learning for all students, regardless of socioeconomic status (SES), is complex and involves numerous interrelated factors—many of which education practitioners can manage (Forlenza & Bureau, 2006). Furthermore, it just might help dismiss unsubstantiated myths spread by media reports and government mandates that learning is straightforward, explained fully by metrics, and biologically determined.

As outlined below, questions linked to fundamental schooling themes can have profound implications for confronting inequality. Five of those themes—and there are many more—along with some starter questions include measures of learning, access to talent, grouping of students, participation in extracurricular activities, and high school counseling. To ascertain the extent to which inequality is occurring for each school in a district, stakeholders (educators, board members, and parents/community partners) can begin by examining these theme-based questions with an eye for differences:

1. Between inequality and students' SES;
2. Between inequality and students' achievement; and
3. Among inequality, students' SES, and students' achievement. (Goodman, Moses, & Jones, 2012)

Schooling Themes and Starter Questions

Measures of Learning

To the detriment of all students—especially the most vulnerable—their families, and the public at large, scores on high-stakes standardized tests have become the mark of learning and a gauge for school effectiveness (Forlenza & Bureau, 2006; Kumashiro, 2015). Learning is unfinished business and cannot be measured by filling in bubbles from multiple-choice options. Although poverty fails to explain variations in learning, the media sensationalize these league-table rankings at the expense of students, thereby reinforcing the misconception that low SES and lack of learning is presumed.

Since the implementation the No Child Left Behind Act of 2002, students have been victimized by primitive schooling practices that narrow their minds to increase test scores. Aiming to satisfy political mandates, current assessment practices limit rather than help students reflect on learning and expand opportunities (Forlenza & Bureau, 2006).

In the best interest of all students, multiple assessment measures are needed that go beyond discrete knowledge to complement complex aspects of learning and cultivate students' metacognitive

skills (Heritage, 2010; Pellegrino, Chudowsky, & Glasser, 2001). Furthermore, the ways of learning and thinking that describe the cognitive skills, intellectual proclivities, and noncognitive attributes needed now and in the years ahead are being ignored, such as working collaboratively with peers; conducting real-world projects with related experiences in and out of school; producing creative works of practical and fine arts; designing and carrying out scientific experiments; and making claims and observations through reading, writing, listening, and speaking (Gardner, 2006; Tough, 2012).

Starter questions to consider concerning measures of learning include:

- By examining course grades and common school-based and individual course assessments, are there significant differences in performance across students' SES groups?
- Are multiple measures used to assess student learning, growth, and development, or do standardized test scores trump all other measures?

Access to Talent

Given the demands of the 21st-century corporate landscape, CEOs around the world find the gap widening between the skills of current workers and the skills needed to achieve meaningful growth (Amato, 2014). Public schools are no exception. Thriving school districts place a premium on creating conditions for recruiting talented educators from diverse backgrounds and geographic areas that reflect district and student demographics. These districts stress rigorous hiring policies and practices in assembling, developing, and—most challenging—sustaining a committed and capable staff. In these districts, professional employees yield the highest return on investment educationally and financially since the majority of education practitioners advance their careers in one school district.

Access to talent also involves how teachers are assigned to students and student groups. The unwritten norm in many schools is that the most senior teachers and/or teachers perceived to be most effective get the best and brightest students. This “rite of passage” mindset often results in the assignment of the most vulnerable students to the least-experienced teachers and/or those perceived as marginally effective.

Starter questions to consider concerning access to talent include:

- For all positions, does the district's hiring policy facilitate access to talented educators from diverse backgrounds and geographic areas so that educators are representative of district and student demographics, or is most hiring completed locally?
- Does the district's hiring policy allow for stakeholders of unlike minds, such as parents/community partners, teachers, and building administrators, to be involved in identifying and hiring talented educators?

- Is there balance in the assignment of teachers to low-performing students vs. high-performing students, or does seniority determine which teachers are assigned to which students?
- Do teacher attendance rates differ across teachers who are assigned primarily to low-performing students vs. those assigned primarily to high-performing students?

Grouping of Students

Unfortunately, grouping and categorizing of students begins in the primary grades and continues, albeit subtly in most cases, through high school. At times, the language of grouping is concealed with inventive words and phrases to appease parents and shield students from negative peer comments. But no one is fooled.

Notwithstanding the accumulation of credible research that suggests that tracking or ability grouping nourishes inequality and is especially detrimental to the most-needy students, the practice continues. Adding to the dilemma, low-performing students increasingly fall behind as they are frequently tethered to their seats working independently on mundane tasks in drill and practice modes (Loveless, 1998; Oakes, 1985). In low-performing classes, students experience a low level of talk quality that discourages construction of knowledge, interaction with peers, and spontaneous connections to primary sources (Gamoran, 1986, 1992), while at the same time reinforcing a fixed mindset—as opposed to a growth mindset—that is detrimental to learning (Dweck, 2006).

Categorizations of students serve a very popular social, rather than educational, function. Leading to tracking and ability grouping, categorizations justify the inequalities that exist in a school with the false claim of educating all students according to their ability. Once this expectation is set, it can be extremely difficult—and, in some schools, virtually impossible—for students to move to higher course levels regardless of performance.

On a related note, the most important things that happen in schools are not measureable in traditional ways. Tracking and ability grouping have adverse effects on inequality that are substantial socially, emotionally, culturally, economically, and physically (Lieberman, 2013). Intensifying K-12, these effects are imperceptible and are likely to endure in students’ lives throughout school and into adulthood.

Starter questions to consider concerning grouping of students include:

- Are students tracked or grouped by ability? If so, why?
- Are all students afforded engaging and challenging educational experiences accompanied by high levels of quality talk? Or are low-performing students tethered to their seats and subjected to repetitive, low-level worksheets and excessive teacher talk?
- Which students are taking advanced courses in high school? How are these students counseled into such courses?

Participation in Extracurricular Activities

Extracurricular activities are vital to educating the whole child as they develop in students the habits of mind that are pivotal to a productive lifestyle during and beyond school (Costa & Kallick, 2000; Duckworth, 2013; Tough, 2012). Involved students tend to have higher attendance rates, are less likely to drop out of school, obtain better grades, exhibit appropriate behavior in and out of school, are likely to be active in their communities, and are goal seeking (Mahoney, Harris, & Eccles, 2006). Whether students engage in the fine or practical arts, sports, debate teams, chess clubs, or community activities, the crucial factor is that students partake in and contribute to challenging programs and causes that help create supportive networks with peers and adult mentors (ASCD, 2015a; Rhodes & DuBois, 2006).

Here is where an appreciation for the complexity of learning can be gained. Triangulating data points relative to achievement is imperative to make sense of current conditions and to arrive at interventions that matter most for all students.

Starter questions to consider concerning engagement in extracurricular activities include:

- Which students participate in extracurricular activities, especially those that are selectively competitive, such as cheerleading, school plays, debate teams, etc.?
- How do students who do and do not participate in extracurricular activities differ with reference to (1) attendance, (2) dropout rates, (3) disciplinary referrals, (4) promotion rates, (5) graduation rates, (6) suspension/expulsion rates, and (7) achievement? Additionally, what are the connections between and among these seven variables?

High School Counseling

With student-guidance counselor caseloads approaching 500 to 1 nationwide at the high school level, helping students and their families navigate the path to postsecondary education opportunities is daunting (Hurd, 2015; Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009).

It is not surprising that high performers and their families reach out to counselors as they evaluate postsecondary options, file applications, pursue financial aid and loan packages, and fill out complicated forms. Unlikely to initiate contact with guidance counselors, many low performers' lives are compromised by the accumulation of low teacher expectations, and they remain unaware of the myriad of postsecondary education opportunities that might be available to them (Boser, Wilhelm, & Hanna, 2014).

Starter questions to consider concerning high school counseling include:

- Do high school guidance counselors recruit students to guide them through postsecondary education opportunities, or must students seek out guidance counselors to learn what educational opportunities exist beyond high school?

- Do counselors keep records of the students they counsel on postsecondary opportunities? If so, is there a sizeable gap between high and low performers relative to these records?

Informing Change

To begin exploring these questions, district and school administrators can use the starter questions to collect data for each school within the district. However, it is important to avoid the seductive lure of data and measurements. Statistics rarely, if ever, generalize to reality. Real-life situations are imprecise and messy, and identical data can mean different things across people in the same system. Nevertheless, relevant, accurate statistics provide signals; ideas; and, most importantly, challenges to enhance dialogue regarding contextual implications for specific schools—the true meaning of data-driven decision making.

People who care about change in the best interest of all students usually approach change efforts with respectful skepticism. Combined with the availability of real-time data, a cross-section of stakeholders, preferably assisted by an unbiased facilitator, is ready to confront the brutal facts that lead to honest exchanges about their mental models regarding student inequality—the beginning of informed change (Goleman & Senge, 2014).

The degree to which readers agree or disagree with these themes and starter questions is inconsequential. Examining them will still trigger constructive ways of looking at familiar practices that are likely reinforcing inequality among students and student groups. As conversations evolve, homegrown schooling themes and related questions pertinent to local situations—the crux of informed change—will unfold.

As the process goes forward, stakeholders will come to realize that learning cannot be explained away by linear cause-and-effect conventional wisdom. As the complexity of learning across domains becomes increasingly comprehensible, the prospect of devising interventions that account for human behavior is enhanced, which over time can produce outsized effects—that is, improved learning and reduced inequality (Karlán, 2015).

Concluding Thoughts

Any school, regardless of its student population, has pronounced achievement variations and students who are alienated from the system. To be sure, this needs-sensing framework is applicable to all schools. Even though poverty and inequality are frequently interchangeable, there are many instances where they vary independently, and it would be a mistake to automatically associate one with the other (Rieff, 2015).

Key financial indicators of wellbeing are income and household and food expenditures (Karlán, 2015). Arguably, public schools cannot impact these factors immediately, but that is no basis for inaction. Confronting inequality can lead to equipping all students—especially the most vulnerable—with skills, values, and habits of mind that build social capital and increase social mobility in and beyond school. Although it does not speak to the whole problem, social capital is

salient in reducing inequality in the United States. And public schools are in the best position to do that.

Ultimately, a school's effectiveness is judged by the success of its most vulnerable students. In his seminal book, *The Mismeasure of Man*, the late Stephen Jay Gould (1996) captured it best with a quote from Charles Darwin: "If the misery of our poor be caused not by the laws of nature, but by our institutions, great is our sin" (p. 19).

References

- Amato, N. (2014, May 28). Access to talent a rising concern for CEOs around the world. *CGMA Magazine*. Retrieved from <http://www.cgma.org/magazine/news/pages/201410221.aspx>
- Association for Supervision and Curriculum Development. (2015a). *Poverty and education*. Retrieved from <http://www.ascd.org/ASCD/pdf/siteASCD/publications/policypoints/Poverty-and-Education-May-15.pdf>
- Association for Supervision and Curriculum Development. (2015b). *Poverty and education: From a war on poverty to the majority of public school students living in poverty*. Retrieved from <http://www.ascd.org/ASCD/pdf/siteASCD/wholechild/spring2015wcsreport.pdf>
- Atkinson, A. B. (2015). *Inequality: What can be done?* Cambridge, MA: Harvard University Press.
- Boser, U., Wilhelm, M., & Hanna, R. (2014). *The power of the Pygmalion effect: Teachers expectations strongly predict college completion*. Retrieved from Center for American Progress website: <http://www.americanprogress.org/issues/education/report/2014/10/06/96806/the-power-of-the-pygmalion-effect/>
- Costa, A. L., & Kallick, B. (2000). *Discovering & exploring habits of mind*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Duckworth, A. L. (2013). The key to success: Grit [Video file]. Retrieved from TED website: http://www.ted.com/talks/angela_lee_duckworth_the_key_to_success_grit
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.
- Forlenza, V. A., & Bureau, W. E. (2006). The Pennsylvania value-added assessment system: Questions that need to be explored. *Pennsylvania Educational Leadership*, 25(2), 6-18.
- Gamoran, A. (1986). Instruction and instructional effects on ability grouping. *Sociology of Education*, 59, 185-198. doi.10.2307/2112346.
- Gamoran, A. (1992). Synthesis of research/Is ability grouping equitable? *Educational Leadership*, 50(2), 11-17.
- Gardner, H. (2006). *Five minds for the future*. Boston, MA: Harvard Business School Press.
- Goleman, D., & Senge, P. (2014). *Triple focus: A new approach to education*. Florence, MA: More Than Sound.
- Goodman, A. H., Moses, Y. T., & Jones, J. L. (Eds.). (2012). *Race: Are we so different?* Malden, MA: Wiley-Blackwell.
- Gould, S. J. (1996). *The mismeasure of man*. New York, NY: Norton.

- Heritage, M. (2010). *Formative assessment and next-generation assessment systems: Are we losing an opportunity?* Retrieved from Council of Chief State School Officers website: http://www.ccsso.org/documents/2010/formative_assessment_next_generation_2010.pdf
- Hurd, N. F. (2015). *College Advising Corps fact sheet*. Chapel Hill, NC: College Advising Corps.
- Karlan, D. (2015). More evidence, less poverty. *Scientific American*, 314, 43-45. doi:10.1038/scientificamerican1015-43
- Kumashiro, K. (2015, November 6). Testing is not helping public education. *Stars & Stripes*. Retrieved from <http://www.stripes.com/opinion/testing-is-not-helping-public-education-1.377423>
- Layton, L. (2015, January 16). Majority of U.S. public school students are in poverty. *The Washington Post*. Retrieved from https://www.washingtonpost.com/local/education/majority-of-us-public-school-students-are-in-poverty/2015/01/15/df7171d0-9ce9-11e4-a7ee-526210d665b4_story.html
- Layton, L., & Brown, E. (2015, September 14). The number of homeless students in U.S. has doubled since before the recession. *The Washington Post*. Retrieved from http://www.washingtonpost.com/local/education/number-of-us-homeless-students-has-doubled-since-before-the-recession/2015/09/14/0c1fad6-58e2-11e5-8bb1-b488d231bba2_story.html
- Lepore, J. (2015, March 16). Richer and poorer: Accounting for inequality. *The New Yorker*. Retrieved from <http://www.newyorker.com/magazine/2015/03/16/richer-and-poorer>
- Lieberman, M. D. (2013). *Social: Why our brains are wired to connect*. New York, NY: Broadway Books.
- Loveless, T. (1998). The tracking and ability grouping debate. *Fordham Report*, 2(8). Retrieved from <http://files.eric.ed.gov/fulltext/ED422454.pdf>
- Mahoney, J. L., Harris, A. L., & Eccles, J. S. (2006). Organized activity participation, positive youth development, and the over-scheduling hypothesis. *Social Policy Report*, 20(4). Retrieved from <http://files.eric.ed.gov/fulltext/ED521752.pdf>
- No Child Left Behind Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002). Retrieved from <http://www2.ed.gov/policy/elsec/leg/esea02/index.html>
- Oakes, J. (1985). *Keeping track: How schools structure inequality*. New Haven, CT: Yale University Press.
- Pellegrino, J. W., Chudowsky, N., & Glaser, R. (Eds.). (2001). *Knowing what students know: The science and design of educational assessment*. Washington, DC: National Academy Press.

- Pollock, M. (2012). Some myths about race that every educator needs to unlearn. In A. H. Goodman, Y. T. Moses, & J. L. Jones (Eds.), *Race: Are we so different?* (pp. 185-189). Malden, MA: Wiley-Blackwell.
- Page, R. N. (1992). *Lower-track classrooms: A curricular and cultural perspective*. New York, NY: Teachers College Press.
- Rieff, D. (2015). *The reproach of hunger: Food, justice, and money in the twenty-first century*. New York, NY: Simon & Schuster.
- Rhodes, J. E., & DuBois, D. L. (2006). Understanding and facilitating the youth mentoring movement. *Social Policy Report*, 20(3). Retrieved from <http://files.eric.ed.gov/fulltext/ED521751.pdf>
- Slavin, R. E. (1987). Ability grouping and achievement in elementary schools: A best-evidence synthesis. *Review of Educational Research*, 57, 293-336. doi:10.3102/00346543057003293
- Stiglitz, J. E. (2012). *The price of inequality: How today's divided society endangers our future*. New York, NY: Norton.
- Suits, S. (2015). *A new majority: Low income students now a majority in the nation's public schools*. Retrieved from Southern Education Foundation website: <http://www.southerneducation.org/Our-Strategies/Research-and-Publications/New-Majority-Diverse-Majority-Report-Series/A-New-Majority-2015-Update-Low-Income-Students-Now.aspx>
- Tierney, W. G., Bailey, T., Constantine, J., Finkelstein, N., & Hurd, N. F. (2009). *Helping students navigate the path to college: What high schools can do: A practice guide* (NCEE 2009-4066). Retrieved from Institute of Education Sciences website: http://ies.ed.gov/ncee/wwc/pdf/practice_guides/higher_ed_pg_091509.pdf
- Tough, P. (2012). *How children succeed: Grit, curiosity, and the hidden power of character*. New York, NY: Mariner Books.
- Wijekumar, K. K., & Forlenza, V. A. (2012). Education practitioners' sensible consumption of research. *Pennsylvania Educational Leadership*, 31(2), 7-15.

About the Author

Dr. Vito A. Forlenza is an educational/organizational consultant. He can be reached at vforlenza@verizon.net.

Practitioner's Page: The Farmer Takes a Child: A University, Early Childhood, and Community Farm Camp Collaboration in Southwestern Pennsylvania

Wendy L. Hardy
University of Pittsburgh, Greensburg

When visiting a farm, children can learn about plants and animals and see the agricultural process of food production. There are experiences in visiting a farm that children cannot acquire anywhere else. Tunnicliffe (1998) compared the differences between the conversations that students had when they visited a zoo and when they visited a farm as a part of class trips. She determined that trips to a farm were far more effective at educating young children about animals than trips to a zoo due to the fact that at a farm the children see the animals and people in context, which they do not in a zoo. Farms also tended to be less structured, and students could get close to the animals, making it easier to use the interactions with the animals to learn science, humanities, and language arts.

Furthermore, topics in gardening and nutrition are inherently linked to farming and agriculture. At a conference presentation at Duke University, Neelon and Evans (2011) discussed how gardening strategies can have an impact on early childhood obesity. The latest recommendations are that children should have five or more servings of fruits and vegetables per day, yet some children are consuming less than one quarter of a serving (Wascalus, 2014). Resources such as school gardens, community gardens, and local farms can allow children to have access to more fruits and vegetables and, if they are harvesting the produce themselves, it will also promote physical activity (Owen, Rosch, & Smith, 2011).

Farming activities can also help students learn about sustainability and conservation. Mayer-Smith, Bartosh, and Peterat (2009), had 400 elementary children, their teachers, and community volunteers create community farms/gardens in order to teach basic scientific gardening principles as well environmental stewardship and appreciation. It was concluded that students gained an understanding of farms, food and planting, and the balance of nature. Moreover, they developed friendships and social skills through working with a diverse group of people. Ogelman (2012) discussed a specific aspect of the environmental curriculum in teaching small children about farming: soil. In his study, he implemented a farm program focused on soil conservation with 180 five- and six-year-olds in which the children were taught about living organisms in soil, soil conservation, and the environment. The results of the study showed that students who participated in the program had an increased knowledge and awareness of environmental issues. Additionally, teachers involved also gained a higher level of pedagogical skills for teaching methods used to

teach soil sustainability, indicating that farm programs may be beneficial to the teachers as well as the students.

Preservice teachers may also benefit from teaching at a farm program. This group of individuals is often lacking in confidence for teaching science (Brígido, Bermejo, & Mellado, 2012; Murphy, Neil, & Beggs, 2007; Yilmaz-Tuzun, 2008), and opportunities to participate in science teaching experiences may increase their self-efficacy for teaching science (Barnot, Brown, Klinger, & Franklin, 2014).

Thus, a well-designed farm program has the potential to have a wide variety of positive outcomes for both the participants and facilitators. The program described here brings together preservice teachers, university faculty members, high school students, and farmers in a collaboration to develop a farm camp for young children that focuses on science, movement, play, environmental awareness, and agriculture in a holistic way that benefits all involved.

The Farm Camp Program

Simmons Farm, founded in 1945, is a family-owned, 300-acre farm in southwestern Pennsylvania. Along with their seasonal festivals that draw families from all around the region, the farm sells flowers in the spring; fruits and vegetables in the summer; pumpkins, apples, and corn stalks in the fall; and Christmas trees in the winter. The farm has a history of interacting with children since many local schools, preschools, foster homes, and youth groups come to the farm for field trips and hayrides.

The author, an education faculty member at a local university, reached out to members of the Simmons family about the possibility of collaborating to create a summer farm camp for elementary-age children. A farm camp-planning group, composed of individuals from the farm and the faculty member, then worked together to design an educational farm experience for children.

Learning Goals

The farm camp-working group decided that, for students to have a true educational experience, the camp would need to give students a well-rounded encounter that included art, science, and literature. In addition, it was decided that all activities would be tied together and centered around a different farm theme each day. Learning goals for the camp were created such that the following outcomes would be met:

- Every student would have a hands-on experience with the fruit, vegetable, or flower that was a part of the theme for that session.
- Children would gain an understanding of the importance of eating fresh fruits and vegetable grown on a local farm.
- Upon completion of the camp, children would be able to articulate where produce originates.
- Each child would have the opportunity to taste a healthy farm snack.

- Children would be able to experience gross motor play along with their farm experience.
- Children would be introduced to the science relevant to the theme for that session.

The learning goals were intended to motivate the design of an experience for the children that would be interdisciplinary in a manner that would allow them to appreciate the connections between fields while addressing real-world situations. Additional goals for preservice teachers would be to gain experience working in an outdoor, mixed-age setting as well as observe an experience that connects so seamlessly with the community in order for them to create similar community partnerships in the future. The farmers had expected a goal of connecting with children and families in the community in order for them to become familiar with agriculture to know where their food comes from and to be able to better manage resources such as soil and water in the future when they become adults.

Camp Participants

Over the past four years, children from several different school districts in the South Hills area of Pittsburgh have participated in the camp, along with home-schooled, cyber-schooled, and privately-schooled children. Most of the children were from suburban communities, however students from any demographic could benefit equally from participation in the camp or a camp similar to this one. In 2015 there were typically 30-35 children per week, ranging in age from four to nine years. Some children enrolled for one session of camp, and some children came for all five three-hour sessions.

Camp Structure

The camp was designed to take place one day a week for five weeks during the month of July and the beginning of August, with the students spending three hours on the farm each week. There was a nominal fee for students in order to cover the costs of supplies for the various activities. Beginning in March, parents could register children online or in person at the farm. Options were available for parents to either register for a single day or for all five weeks, depending upon their schedule or their child's interest in the topics. The maximum capacity for children, based on available space and staff, was 35 children. Parents learned about the camp via several different means: The camp was advertised on the farm's website, e-mail blasts from the farm's e-mail list went out at the end of each winter, articles were written in area community magazines, and advertising was done at the local public library.

Each day of farm camp began with a hay wagon ride taking children to the field for the first activity. All of the children worked together throughout the day except for daily story time when they were divided up based on age for separate, developmentally-appropriate books.

Farm Camp Facilitators

The farm staff (the workers in the market and the farmhands) were essential and involved in many aspects of the farm camp project. For some activities their roles were peripheral, but for others their involvement was direct. For instance, Farmer Scott, as he was known to the children,

drove the hay wagon and explained daily themes, such as farm equipment and how to irrigate vegetables, and farm workers organized and prepared areas for the daily healthy farm snack for the students.

A minimum ratio of one adult to five children was maintained throughout the camp. Farm workers led students through some of the activities, but more adults were needed to ensure a safe environment for the children. Therefore, university students majoring in education (preservice early childhood teachers) were recruited to assist with the program itself. The preservice teachers, who volunteered their time, were responsible for keeping the children engaged during the beginning and end of the camp day, as the children were arriving and waiting to be picked up. They also distributed the daily farm snack, read stories to small groups, led the children in discussions about the material, and assisted with the craft based on the daily theme.

Additional farm camp facilitators were found through the local high school. The Peters Township High School gifted educator was contacted in an effort to find high school students who would like to volunteer in order to fulfill required community service hours. Thus, several high school students, many performing work for the National Honor Society, helped facilitate farm camp. These volunteer positions were advertised through the school's digital system.

Daily Themes

A farm-centered theme was chosen for each day of the camp. The themes were selected by the university faculty member to address the educational needs of the camp, while allowing for constraints set forth by the farm: The themes were dependent upon the crops and equipment available on the farm during a given week. As can be seen in Table 1, the daily themes were selected to allow children to see various aspects of a working farm.

During each day of the farm camp, children completed a craft project, learned a song, and read a story related to that day's theme. Approximately one hour was spent on the daily craft and story. Students were divided into two or three groups, depending on the size of the total group and number of stories available. They were grouped by age, and a story was read by the university faculty member and preservice teachers. Each book was carefully selected to suit the age group and the theme. The university preservice teachers also led the children in question-and-answer discussions based on the book, theme, and crop/activity of the day.

The science of farming was interwoven throughout the camp, and many of Pennsylvania's academic standards for science, starting as early as pre-kindergarten, correlated directly with the goals of farm camp (Table 2). The camp participants learned about the process of agriculture in the local region; the needs of plants and animals; and the dependence of plants and animals on sun, water, and air to live. Children explored the different parts of vegetable plants and flowers and learned how vegetables and fruits produce food for us to eat. Figure 2 shows the children gathering around Farmer Scott and learning about how a plant starts growing from a seed.

Table 1
Farm Camp Schedule

	Daily Theme				
	Tomato/Seeds	Farm Equipment	Pigs and Sheep	Insects	Butterflies, Bugs, and Flowers
Craft	Decorate pot made out of recycled materials and put dirt and plant vegetable in the pot to take home	“A farmer’s life for me” portrait activity (clip art of a farmer, with the child’s photo inserted in the place of the face)	Sheep made out of sheep’s wool (Figure 1)	Bug jar (decorated jars made from recycled peanut butter containers)	Butterfly yarn craft (yarn wrapped around popsicle sticks to look like a butterfly)
Song	“The Seed” (Wise, 1987)	“The Tractor Goes Chug, Chug, Chug” (Farmer Jason, 2003)	“Down on Grandpa’s Farm” (Raffi, 1985)	“Icky, Icky, Insects” (Silly Bus, 2008)	“Goin’ Down to Mexico (The Monarch Butterfly Song)” (Miller, 2010)
Activity	Look at tomatoes, seeds, and plants; learn about how to plant tomatoes and how they grow from a seed; pick and eat tomatoes	See all the farm machinery; Farmer Scott explains all the names of equipment, the uses of each piece of equipment, and where they are used on the farm	Visit Bubba the pig and the sheep in the farm’s petting zoo and learn about the food and habitats of pigs and sheep on a farm	Collect bugs with bug tweezers from all around farm property	Pick flowers and learn about the names of different flowers, parts of a flower, and how they pollinate

Note. Themes vary slightly from year to year to make it less repetitive for children who attend in successive years.



Figure 1. Sheep wool.



Figure 2. Farmer Scott and children.

Feedback on Farm Camp

The farm staff was asked to provide feedback on their experiences with the farm camp. Many of them expressed surprise that the children initially had no idea about different types of food or farm animals, and that they did not appreciate where their food came from. The farmers indicated that it was important to them that the children learn about where their fruits and vegetables come from, and they felt that the farm camp was successful in this regard. The Simmonses mentioned the importance of farm camp impacting the future: “We believe that the farm camp participants will become better consumers and will have a better appreciation for the work that goes into growing food” (S. Simmons, personal communication, (February 27, 2014). They also noted that the collaboration required them to explain their agricultural knowledge to young children, and they found this process exciting in its novelty. The farmers were pleased with the amount of energy the children had and with how much enjoyment they gained from exploring and roaming through the fields, flower garden, and animal pens. The farmers cited instances of specific learning, such as children digging potatoes out of the ground or discovering that corn has only one or two good ears per stalk, which they found encouraging. As the owner and manager of the farm, Farmer Scott was vital to the farm camp. Despite the time it took away from his farm chores, he was happy to be involved because he felt it was important to educate the next generation of consumers.

Table 2

Pennsylvania Learning Standards for Science Addressed in Farm Camp

Academic Standard for Science	Standard
3.4.3.E2.	Identify some processes used in agriculture that require different procedures, products, or systems.
3.1.PK.A2.	Identify basic needs of plants (water and light) and animals (food, air, water).
3.1.1.A2.	Investigate the dependence of living things on the sun’s energy, water, food/nutrients, air, living space, and shelter.
3.1.3.A2.	Describe the basic needs of living things and their dependence on light, food, air, water, and shelter.
3.1.PK.A3.	Recognize that plants and animals grow and change.
3.1.K.A3.	Observe, compare, and describe stages of life cycles for plants and/or animals.
3.1.2.A3.	Identify similarities and differences in the life cycles of plants and animals.
3.1.3.A3.	Identify differences in the life cycles of plants and animals.
3.1.K.A5.	Observe and describe structures and behaviors of a variety of common animals.
3.1.1.A5.	Identify and describe plant parts and their function.
3.1.2.A5.	Explain how different parts of a plant work together to make the organism function.
3.1.3.A5.	Identify the structures in plants that are responsible for food production, support, water transport, reproduction, growth, and protection.

Note. Adapted from Pennsylvania Learning Standards (2010).

Comments from the high school gifted coordinator were solicited following the program to gather feedback on the outcomes from her perspective. In her observations, she noted that the experience has had multiple benefits for the high school students involved:

Yearly involvement in farm camp has allowed for civic engagement. Sharing the vital importance of farming skills, the continued need for eating fresh foods while sustaining local farming efforts, with elementary-age children is vital to all. I appreciate that this program has encouraged students to internalize that they are an integral part of sustaining locally grown food. (J. Alexander, personal communication, (February 19, 2016)

The idea that the farm camp had multiple benefits for both the facilitators and children was also expressed by the preservice teachers when they were surveyed on their experiences with the farm camp. They remarked that the environment of teaching outdoors was more hands-on than what is typically seen in a classroom and therefore was more valuable to both children and teachers as a learning experience. One preservice teacher noted that the children could apply the books and crafts to the farming activities in order to bring about a holistic agricultural experience that brought together science, language arts, crafts, and nutrition with farming. Another preservice teacher, who hoped to continue to participate in the coming season, commented that the children “forged a strong partnership with their family by bringing home the produce and the farm products,” and that they developed a “community that can be built upon in the years to come.” Another preservice teacher commented on the skills she honed during farm camp sessions:

As a future teacher, I learned so much about managing a group of children and being responsible. It’s a great experience for the children because it infused learning with fun! It brings the community together and is an awesome experience for everyone involved.

These statements illustrate many comments by the preservice teachers that indicated that in addition to the benefits they see for themselves; the preservice teachers recognize that farm camp is also beneficial for the children.

The children who participated were impacted in many ways. They gained knowledge about farming and science and expanded their knowledge of the origin of the food they eat every day. One child said, “I learned that tractors pull the equipment and harvest out of the ground such as potatoes. I liked helping Farmer Scott doing the potato picking. It was my favorite.” Another child added, “I learned about apples, peaches, and corn and how they grow, and I really liked catching bugs in the bug jars to take home and look at the bugs.” The overwhelming response from the children’s parents was positive. Several noted a difference between their own childhoods and that of their children, in the way their children deal with food origins, and indicated that the farm camp helped their children to gain a new perspective. One parent said the following about farm camp.

Our kids are being raised in town, and it’s easy for them to take for granted a trip to the grocery store or looking up information on electronic devices. I love

the opportunity to get them involved in hands-on activities and interested in the outdoors. The crafts and food they bring home are tangible reminders that give the kids a greater appreciation of where the food they eat came from.

Many of the parents have been so pleased with the experience that they have enrolled their children for multiple years.

Concluding Remarks

The farm camp is a unique, educational program in which young children, high school students, university preservice education students, education faculty members, and farmers collaborate, and through this collaboration, farm camp strengthens ties within the local community. The camp successfully teaches students about the science of agriculture and, through their participation, children gain an appreciation for where their food comes from. The integration of literature, science, art, and play is seamless, and everyone involved with the farm camp including the children, farmers, preservice teachers, parents, and education faculty has given positive feedback about the experience. The high school students enjoyed working with young people and gained an appreciation for working in an unfamiliar rural environment. The preservice teachers saw the value of the outdoor experience for the children and appreciated that connecting all the activities into an integrated unit covering multiple disciplines made the material more meaningful. They also recognized that the experience enhanced their teaching abilities. The parents noticed the increase in the children's understanding of the origin of their foods and a heightened appreciation for the environment, while their children enjoyed the outdoor environment of the learning experience and relished the hands-on activities such as picking apples and potatoes and catching bugs. The number of students interested in the camp each year has been growing, and the camp operates at full capacity, which in itself is an indication of the success of the program.

References

- Barnot, V., Brown, K., Klinger, K., & Franklin, S. (2014). Collaboration between science faculty and preservice early-childhood teachers through physical science outreach: A case study. *Pennsylvania Teacher Educator*, 13, 24-35. Retrieved from https://www.pac-te.org/uploads/1420649175_Barnot%20et%20al%20-%202014.pdf
- Brígido, M., Bermejo, M. L., & Mellado, V. (2012). Self-efficacy and emotions in prospective primary education science teachers. In C. Bruguière, A. Tiberghien, & P. Clément (Eds.), *E-book proceedings of the ESERA 2011 conference: Science learning and citizenship* (Part 12, D. Psillos & R. M. Sperandeo [Co-Eds.], pp. 19-24). Retrieved from European Science Education Research Association website: http://www.esera.org/media/ebook/strand12/ebook-esera2011_BRIGIDO-12.pdf
- Farmer Jason. (2003). The tractor goes chug, chug, chug. On *A day at the farm with farmer Jason* (Bumper crop edition) [CD]. Hillsborough, NC: Yep Roc Records.
- Mayer-Smith, J., Bartosh, O., & Peterat, L. (2009). Cultivating and reflecting on intergenerational environmental education on the farm. *Canadian Journal of Environmental Education*, 14, 107-121. Retrieved from <https://cjee.lakeheadu.ca/article/view/890>
- Miller, L. (2010). Goin' down to Mexico (The monarch butterfly song). On *I love the Earth: The absolute best of the singing zoologist* [iTunes file]. Austin, TX: BioRhythms Publishing.
- Murphy, C., Neil, P., & Beggs, J. (2007). Primary science teacher confidence revisited: Ten years on. *Educational Research*, 49, 415-430. doi:10.1080/00131880701717289
- Neelon, S. B., & Evans, K. (2011). Farm to preschool and preschool garden strategies to combat early childhood obesity. In J. Owen, J. Rosch, & S. Smith (Eds.), *Preventing childhood obesity: Policy and practice strategies for North Carolina* (pp. 28-38). Retrieved from <http://files.eric.ed.gov/fulltext/ED540122.pdf>
- Ogelman, H. G. (2012). Teaching preschool children about nature: A project to provide soil education for children in Turkey. *Early Childhood Education Journal*, 40, 177-185. doi:10.1007/s10643-012-0510-4
- Owen, J., Rosch, J., & Smith, S. (Eds.) (2011). *Preventing childhood obesity: Policy and practice strategies for North Carolina*. Retrieved from <http://files.eric.ed.gov/fulltext/ED540122.pdf>
- Pennsylvania Learning Standards. (2010). <https://www.pdesas.org/Standard/View>
- Raffi. (1985). Down on grandpa's farm. On *One light, one sun* [iTunes file]. Nashville, TN: Rounder.
- Silly Bus. (2008). Icky, icky, insects. On *Alphabet: Volume 2* [iTunes file]. Richmond, VA: Author.

- Tunncliffe, S. D. (1998). Down on the farm: The content of conversations generated by school children viewing live animals as exhibits and on a farm. *Journal of Elementary Science Education*, 10(1), 1-17. doi:10.1007/BF03173584
- Wascalus, J. (2014). Farm to school movement connects kids and healthy foods. *Fedgazette*, S1.
- Wise, J. (1987). The seed. On *Music for kids: Best of Joe Wise* [iTunes file]. Chicago, IL: GIA Publications.
- Yilmaz-Tuzun, O. (2008). Preservice elementary teachers' beliefs about science teaching. *Journal of Science Teacher Education*, 19, 183-204. doi:10.1007/s10972-007-9084-1

About the Author

Wendy L. Hardy, Ed.D., is assistant professor of education at the University of Pittsburgh, Greensburg. Her specialty is in early childhood and early elementary education. Her research focuses on the arts and its effect on literacy in early childhood education. She has worked with the visual, musical and theatrical arts in many capacities. Her e-mail address is Wlh17@pitt.edu.

An Invitation to Write for Pennsylvania Educational Leadership

Kathleen Provinzano, Editor

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

A peer-reviewed journal, PEL is typically published two times per year. Manuscripts are accepted 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. Manuscripts may address, among other topics, descriptions of curriculum improvement projects, discussions of trends and issues, views on instructional strategies, statements of theoretical positions, accounts of staff development and supervisory practices, reports of formal research projects and teacher inquiries. In addition, the journal welcomes practitioner's pages—non-research manuscripts written by practitioners for practitioners.

Manuscript Submission Guidelines

Manuscripts should be emailed to the editor, Kathleen Provinzano, at ktp37@drexel.edu. 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 can be directed to the editor at ktp37@drexel.edu.