# THE ALABAMA JOURNAL OF EDUCATIONAL LEADERSHIP

## Alabama Association of Professors of Educational Leadership

AAPEL

Alabama Association of Professors of
Educational Leadership


# The Alabama Journal of Educational Leadership

Volume 5, August 2018


An ICPEL State Affiliate Journal


Editor
Tonya Conner

*Troy University Dothan Campus*

Alabama Journal of Educational Leadership (AJEL)
2017-2018 Editorial Board

ALABAMA ASSOCIATION OF PROFESSORS OF EDUCATIONAL LEADERSHIP

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The **Alabama Association of Professors of Educational Leadership (AAPEL)** is a non-profit professional society organized for the purpose of establishing and maintaining a collegial and collaborative organization in the State of Alabama. In addition, this organization exists for the purpose of:

1. Promoting continuous dialog among Educational Leadership Professors;

2. Exploring and promoting research, thus making distinctive contributions to the field;

3. Recognizing and examining strengths and weaknesses in Educational Leadership Programs,

4. Establishing informational and professional linkages with the State Department of Education and the Alabama Commission on Higher Education; and

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## AAPEL Call for Papers and Publication Information
## 2018-2019
## Theme: Leadership Matters

Full research papers with results are preferred, but theoretical contributions, action research, and literature reviews are considered on a limited basis per volume. Submission must include a one hundred word (100) abstract and five (5) key words. Send one electronic copy of the manuscript, using Word or a Word-compatible word-processing program. A letter signed by the author(s) authorizing permission to publish must accompany the manuscript. In addition, a separate cover page must be included containing the article title, each author's name, professional title, highest degree obtained, institutional affiliation, email address, telephone and FAX numbers. Only the article title should appear on the subsequent pages to facilitate a triple-blind reviewing of the manuscript.

Submissions should be 2,000 to 3,000 words in length (approximately 15-20 pages including references). Submissions must adhere to the criteria and standards of the *APA Manual* (6th Edition) (http:///www.apastyle.org). Submissions must be double-spaced, upper and lower case, 12 point Times New Roman font with one inch margins on all sides, each page numbered. Submissions in different formats will be automatically rejected.

Deadline for submissions is April 1, 2019, in anticipation for a September 2019 publication date of the AAPEL Journal (AJEL) Volume 5, 2019. To submit materials for consideration, send one electronic copy of the manuscript and requested information, using Word or Word compatible word processing program to:

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# Note from the Editor

Tonya Conner, Ed. D.
*Troy University, Dothan*

Welcome to Volume V of the *Alabama Journal of Educational Leadership* (AJEL). AJEL uses a peer reviewed, triple-blind process upheld by the Alabama Association of Professors of Educational Leadership (AAPEL).  AAPEL is celebrating the continued growth of AJEL with enthusiasm and is indexed with Education Resources Information Center (ERIC) at https://eric.ed.gov/ and has acquired the ISSN 2473-8115. Volume 5 includes a variation of manuscripts stemming from a broad theme: Leadership Matters.

The first article of AJEL begins with Lougue, Caldwell, and Balam regarding the perceptions of technology use by faculty while Harrell and Bynum share external and internal factors affecting the proper implementation of technology in classrooms. As you continue to read, you will learn how Cornelius and Harris provide insight on how prepared students perceive themselves for the *Praxis* exam. Next, sharing an overview of *Grutter v. Bollinger* and *Gratz v. Bollinger* is Davenport, Howard, and Weston. As you continue to read you will find Hildreth, Rogers, and Crouse exploring effective practices in developing and supporting rural instructional leaders. Finally, Brown, Horn, and King wrap up to explore the role of the school leader in creating successful professional learning communities and will explain how PLCs have improved K-12 education for both teachers and students.

As we move forward, the continuation of various manuscripts for publication consideration is requested. We encourage submissions from novice and experienced faculty as well as students. The Alabama Journal of Educational Leadership is a refereed journal using a triple-blind review process.

I would like to acknowledge the many people supporting the continuation of AJEL. First, thank you to all of the authors for submitting manuscripts. I encourage you to continue proposing your work for consideration. In addition, an enormous thanks to the manuscript reviewers. Many reviewers took on the task to evaluate many manuscripts and provide insightful feedback to the authors. Furthermore, thank you to the AAPEL Editorial, Executive, and Advisory boards.

I have thoroughly enjoyed serving as the AJEL Editor for the past 5 years. As I turn the reigns over to Dr. Yvette Bynum, I look forward to the continued success of AJEL. I truly appreciate AAPEL providing the publication funding and an annual opportunity for researchers to share their work and provide another avenue to bridge theory to practice. Please visit the ICPEL state affiliate website at https://www.icpel.org/state-affiliate-journals.html to review all volumes of AJEL.

Finally, to James Berry and Brad Bizzell with The International Council of Professors of Educational Leadership (ICPEL) Publications, AJEL would literally not be possible without your direction, support, and publication platform. To the readers, I hope the content will provide you with a deeper awareness of the many features of Instructional Leadership, Teacher Leadership, and best practices within the field of education through AAPEL's continuous dedication to offer insightful and reflective research. Remember: Leadership matters! Enjoy!

# The Alabama Journal of Educational Leadership
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# Professors' Attitudes and Perceptions about Technology Use in the Classroom

Averil Loague, Naomi Caldwell, and Esenc Balam
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## Abstract

Since the 1970's the implementation of technology into instruction in K-12 schools and higher education has been an uneven process of acceptance and use despite the fact that digital literacy and computer skills are now an accepted requirement for anyone to participate in today's society. This uneven flow of adoption moves along a continuum that can be described by the Technology Acceptance/Use Continuum (Loague, 2003). This study aims to provide information regarding faculty technology acceptance and use for instruction at an HBCU. Preliminary data was collected from a questionnaire administered to 50 faculty members from two different colleges. Findings indicate an overall positive attitude toward using technology in instruction, and that the university and colleges do not provide enough tech support (both hardware and training). The types of technology being used most are the course management system, desktop applications, and presentation software. The data appears to indicate that the faculty as a whole is operating at the intermediate level or slightly below on the technology acceptance/use continuum.

*Key words*: technology use, higher education, college professor, technology acceptance

Today's K-12 schools and universities, teachers, faculty, and administrators are expected to meet accreditation standards in teaching and modeling appropriate digital skills. Students readily accept and use today's new technologies, but most administrators as well as teachers and faculty are struggling with the adoption of new technologies and the new concepts about teaching that it brings to school culture. This has been in effect since the 1970's. The implementation of technology into instruction has been a process of acceptance and then use based upon the perceived usefulness and ease of use. Some teachers, professors, schools, and universities have led the way integrating technology while others have moved slowly. It has not been an even process for individuals or institutions. A large number of research studies have examined a variety of interrelated reasons for the creeping rate of technological changes in education. The reasons include lack of technology education, attitudes toward technology, lack of technology training and support, lack of infrastructure, and lack of opportunities to observe technology-rich classrooms (Vannetta & Beyerbach, 2000; Fullan, 2012; Jones, 2017; Camilleri, 2017).

The adoption of technology for instruction and use in the classroom has been studied using several models, the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Rogers' Theory of Diffusion of Innovations (DOI) (Rogers, 1983), and the Technology Acceptance Model (TAM) (Davis, 1989) and its derivatives, (Lai, 2017; Surendran, 2012). The Theory of Reasoned Action (TRA) states that a person's attitude toward a behavior, such as using computer technology, is determined by one's beliefs about the consequences of the behavior and the influence of external factors (colleagues, friends…etc.). Rogers' Theory of Diffusion of Innovations (DOT) explains how ideas and new technology are spread. The elements of diffusion are the innovation itself, the adopters, communication between adopters, time, and the influences of the social system. Rogers (1983) identified five stages of adoption, which are knowledge, persuasion, decision, implementation, and confirmation. Five adopter categories were also identified, innovators, early adopters, early majority, late majority, and laggards.

The Technology Acceptance Model (TAM) (Davis, 1989) is an extension of TRA replacing measures of attitude with those of technology measures-ease of use and usefulness. TAM has been used most often and verified by multiple studies examining technology use (Lai, 2017; Surendran, 2012; Wingo, Ivankova, Moss, 2017). Within the model technology acceptance is influenced by multiple factors, culture, culture and change, teacher perceptions, teaching style, and attitudes towards technology (Suredran, 2012; Afshari, Bakar, Luan, Bahaman, Samah, & Fooi, 2009).

As shown in Table 1 this uneven flow of technology adoption moves along a continuum that can be described by the Technology Acceptance/Use Continuum. It describes attitude, use, problem solving, and instruction for each of the three levels, low acceptance/use, intermediate acceptance/use, and high acceptance/use (Loague, 2003).

Table 1
*Technology Acceptance/Use Continuum*

| Level | Attitude | Use | Problem Solving | Instruction |
|---|---|---|---|---|
| Low Acceptance/ Use | Unenthusiastic and skeptical about its benefits even when it is compatible with existing practices. Avoids or dismisses conversations about technology if possible. | Minimal to no personal use. Uses e-mail, word processing, and/or the Internet when required. | Prefers someone else to solve a problem instead of having someone show/explain how to solve it. Never uses or infrequently uses Help before asking someone else. | Does not incorporate technology into instruction or address it except for available Internet resources. |
| Intermediate Acceptance/ Use | Recognizes benefits that are compatible with existing practices Ease of use determines attitude on a day-to-day basis. Enters into conversations about technology. | Uses it for work and increasingly more personal business. Learns new applications as necessary. | Begins to use Help more often before asking someone else. | Beginning to think of ways to incorporate technology into instruction. Professor's use of technology is greater than students' use in the classroom. |
| High Acceptance/ Use | Very positive and embraces learning new technology. Encourages others by sharing information and resources and offering assistance. Initiates conversations about technology. Frustrated by lack of technology. | Uses it constantly and looks for new applications for work and personal use. | Persistent in attempting to solve problems on their own. | Incorporates technology into instruction whenever it is applicable. Student use of technology is greater than the professor's in the classroom. |

The use of new technology for instruction tends to follow a general pattern. First, it is used personally in completing managerial tasks. Before the widespread use of electronic gradebooks

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one of the first steps for a teacher was to begin using a spreadsheet application instead of the traditional paper gradebook and using word processing for lesson planning. As ease of use and comfort levels improved delivering instruction followed with faculty using presentation software, video, and Web sites (Ertmer & Ottenbreit-Leftwich, 2010). Finally, the technology was placed in the hands of students for learning. At this step Jonassen (1996) referred to the applications being used as knowledge construction tools or mind tools, i.e., concept mapping tools, data bases, spreadsheets, simulations, and visualization tools.

Today virtual and augmented reality, makerspaces, robotics, game-based learning and coding are added to this list as the skills required in the 21st century are not just those of the structured 20th century (Prenski, 2006; Lombardi 2007; Johnson, Adams Becker, Cummins, Estrada, Freeman, & Hall, 2016). Skills now include the ability to engage in independent critical thinking, problem solving at a high level, communicating, and collaborating using technology (Kivunga, 2014; Murphy, 2017), more commonly known as information and communication technology (ICT). These same skills are required by preservice teachers and need to be addressed in teacher education as well as how to infuse technology into instruction.

The old axiom, "teachers teach as they were taught" is also true when it comes to technology use.  Studies have found that in teacher education programs technology usually receives little attention as a support of pedagogy (Chien, Chang, Yeh, & Wu, 2012). The findings of the study by Voogt & McKenney (2016), which included five teacher education institutes, suggested that teacher educators have difficulty using technology effectively in their own classes.

Across content areas studies of higher education faculty have highlighted factors that affect the adoption and use of technology for instruction (Myer & Xu, 2009). The Educause Center for Analysis and Research (ECAR) conducted faculty surveys in 2014, 2015, and 2017 examining how faculty use technology and how they think about technology as it relates to teaching, learning, and students (Dahlstrom & Brooks, 2014; Brooks, 2015; Pomerantz & Brooks, 2017). Overall faculty support new educational trends and believe that the use of technology aids learning, and that faculty are proficient in using current technologies. However, there are discrepancies between faculty perception of student use in the classroom and student perception.

Smaller studies have focused on individual universities and colleges, both primarily white institutions (PWI) and Historically Black Colleges and Universities (HBCU) (Joseph, 2008; Allen, 2012; Fathema, Shannon, & Ross, 2012). Most studies have overlapped in the areas examined with the major focus on access to computing resources, organizational support, device ownership, campus technology experiences, security training and practices, sources of technology support, classroom technology experiences, perspectives and preferences for teaching, and the barriers that inhibit integration.

The purpose of this study was to investigate professors' attitudes, perceptions, and use of technology in their classes at an HBCU in order to compare them to the 2017 ECAR findings in terms of the adoption and implementation of technology for teaching and learning. The Educause Center for Analysis and Research (ECAR) is the research division of Educause, a non-profit association comprised of academic, technology, and campus leaders whose goal is to advance higher education through the use of instructional technology. ECAR focuses on instructional technology use, trends, and emerging technologies.

## Method

### Participants

Upon approval from deans, researchers attended college meetings to explain the scope of the research and recruit participants from the College of Education and College of Liberal Arts and Social Sciences. Faculty members were presented with the informed consent and upon their agreement, they filled out the provided survey. A total of 47 full-time faculties, 22 females (46.81 %) and 24 males (53.19) volunteered to participate in this study. It was reported that out of 47 faculty members, 23 teach undergraduate level courses, 13 teach graduate level, and 13 teach both graduate and undergraduate level courses. One faculty member failed to respond to their level of teaching. No incentives were offered by the researchers to the participants.

### Instrumentation

After a review of literature, a 42-item survey was constructed to capture faculty members' attitudes and perceptions about technology use in the classroom. Part A consisted of 25 Likert-type scale items related to instruction and learning, technical support, and online courses. Faculty members were instructed to respond to the items on a 5-point scale (1=*strongly disagree*, 5=*strongly agree*). Part B consisted of 18 items asking the percentages, in which a specific technology tool was used in the classroom. Percentages were listed as 0%, 25%, 50%, 75%, and 100%.

Participants also completed a demographic section that encompasses questions regarding gender, year of teaching, area of expertise, level of teaching, and devices they own such as desktop, laptop, smartphone, etc.

## Results

### Reliability Analysis

To assess internal consistency among all items, reliability analyses were conducted for each subscale (instruction and learning, online courses, and technical support) and an overall scale of faculty attitudes and perceptions about technology use on classroom. The items composing the subscales with poor correlation were eliminated from the scale. Accordingly, the instruction and learning subscale consisted of 5 items ($\alpha$ = .77), technical support consisted of 6 items ($\alpha$ = .70), and the online courses subscale consisted of 7 items ($\alpha$ = .78). Cronbach's alpha coefficient for the overall scale was reported as .71, indicating acceptable internal consistency. Table 2 provides a summary of the reliability analyses.

Table 2
*Summary of Reliability Coefficients*

| Subscale | Cronbach's |
|---|---|
| Instruction and Learning | .77 |
| Technical Support | .70 |
| Online Courses | .78 |

## Instruction and Learning

Descriptive statistics was used to summarize participants' attitudes and perceptions about the impact of technology in instruction and learning. Results demonstrated in Table 3 suggest faculty in both colleges perceived use of technology in the classroom to have an impact on students' learning as well as student collaboration. Accordingly, they encourage the use of both laptops ($M$ = 3.39, SD =1.40) and smartphones ($M$ = 3.27, SD =1.38). According to faculty, teaching with technology requires more time than traditional methods.

Table 3
*Professors' Perceptions of Technology Use for Instruction and Learning*

| Items | $M$ (SD) |
|---|---|
| Faculty use of technology in a class has an impact on learning. | *4.5* (1.09) |
| Student use of technology in a class has an impact on learning. | *4.23* (1.19) |
| Technology increases student collaboration in a classroom. | *4.0* (1.09) |
| I encourage the use of smart phones in my class for instructional/learning purposes. | *3.27* (1.38) |
| I encourage the use of laptops in my class for instructional/learning purposes. | *3.39* (1.40) |

## Technical Support

With regard to technical support including hardware and software, results indicate that faculty tend to agree that both the university and colleges are providing support. Furthermore, faculty tend to agree that instructional technology workshops are provided slightly more by the university ($M$ = 2.96, SD =1.25) as opposed to the colleges ($M$ = 2.67, SD =1.28). When seeking help, faculty appear to use the IT help desk ($M$ = 3.79, SD =1.16) first, followed by the colleges ($M$ = 3.73, SD =1.12). The data shows that more faculty desire a technical support unit dedicated to the instructional use of technology (4.19). It also indicates that faculty view technology as an aid in professional collaboration. Table 4 demonstrates the means and standard deviations for professors' perceptions of technical support.

Table 4

*Professors' Perceptions of Technical Support*

| Items | *M* (SD) |
|---|---|
| The University provides instructional technology workshops. | *2.96* (1.25) |
| The University provides hardware and software. | *2.8* (1.32) |
| My college provides instructional technology workshops. | *2.67* (1.28) |
| My college provides hardware and software. | *3.07* (1.37) |
| I seek technology help from other faculty members. | *3.73* (1.12) |
| I seek technology help from the Office of Technology Services. | *3.79* (1.16) |

## Online Courses

In the section related to online courses, the results indicate differences in faculty perceptions that learning outcomes are the same for online courses as they are for face-to-face courses ($M$ = 2.78, SD =1.58) The same appears to be evident in the quality of online courses versus face-to face courses ($M$ = 2.96, SD =1.41). A large number of faculty consider faculty-student interaction as important for an online course. The data indicates that slightly more faculty have taught online courses as opposed to taking an online course ($M$ = 3.87, SD =1.62). There is a discrepancy in faculty perception that instructional models used in online classes are the same as those used in face-to-face classes ($M$ = 2.73, SD =1.37). The means and standard deviations for professors' perceptions of online courses are provided in Table 5.

Table 5.
*Professors' Perceptions of Online Courses*

| Items | *M* (SD) |
|---|---|
| Learning outcomes are the same in an online course as a face-to-face course. | *2.78* (1.58) |
| The quality of an online course is the same as a face-to-face course. | *2.96* (1.41) |
| Faculty-student interaction is very important in an online course. | *3.87* (1.62) |
| I have taken online courses. | *3.06* (1.98) |
| I have taught online courses. | *3.36* (1.99) |
| I would like to teach an online course. | *3.35* (1.38) |
| Instructional models used in online courses are the same as those used in face-to-face courses. | *2.73* (1.37) |

## Professors' Preference of Technology Use

The statistical analysis results indicated that the mostly used technology tool by faculty in both colleges was Blackboard (76.63 %); Desktop Applications such as word processing, spreadsheets, and database (75.56 %); Presentation Software such as PowerPoint, Prezi, and Keynote (67.22 %); Collaboration Tools such as Google Docs and Collaborate on Blackboard (62.22 %); and Internet Websites (61.93 %). Game devices (5.63 %), clickers (11.25 %), educational games (15 %), clickers (11.25%), and LiveText (19.51 %) were the least preferred technology tools.

## Discussion

ECAR's series of surveys provided comprehensive analysis of technology trends, issues, use in the classroom, support, etc., related to instructional technology. They addressed in great depth IT use and trends across their sequence of studies. This study was more cursory and exploratory, the findings indicating that the university is not out of step with other schools and that the faculty as a whole is operating at the intermediate level or slightly below on the technology acceptance/use continuum.

The types of technology being used at this university align with those discussed in the ECAR studies. The top eight being, the course management system, desktop apps, presentation apps, Websites, collaboration tools, videos, online tutorials, and recorded lectures. In the ECAR 2017 faculty study most of these are listed by the faculty as ones they say they would be more effective using for instruction if they had better skills. In alignment with this thought the faculty in this study stated a desire for a technical support unit dedicated to instructional use.

Common issues found in the ECAR studies and in this study are faculty differences about cell phone use as a learning tool and the use of gaming in instruction. Another common issue is the increased amount of preparation time required when incorporating technology.

Similar threads also exist in the areas of IT support and training. ECARs' 2017 Faculty survey also found that faculty seek help first from the IT help desk, followed by themselves, online searches, and then colleagues. In this study, faculty also sought help from IT first and then colleagues.

This university's faculty perception of the use of technology aligns with the perceptions of faculty on a national and international level. Faculty agree that the use of technology in the classroom supports learning, but greater support for integrating technology into instruction is needed. The data from this study will be used to support the need for more assistance in learning new technologies and integrating them into the classroom. Further research could attempt to recruit more professors from other colleges and investigate differences across colleges.

# References

Afashari, M., Bakar, K., Luan, W., Samah, B. & Fooi, F. (2009). Factors affecting teachers' use of information and communication technology. *International Journal of Instruction*, 2, (1). Retrieved from http://eric.ed.gov/?id=ED524156

Allen, N. (2012). *Technological challenges of faculty at a historically black college and university* (Doctoral Dissertation). Retrieved from https://eric.ed.gov/?id=ED567329.

Brooks, D.C. (2015). *ECAR study of faculty and information technology 2015*. Retrieved from https://library.educause.edu/resources/2015/8/2015-student-and-faculty-technology-research-studies

Camilleri, M. & Camilleri, A. (2017). *The technology acceptance of mobile applications in education*. Paper presented at the 13th International Conference on Mobile Learning. https://ssrn.com/abstract=2937971

Chien, Y.-T., Chang, C.-Y., Yeh, T.-K., & Chang, K.-E. (2012). Engaging pre-service science teachers to act as active designers of technology integration: A MAGDAIRE framework. *Teaching & Teacher Education, 28*. Retrieved from https://://www.researchgate.net/publication/257245963_Engaging_preservice_science_teachers_to_act_as_active_designers_of_technology_integration:_A_MAGDAIRE_framework

Dahlstrom, E. & Brooks, D.C. (2014). *Study of faculty and information technology, 2014*. Retrieved from https://www.uwsuper.edu/iits/research-and-surveys/upload/ECAR-2014-Faculty-Study.pdf

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-339.

Educause Center for Analysis and Research (2016). *ECAR Study of Undergraduate students and information technology, 2016*. Retrieved from http://library.educasue.edu/~/mediafiles/library/2016/10/ers1605.pdf

Elzarka, S. (2012). *Technology use in higher education instruction* (Dissertation). Retrieved from http://scholarship.claremont.edu/cgu_etd/39/

Ertmer, P. & Ottenbreit-Leftwich, A. (2010). *Teacher technology change how knowledge, confidence, beliefs, and culture intersect*. Retrieved from https://files.eric.ed.gov/fulltext/EJ882506.pdf

Fathema, Shannon, & Ross, (2012). Expanding the Technology Acceptance Model (TAM) to examine faculty use of learning management systems (LMSs) in higher education institutions. *MERLOT Journal of Online Learning and Teaching, 11*(2), 2015, 210-232.

Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Available from http://people.umass.edu/aizen/f&a1975.html

Fullan, M. (2012). *Stratosphere: Integrating technology, pedagogy, and change knowledge*. NY: Pearson.

Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., and Hall, C. (2016). *NMC Horizon Report: 2016 Higher Education Edition*. Austin, Texas: The New Media Consortium.

Jonassen, D.H. (1996). *Computers in the classroom: Mind tools for critical thinking*. Columbus, OH: Merrill/Prentice-Hall.

Jones, S. (2017). Technology in the Montessori classroom: Teachers' beliefs and technology use. *Journal of Montessori Research, 3*(1), 16-29. Retrieved from https://eric.ed.gov/?id=EJ1161304

Joseph, L. (2008). The adoption and diffusion of computing and Internet technologies in historically black colleges and universities. *The International Journal of Applied Management and Technology*, *6*(1), 86-112.

Kivunja, C. (2012). Do you want your students to be job-ready with 21st century skills? Change pedagogies: A pedagogical paradigm shifts from Vygotskyian social constructivism to critical thinking, problem solving and Siemens' digital connectivism. *International Journal of Higher Education, 3*(3). Retrieved from http://www.sciedu.ca/journal/index.php/ijhe/article/view/5156

Lai, PC. (2017). The literature review of technology adoption models and theories for the novelty technology. *Journal of Information Systems and Technology Management*, *14* (1), 21-38.

Loague, A. (2003). *Beliefs and practices regarding technology: Influences on professional instructional practices* (Dissertation). Retrieved from https://www.learntechlib.org/p/120016/

Lombardi, M. (2007). *Authentic learning for the 21st century: An overview*. Retrieved from https://www.researchgate.net/profile/Marilyn_Lombardi/publication/220040581_Authentic_Learning_for_the_21st_Century_An_Overview/links/0f317531744eedf4d1000000.pdf

Murphy, J. (2017). *Integrating 21st-century workplace skills into lecture-based courses*. Retrieved from https://er.educause.edu/articles/2017/5/integrating-21st-century-workplace-skills-into-lecture-based-courses

Myer, K. & Xu, Y.K. (2009). A causal model of factors influencing faculty use of technology. *Journal of Asynchronous Learning Networks, 13*(2), 57-70. Retrieved from https://eric.ed.gov/?id=EJ862348

Pomerantz, J. & Brooks, D.C. (2017). *ECAR study of faculty and information technology*. Retrieved from https://library.educause.edu/resources/2017/6/2017-student-and-faculty-technology-research-studies

Prenski, M. (2006). *Don't bother me, Mom, I'm learning*. St. Paul, MN: Paragon House.

Rogers, E. (1983). *Diffusion of innovations* (3rd ed.). The Free Press, NY: NY.

Surendran, P. (2012), Technology Acceptance Model. *International Journal of Business and Social Research, 2*(4). Retrieved from https://www.thejournalofbusiness.org/index.php/site/article/download/161/160

Vannetta, R. & Beyerbach, B. (2000). Facilitating a constructivist vision of technology interaction among education faculty and preservice teachers. *Journal of Research on Computing in Education*, *33*, 132-147. Retrieved from ProQuest Research Library.

Voght, J. & McKenney, S. (2016). TPACK in teacher education: Are we preparing teachers to use technology for early literacy? *Technology, Pedagogy, and Education, 26*(1).

Wingo, N., Ivankova, N., & Moss, J. (2017). Faculty perceptions about teaching online: Exploring the literature using the technology acceptance model as an organizing framework. *Online Learning*, *21*(1). Retrieved from https://files.eric.ed.gov/fulltext/EJ1140242.pdf

# Factors Affecting Technology Integration in the Classroom

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**Abstract**

Technology is an integral part of our everyday lives. In fact, students in our public schools are considered digital natives and have become accustomed to always being connected to their devices and the Internet. In 2013, 71 percent of the US population age 3 and older used the Internet (Snyder, de Brey, & Dillow, 2016). Given the importance technology plays in our lives, schools now have a responsibility to integrate it into teaching and learning and prepare students for 21st Century skills and careers (Cakir, 2012; Luterberbach & Brown, 2011). Although classrooms may have access to many technology devices, there are several external and internal factors that affect the proper implementation of technology in classrooms. In preparing students to be college and career ready, technology integration is imperative. This paper will discuss factors such as poor infrastructure, inadequate technology, lack of sufficient technological tools, effective professional development (external factors), low teacher self-efficacy and teacher perceptions (internal factors) that affect technology integration in PK-12 schools.

*Keywords:* technology integration, self-efficacy, digital literacy, digital natives, 21st-century skills

In today's culture, you will be hard-pressed to find a child of any age not plugged into some form of technology. Students today are considered digital natives and are immersed daily in the world of interactive technology such as mobile phones, iPods, television on demand, and other limitless resources that provide the answer to any question with just a few clicks of a keyboard or taps on a screen. Over the past few years, technology has become a major tool used in just about every career field and has provided educators with a valuable resource to support teaching and learning (Mac Callum, Jeffrey, & Kinshuk, 2014). The traditional model of education with lectures and students sitting in straight rows is no longer sufficient. Schools now have a responsibility to integrate technology into the curriculum and prepare students for 21st Century skills and careers (Cakir, 2012; Luterberbach and Brown, 2011).

Practically speaking, there is an obvious need for students to be prepared to use technology to compete in the 21st-century global economy. Technology is an essential life skill in the workforce. Students who are technologically savvy often have a better chance of getting a job and excelling in their careers (Savage & Brown, 2015). However, the task of integrating technology into classroom instruction in a meaningful and state-of-the-art way remains challenging (Pittman & Gaines, 2015). Although classrooms may have access to technology initiatives, there are several circumstances that affect the proper implementation of technology in classrooms such as poor infrastructure, inadequate technology, lack of sufficient technological tools, effective professional development (external factors), low teacher self-efficacy and teacher perceptions (internal factors). In preparing students to be college and career ready, technology integration is imperative. This paper will discuss those external and internal factors that affect technology integration in PK-12 schools.

## External Factors Limiting Technology Integration

### Poor Infrastructure

There is a revolution underway in K-12 classrooms as school districts and boards move to adopt a new style of classrooms and pedagogy focused on mobile learning. To succeed, the move to anywhere, anytime learning must be supported by a strong foundation in technology, particularly network infrastructure (Build the 21st Century Classroom, 2018). By focusing on the right technological advances in network management and security from the right vendor, school districts can prepare their classrooms for tomorrow's networking needs. Too often infrastructure is overlooked when making the decision to purchase technological tools and how they will be utilized in the learning environment. When making these decisions certain aspects should be considered such as the range of the devices, duration the device's purpose. Collaborative classrooms require not only furniture grouped to facilitate clusters of learners, but also a strong Wi-Fi signal that assures students of anywhere anytime connectivity for a range of devices (Build the 21st Century Classroom, 2018). Infrastructure can affect Wi-Fi connection and limit internet access to technology devices. Especially, in rural schools and older building without proper power voltage to support multiple tech devices. Only 68% of students say they have Wi-Fi access at school (Pearson, 2015). Hence, school districts would greatly benefit from focusing on the best networking management tools for their system to further prepare classrooms for tomorrow's networking requirements.

**Inadequate Technology**

From the perspective of learning theory, the integration of technology usage into the classroom serves constructivist and sociocultural principles. According to the constructivist view, learners create knowledge as a result of their interactions with the environment, building on existing knowledge and dependent upon the relevance of the content or instructional activity in their own lives. From the sociocultural perspective, technology provides the platform, and the tools to engage via numerous media with other individuals and groups beyond the immediate reach of the learner (Pittman & Gaines, 2015). There is an obvious need for students to be prepared to use technology. In 2013, 71 percent of the US population age 3 and older used the Internet (Snyder, de Brey, & Dillow, 2016). However, due to limited funds and budgets schools don't have the resources to provide adequate technology for every student. In the Student Mobile Device Survey National Report: Students Grades 4-12 conducted by Pearson (2015) it found that 14% of elementary students attend a school with a 1:1 initiative. However, most students access to technology is through a computer lab (37%) or shared in a classroom (33%). Sixty-two percent of students want to use technology more in the classroom, but the reality is that the resources are just not available. In schools that implement Bring Your Own Device (BYOD), it is assumed students will have the devices to fill in gaps where schools lack the resources. However, only 8% (elementary) and 13% (middle and high) school students bring their own devices to school for personal use. The opportunity to engage broadly and deeply with virtual environments made possible by technology continues to lag in education. The practical applications for learners as they create knowledge for themselves are numerous and growing, as can be evidenced by a simple Internet search on the subject. As districts continually move toward 21st-century classrooms, it is important to bridge the gap between utilization and adequate resources.

**Lack of Sufficient, Effective Professional Development**

Even with adequate technology access, effective professional development remains a reason that makes it difficult to increase the level of technology integration in classrooms. Little is understood about what these experiences might look like for teachers ''on the ground,'' during implementation of technology-integrated professional development (Wilkerson, Andrews, Shaban, Laina, & Gravel, 2016). Research indicates that simply providing teachers with professional development opportunities related to using technology does not translate into higher levels of integration in the classroom. It is only when they are provided the knowledge, skills, resources, and support that they will integrate technology in the curriculum to maximize its effects on teaching and learning (Papanastasiou, Zemblyas, & Vrasidas, 2003). However, schools are providing technology-related professional development. Technology integration was the second most common topic for professional development (67% of teachers) only following training on a content specific area (Rotermund, De Rocje, & Ottem, 2017). But, of those that participated in training, 59% only received 8 or fewer hours indicating teachers are left on their own with the daunting task of choosing the most appropriate technology tool to support teaching and learning.

## Internal Factors that Limit Technology Integration

### Low self-efficacy

Self-efficacy is the belief that a person can perform a task to achieve the desired outcome. It is an essential concept of Bandura's social cognitive theory (1977) that affects how you choose to interact with society and your surroundings. Researchers in education focus on the principles of self-efficacy involving performance accomplishment, vicarious experiences, verbal persuasion, and physiological stress (Howardson & Behrend, 2015; Pan & Franklin, 2011). It is predicted that digital classrooms, which involve many technological devices, will improve students' success level. However, without effective technological integration, it is unreasonable to claim it is possible to reach these goals without the necessary online technologies self-efficacy (Ozerbas & Erdogan, 2016). The theory of self-efficacy is "that people process, weigh, and integrate diverse sources of information concerning their capability, and they regulate their choice behavior and effort expenditure according to that information" (Bandura, 1977). We have control over our behavior not control of the outcome. There is also a significant correlation to teacher's use of technology in the classroom with their self-efficacy (Li, Worch, Zhou, & Aguiton, 2015). Due to high demands of student achievement and accountability, if teachers felt the use of technology had a positive outcome on their students' learning it was more likely they would integrate it into their practice. However, if they felt it would not increase their student's performance they would not use it. Another point worth noting, 62% of elementary students feel they know more about technology than their teachers (Pearson, 2015) which may add to some teachers perceived low self-efficacy.

### Teacher Perceptions

Despite increasing access to technology in schools, teachers are usually portrayed as hesitant users. They are accustomed to the old standard which can create frustration when trying to shift to a new paradigm leading them to stray away from the use of 21st-century technological devices. Teachers who are not digitally literate, able to understand and use information from a variety of digital sources, will be the ones who integrate technology. They perceive the effort needed to learn the new technology and practicality or value of it as a significant consideration in whether they use it or not (Mac Callum, Jeffrey, & Kinshuk, 2014). This is consistent with other research that found teacher's readiness, or lack thereof, had the highest total effect on whether teachers integrated technology in their classrooms (Inan & Lowther, 2009). Teachers also perceive technology integration negatively due to the amount of time it takes to integrate into the curriculum through additional training and planning. Technology integration requires preparation, classroom management practices, and demands attention that is not normally spent in those areas. It is easier to just remain with the "status quo."

### Summary

The integration of technology in the classroom is a multifarious process. One of the greatest challenges for teachers is the link between educational technology innovations, promising practices for teaching and learning and integrating technology with increases in student

achievement (Middleton & Murray, 1999).  Successful student-use of technology in education hinges on knowing how to manage technology efficiently and overcoming barriers that come with integrating technology.  Simply equipping schools and classrooms with technology is not the panacea for improving student achievement.  It would be necessary to conduct a longitudinal study to suggest if the tools used are even effective and then the district can construct a plan to help schools address these hindering internal and external factors.

Self-efficacy plays a significant role in the desire to use such tools in the classroom. Therefore, teachers must be supported and felt that their needs are being met throughout the implementation process.  When teachers are not confident in the usage of these tools, they tend to have a lower perception of its value.  Hence, the tools will not be used to their full capacity creating an internal barrier. Administration adds to teachers' low self-efficacy by not providing them sufficient amount of professional development. Coupled with poor infrastructure, lack of network bandwidth and a shortage of enough devices for classroom usage may cause teachers to feel discouraged and abandon fully implementing technology into their practice. Furthermore, hindering the students from receiving 21st-century instruction. As schools are moving toward college and career readiness, it is imperative that districts address these barriers, and include them in the process when developing technology plans for new investments and expansions.

As society continues to grow in its use of technology for social reasons it is expected that education will continue to grow in the usage of such tools as well.  Addressing these barriers is a step in a positive direction in closing this gap.

# References

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral
      change. *Psychological Review, 84*(2), 191-215. doi.org/10.1037/0033-295X.84.2.191.

Build the 21st century classroom infrastructure. (2018). *T H E Journal, 45*(2), 11-12.

Cakir, R. (2012). Technology integration and technology leadership in schools as learning
      organizations. *Turkish Online Journal of Educational Technology (TOJET)*, 11, 273-282.

Howardson, G. N., & Behrend, T. S. (2015). The relative importance of specific self-efficacy
      sources in pertaining self-efficacy beliefs. *International Journal of Training &*
      *Development, 19*(4), 233-252. doi:10.1111/ijtd.12060.

Inan, F. & Lowther, D. (2009). Factors affecting technology integration in k-12 classrooms: A
      path model. *Education Tech Research Development*, *58*, 137-154. doi:10.1007/s11423-
      009-9132-y.

Li, L. Worch, E., Zhou, Y., Aguiton, R. (2015). How and why digital generation teachers use
      technology in the classroom: An exploratory sequential mixed methods study.
      *International Journal for the Scholarship of Teaching and Learning, 9*(2).
      doi:10.20429/ijsotl.2015.090209.

Luterbach, K. J., & Brown, C. (2011). Education for the 21-st century. *International Journal of*
      *Applied Educational Studies, 10*(2), 14-32.

Mac Callum, K., Jeffrey, L., & Kinshuk. (2014). Factors impacting teachers' adoption of mobile
      learning. *Journal of Information Technology Education: Research, 13*, 141-162.
      doi:10.28945/1970.

Middleton, B. M., & Murray, R. K. (1999). The impact of instructional technology on student
      academic achievement in reading and mathematics. *International Journal of Instructional*
      *Media, 26*(1), *109.*

Ozerbas, M., & Erdogan, B. (2016). The effect of the digital classroom on academic success and
      online technologies self-efficacy. *Journal of Educational Technology & Society*, *19*(4),
      203-212.

Pan, S., & Franklin, T. (2011). In-service teachers' self- efficacy, professional development, and
      web 2.0 tools for integration. *New Horizons in Education*, *59*(3), 28-40.

Papanastasiou, E., Zembylas, M., & Vrasidas, C. (2003). Can computer use hurt science
      achievement? The USA results from PISA. *Journal of Science Education and*
      *Technology, 12*(3), 325-332. doi:10.1023/a:1025093225753.

Pearson (2015). *Student mobile device survey national report: Students in grades 4-12*. Retrieved
from https://www.pearsoned.com/wp-content/uploads/2015-Pearson-Student-Mobile-Device-
Survey-Grades-4-12.pdf .

Pittman, T. T., & Gaines, T. T. (2015). Technology integration in third, fourth and fifth-grade
      classrooms in a Florida school district. *Educational Technology Research &*
      *Development*, *63*(4), 539-554.

Rotermund, S., DeRoche, J., & Ottem, R. (2017). *Teacher professional development by selected*
      *teacher and school characteristics: 2011-12*. [Stats in Brief]. NCES 2017-200. National
      Center for Education Statistics. Retrieved from:
      https://nces.ed.gov/pubs2017/2017200.pdf.

Savage, A. J., & Brown, D. S. (2014). Examining past studies of the effects of classroom
      technology implementation in terms of student attitude and academic achievement.
      *Global Education Journal, 4, 20-27.*

Snyder, T.D., de Brey, C., and Dillow, S.A. (2016). Digest of education statistics 2015 (NCES 2016-014). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Wilkerson, M., Andrews, C., Shaban, Y., Laina, V., & Gravel, B. (2016). What's the technology for? Teacher attention and pedagogical goals in a modeling-focused professional development workshop. *Journal of Science Teacher Education*, *27*(1), 11-33.

# Graduate Educational Leadership Students' Perceptions of Academic Readiness of Content Knowledge on the *Praxis* Test

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**Abstract**

The purpose of this study was to investigate graduate educational leadership students' perceptions of academic readiness of content knowledge on the *Praxis* test. The study also sought to determine if statistically significant correlations existed between the different content area categories of the *Praxis* test. Data were collected through web-based surveys with items asking graduate educational leadership students (current and past) about their experience on the *Praxis* test. The instrument measured six content area categories as assessed on the *Praxis* test as follows: vision and goals, teaching and learning, managing organizational systems and safety, collaborating with key stakeholders, ethics and integrity, and the education system. The quantitative findings revealed strong correlations between specific content area categories as assessed on the *Praxis* test.

*Keywords*: praxis, academic readiness, content knowledge, content area categories, variables

Graduate leadership programs must effectively prepare educational leaders for their roles. The role includes much more than managing a curricular program (Carver, 2012). So, how can graduate leadership programs effectively prepare educational leaders? To answer this question, it is important for graduate leadership programs to offer a curriculum grounded in the correct content knowledge. Therefore, universities offering graduate leadership programs must make a conscious effort to ensure that program curriculum has been designed to not only enable graduate students to meet standards, but also to ensure the correct standards are being utilized. As a result, it is also important for professors of graduate leadership programs to have an in-depth knowledge of the content areas assessed on the *Praxis* test for Educational Leadership: Administration and Supervision. *Praxis* tests are used in 47 states within the United States to make decisions concerning the licensing of beginning educators (ETS Praxis, 2017). Based on past research, content knowledge plays an important role in the success of a beginning educational leader (Carver, 2012; Stein & Nelson, 2003).

The purpose of this study was to investigate graduate educational leadership students' perceptions of academic readiness of content knowledge on the *Praxis* test. Data were collected through web-based surveys with items asking graduate educational leadership students (current and past) about their experience on the *Praxis* test. The findings addressed how educational leadership programs may be improved by investigating graduate leadership students' perceptions of their own experiences on the *Praxis* test.


## Literature Review


### Background

The *Praxis* test required for graduate educational leadership students in Alabama is comprised of 110 selected-response questions covering six content areas aligned with the Educational Leadership Policy Standards: ISLLC 2008 (ETS Praxis, 2017). These six content areas are as follows: vision and goals, teaching and learning, managing organizational systems and safety, collaborating with key stakeholders, ethics and integrity, and the education system. In 1996, the Interstate School Leadership Licensure Consortium (ISLLC) developed standards for school leaders to identify a common core of knowledge, dispositions, and performances (Council of Chief State School Officers, 1996). In 2008, the Interstate School Leadership Licensure Consortium (ISLLC) adopted new standards while retaining the structure of the six original ISLLC Standards, but with new purposes and audiences (Council of Chief State School Officers, 2008a). At present time, the *Praxis* test for graduate educational leadership students in Alabama for initial licensure continues to be in alignment with the ISCLLC 2008 Standards (ETS Praxis, 2017). As a result, it is important for graduate educational leadership programs to be well versed in the six content areas and seek ways to ensure students are well prepared within these six content areas. The following discussion will provide pertinent information for each of the six content areas assessed on the *Praxis* test with specific discussion focused on the actual functions of each standard.

**Vision and Goals**

Educational leaders must be able to promote the success of every student by facilitating the development, articulation, implementation and stewardship of a vision of learning that is shared and supported by all stakeholders (Council of Chief State School Officers, 2008b). Schools that have closed achievement gaps have a mission and vision clearly focused on the success of every student and every group of students (Johnson & Uline, 2005). Educational leaders need a clear connection between a school's vision and goals (Graczewski, Knudson, & Holtzman, 2009). Connections exist between the coherence of a school's vision and goals and the coherence and relevance of a school's professional development opportunities (Graczewski et al., 2009). Therefore, it is important for educational leaders to construct a vision and goals with clear focus. If these two areas (vision and goals) are not clearly constructed, then professional development may have undermined. It is also important for educational leadership programs to clarify the meaning of the vision, mission, values and goal statements as well as explore the articulation, adoption and alignment that such statements may have on the process of school improvement (Gurley, Peters, Collins, & Fifolt, 2015).

**Teaching and Learning**

Educational leaders must be able to promote the success of every student by advocating, nurturing and sustaining school culture and instructional program conducive to student learning and staff professional growth (Council of Chief State School Officers, 2008b). One primary task of educational leaders is the development of a culture of great expectation (Teasley, 2017). The old adage, "inspect what you expect" rings so true. Teachers must feel that their individual and collective success is of utmost importance to their educational leaders (Johnson & Uline, 2005). As discussed previously, a school's vision and goals affect the relevance of the professional development opportunities (Graczewski et al., 2009). In successful schools, professional development is not isolated, but rather a part of the school's culture (Johnson & Uline, 2005). Educational leadership programs should prepare educational leaders to lead instruction with an emphasis on *how* to lead instruction attached with *why* instruction needs to be led (Brazer & Bauer, 2013).

**Managing Organizational Systems and Safety**

Educational leaders must be able to promote the success of every student by ensuring management of the organization, operation, and resources for a safe, efficient and effective learning environment (Council of Chief State School Officers, 2008b). The day-to-day operations of a school such as student discipline issues, legal issues, employee issues, transportation issues, parent issues, safety concerns, and instructional concerns require time. Furthermore, the time required to complete the issues/concerns often come at the expense of the educational leader. Therefore, educational leaders must seek ways to be efficient during the day, but also to be effective so that the most critical areas may be prioritized. Particularly, educational leaders need to reduce or remove low-leverage/high-time tasks (i.e. teacher supervision and evaluation) and devote more time to working collaboratively with teams in the review of evidence of student learning and approaches to improve results (DuFour & Marzano, 2009). Educational leadership

programs need to provide activities and opportunities for educational leaders to learn and address daily leadership and managements tasks (Tobin, 2014).

## Collaborating with Key Stakeholders

Educational leaders must be able to promote the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources (Council of Chief State School Officers, 2008b). The success of every student must not only be a belief of the educational leader, but must drive the actions of the educational leader. Believing is one component, but taking action to ensure that every student succeeds is another. Kladifko (2013) suggested the following:

> "Schools and principals who communicate with their external communities in some organized way enhance their chances of getting better public support, minimizing criticism, learning the values and priorities of a community, and receiving many functional ideas and resources that will help educate students better. (p. 54)

School and home connections can be cultivated when educational leaders convert to transformative professionals who are conscious and passionate about equity and justice for school stakeholders (Robinson, 2017). Furthermore, evidence exists that district leadership is a significant variable for helping schools implement simple structures of partnership programs and enhancing outreach to involve all families in children's education (Epstein, Galindo, & Sheldon, 2011). Finally, educational leadership programs should prepare educational leaders with strategies that support optimal parent and educator interactions (Robinson, 2017).

## Ethics and Integrity

Educational leaders must be able to promote the successes of every student by acting with integrity, fairness, and in an ethical manner (Council of Chief State School Officers, 2008b). Leaders of education are under public scrutiny and must practice ethical behavior (Beyer, 2009). If educational leaders desire to make an impact on society, they must be grounded in concepts accentuated by the Court-moreover, educational opportunity, equality, justice, and fundamental value of education (Bon, 2012). Educational leadership programs must prepare all educational leaders "to act in an ethical manner in program planning, resource allocation, curriculum development, human resource management, provide a safe and secure learning environment, and offering the special programs and services that will support the academic and social success of every student" (Beyer, 2009, pp. 9–10).

## The Education System

Educational leaders must be able to promote the success of every student by understanding, responding to, and influencing the political, social, economic, legal, and cultural context (Council of Chief State School Officers, 2008b). Leaders must have knowledge and understanding of the political, social, economic, legal, and cultural contexts in which they work (Johnson & Uline, 2005). Transforming the education system will not work without the transformation of the leaders within the system, particularly within the schools (Futrell, 2011). School leaders must go outside school walls to create appropriately responsive systems of practice that allow students to succeed (Miller, Pavlakis, Lac, & Hoffman, 2014). Educational leadership programs need to ensure that

educational leaders are equipped with the knowledge, skills, and dispositions that will assist them to lead students to higher achievement (Miller et al., 2014).

## Methodology

A quantitative research approach was used in this study.  Quantitative research was defined by (Leedy & Ormrod, 2001) as an approach to "answer questions about relationships among variables with the purpose of explaining, predicting, and controlling phenomena" (p. 101).  The variables under investigation were vision and goals, teaching and learning, managing organizational systems and safety, collaborating with key stakeholders, ethics and integrity, and the education system.  The design used in the study was a correlational design.  The approach met the needs for this study.

### Population

Thirty graduate leadership educational leadership students (both current students and recent graduates) were selected for this study.  Data were analyzed for students who successfully passed the *Praxis* test for Educational Leadership: Administration and Supervision.  Of the initial 30 students who were surveyed, 14 students had taken and successfully passed the *Praxis* test.  Data from each student of the 14 students were analyzed to assist instructional leadership professors in pinpointing content areas that may need to be further addressed.

### Instrumentation

The researchers developed the survey instrument utilized in this study, the *Graduate Educational Leadership Students' Perception Survey*.  A pilot survey was conducted to determine the clarity and level of difficulty that existed in the survey items. The items in the pilot survey were specific to graduate educational leadership students' perceptions of academic readiness of content knowledge in six areas (vision and goals, teaching and learning, managing organizational systems and safety, collaborating with key stakeholders, ethics and integrity, and the education system) on the *Praxis* test and used a 5-point Likert-scale (strongly disagree to strongly agree).  Three graduate leadership students participated in the pilot study whom were not part of the final study. Participants completed the pilot survey via Qualtrics Survey Software$^{TM}$.

Pilot survey items were analyzed for reliability and Cronbach's alpha reliability coefficients were calculated for each of the survey's six content areas. The pilot survey consisted of 39 items. Items that weakened the reliability coefficients were extracted from the survey.  A total of five items were extracted from the pilot survey.  The extraction of these items resulted in a stronger reliability coefficient for the items measured in the survey. The final survey resulted in a total of 34 items.  Reliability coefficients ranged from 0.750 to 0.968.  The item numbers and item descriptions with reliability coefficients for the final survey are displayed in Table 1.

Experts in the field of education validated the survey. Both professors of education and school-based administrators assisted in the validation of the survey.  It was important to receive input from these experts so that the survey could be validated before collecting data.  The final survey measured the six same six content area categories (vision and goals, teaching and learning, managing organizational systems and safety, collaborating with key stakeholders, ethics and

integrity, and the education system) as the pilot survey. Demographic items such as gender and years of experience were also included in the survey.

Table 1
*Description of Survey Items*

| Item Numbers | Description of Items | Reliability Coefficients |
|---|---|---|
| 1-9 | Demographics | |
| 15,21,25,28 | Vision and Goals | 0.921 |
| 10,16,22,26,29,32,33,34 | Teaching and Learning | 0.926 |
| 11,17,23,30 | Managing Organizational Systems and Safety | 0.868 |
| 12,18 | Collaborating with Key Stakeholders | 0.750 |
| 13,19,24,27,31 | Ethics and Integrity | 0.968 |
| 14,20 | The Education System | 0.824 |

## Findings

## Analyses

A statistical analysis was completed on the data collected from the *Graduate Educational Leadership Students' Perception Survey*. Analysis of the data using descriptive statistics revealed that the mean of graduate educational leadership students' perceptions of collaborating with key stakeholders appeared greater in comparison to other variables. Furthermore, descriptive statistics revealed that the mean of graduate educational leadership students' perceptions of the education system appeared lower in comparison to other variables. The statistical means of each variable and standard deviations are presented in Table 2.

Table 2
*Variable Means and Standard Deviations*

| Variables | $n$ | $M$ | $SD$ |
|---|---|---|---|
| Vision and Goals | 14 | 4.45 | 0.39 |
| Teaching and Learning | 14 | 4.31 | 0.29 |
| Managing Organizational Systems and Safety | 14 | 4.36 | 0.38 |
| Collaborating with Key Stakeholders | 14 | 4.54 | 0.49 |
| Ethics and Integrity | 14 | 4.46 | 0.35 |
| The Education System | 14 | 4.18 | 0.42 |

Further inferential data analysis conducted through a correlation matrix including all six variables were calculated. The six content area variables revealed statistically significant correlations ($r$ ranging from .597 to .894 and $p$ ranging from < .03 to < .001). Teaching and learning (TL) content area was strongly correlated with managing organizational systems and safety (MO) content area ($r = .894$ and $p < .01$). Teaching and learning (TL) content area was strongly correlated with ethics and integrity (EI) content area ($r = .777$ and $p < .01$). Teaching and learning (TL) content area was strongly correlated with vision and goals (VG) content area ($r = .884$ and $p < .01$). Teaching and learning (TL) content area was strongly correlated with vision and

goals (VG) content area (r = .884 and p < .01). MO content area was strongly correlated with TL content area (*r* = .894 and *p* < .01). MO content area was strongly correlated with collaborating with key stakeholders (C) content area (*r* = .747 and *p* < .01). MO content area was strongly correlated with EI content area (*r* = .758 and *p* < .01). MO content area was strongly correlated with VG content area (*r* = .884 and *p* < .01). C content area was strongly correlated with MO content area (*r* = .747 and *p* < .01). C content area was strongly correlated with EI content area (*r* = .771 and *p* < .01). EI content area was strongly correlated with TL content area (*r* = .777 and *p* < .01). EI content area was strongly correlated with MO content area (*r* = .758 and *p* < .01). EI content area was strongly correlated with C content area (*r* = .771 and *p* < .01). EI content area was strongly correlated with VG content area (*r* = .766 and *p* < .01). VG content area was strongly correlated with TL content area (*r* = .884 and *p* < .01). VG content area was strongly correlated with MO content area (*r* = .884 and *p* < .01). VG content area was strongly correlated with EI content area (r = .776 and p < .01). The correlation matrix is displayed in Table 3.

Table 3
*Correlation Matrix*

|  | TL | MO | C | EI | ES | VG |
|---|---|---|---|---|---|---|
| TL | 1 | .894** | .674** | .777** | .643* | .884** |
| MO | .894** | 1 | .747** | .758** | .599* | .884** |
| C | .674** | .747** | 1 | .771** | .609* | .597* |
| EI | .777** | .758** | .771** | 1 | .699** | .766** |
| ES | .643* | .599* | .609* | .699** | 1 | .641* |
| VG | .884** | .884** | .597* | .766** | .641* | 1 |

*Note.* TL = teaching and learning; MO = managing organizational systems; C = collaborating with key stakeholders; EI = ethics and integrity;
ES = the education system; VG = vision and goals
*p<.05. *p<.01.

## Conclusions

These findings suggest that graduate educational leadership students perceive a strong relationship between most content area categories of the *Praxis* test. For example, teaching and learning was strongly correlated was strongly correlated to managing organizational systems/safety content area (*r* = .894 and *p* < .01) and vision/goals (*r* = .894 and *p* < .01). As a result, it is important for educational leadership programs to embed content that crosscuts multiple content categories compared with teaching individual courses that focus on isolating single content categories into one single course. For example, a course that focuses on teaching and learning may crosscut content categories of managing organizational systems/safety and vision/goals. If graduate educational leadership programs crosscut content area categories across courses, learning targets may become more efficient and more effective. The results of this study align with a previous study that suggests educational leadership programs need to ensure that educational leaders are equipped with the knowledge, skills, and dispositions that will assist them to lead students to higher achievement (Miller et al., 2014). An intentional effort that focuses on mastery of knowledge, skills, and dispositions that crosscuts across graduate educational leadership courses is noteworthy.

Another finding of this study is that graduate students rated the education system the lowest (*M* = 4.18) compared with the other five content area categories. An implication of this finding

indicates that graduate educational leadership programs may want to allocate extra time to delve deeper in the content area of the ISLLC standard that focuses on the education system. The highest rated content area category was collaborating with key stakeholders ($M = 4.54$). Based on student perceptions in this study, it appears that graduate leadership programs believe they are strongly prepared to collaborate with key stakeholders. As a result, educational leadership programs should continue to prepare educational leaders with strategies that support optimal parent and educator interactions (Robinson, 2017).

Based on the inferential statistics of this study, graduate leadership programs need to exam their programs for alignment based on the six content area categories. For example, a particular course could be heavy in teaching and learning with limited focus on vision and goals. As a result, a course that only contains teaching and learning standards could also embed standards that focus on vision and goals, and thus crosscut two content area categories into one course. This has the potential to make the course more effective and more efficient.

In conclusion, the findings of the current study indicate strong relationships between many content area categories. Future professors and instructors may desire to analyze their own graduate leadership standards against the standards for two reasons: 1) to ensure that content area categories crosscut multiple courses to improve the efficiency and effectiveness of the graduate leadership program 2) to ensure students are successful on the *Praxis* for educational leadership: administration and supervision.

# References

Beyer, B. (2009). An Imperative for Leadership Preparation Programs: Preparing Future Leaders to Meet the Needs of Students, Schools, and Communities. *International Journal of Educational Leadership Preparation*, *4*(1). Retrieved from https://eric.ed.gov/?id=EJ1068486

Bon, S. C. (2012). Examining the crossroads of law, ethics, and education leadership. *Journal of School Leadership, 22*(2), 285.

Brazer, S. D., & Bauer, S. C. (2013). Preparing Instructional Leaders: A Model. *Educational Administration Quarterly*, *49*(4), 645–684. https://doi.org/10.1177/0013161X13478977

Carver, C. L. (2012). Developing Leadership Content Knowledge during School Leader Preparation. *International Journal of Educational Leadership Preparation*, *7*(3). Retrieved from https://eric.ed.gov/?id=EJ997465

Council of Chief State School Officers. (1996). *Interstate school leaders licensure consortium standards for school leaders*. Retrieved from http://www.soe.unc.edu/academics/requirements/standards/ISLLC_Standards.pdf

Council of Chief State School Officers. (2008a). *Educational leadership policy standards: isllc 2008*. Retrieved from http://www.wallacefoundation.org/knowledge-center/Documents/Educational-Leadership-Policy-Standards-ISLLC-2008.pdf

Council of Chief State School Officers. (2008b). *Performance expectations and indicators for education leaders*. Retrieved from http://npbea.org/wp-content/uploads/2017/05/Peformance_Indicators_2008.pdf

DuFour, R., & Marzano, R. J. (2009). High-leverage strategies for principal leadership. *Educational Leadership*, (5), 62.

Epstein, J. L., Galindo, C. L., & Sheldon, S. B. (2011). Levels of leadership: Effects of district and school leaders on the quality of school programs of family and community involvement. *Educational Administration Quarterly 47*(3), 462–495. https://doi.org/10.1177/0013161X10396929.

ETS Praxis. (2017). *Praxis: State Requirements*. Retrieved from https://www.ets.org/praxis/states

Futrell, M. H. (2011). Redefining Leadership: Working Together to Change America's Education Paradigm and Prepare for Tomorrow's World. *Journal of School Leadership*, *21*(4), 635.

Graczewski, C., Knudson, J., & Holtzman, D. J. (2009). Instructional Leadership in Practice: What Does It Look Like, and What Influence Does It Have? *Journal of Education for Students Placed at Risk (JESPAR)*, *14*(1), 72–96. https://doi.org/10.1080/10824660802715460

Gurley, K. D., Peters G. B., Collins L., & Fifolt, M. (2015). Mission, vision, values, and goals: An exploration of key organizational statements and daily practice in schools. *Journal of Educational Change; Dordrecht, 16*(2), 217–242. http://dx.doi.org/10.1007/s10833-014-9229-x.

Johnson, J. F., Jr., & Uline, C. L. (2005). Preparing Educational Leaders to Close Achievement Gaps. *Theory Into Practice*, *44*(1), 45–52.

Kladifko, R. E. (2013). Practical School Community Partnerships Leading to Successful Educational Leaders. *Educational Leadership and Administration: Teaching and Program Development*, *24*, 54–61.

Leedy, P. D., & Ormrod, J. E. (2001). *Practical research: Planning and Design*. Merrill Prentice Hall, 2001.

Miller, P., Pavlakis, A., Lac, V., & Hoffman, D. (2014). Responding to poverty and its complex challenges: The importance of policy fluency for educational leaders. *Theory Into Practice, 53*(2), 131–138. https://doi.org/10.1080/00405841.2014.887888

Robinson, D. V. (2017). Collaborative partnerships between high poverty and minority parents and educational leaders: Reversing the school and home divide. *Journal for Multicultural Education; Bingley, 11*(1), 2–18.

Stein, M. K., & Nelson, B. S. (2003) Leadership content knowledge. *Educational Evaluation and Policy Analysis 25*(3), 423–448.

Teasley, M. L. (2017). Organizational Culture and Schools: A Call for Leadership and Collaboration. *Children & Schools, 39*(1), 3–6. https://doi.org/10.1093/cs/cdw048

Tobin, J. (2014). Management and Leadership Issues for School Building Leaders. *International Journal of Educational Leadership Preparation, 9*(1). Retrieved from https://eric.ed.gov/?id=EJ1024110

# An Examination of the Effect of the University of Michigan Cases on the Complexion of Higher Education

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**Abstract**

Some of the nation's most prominent colleges and universities have abandoned their affirmative action-based admission policies and adopted race-neutral affirmative action as a result of two lawsuits against the University of Michigan, which threaten the availability of undergraduate and graduate program access to applicants of color. In this article, an overview *Grutter v. Bollinger* and *Gratz v. Bollinger* is provided. Futhermore, the authors identify how *Grutter v. Bollinger* has specifically impacted other institutions.

*Keywords: affirmative action, admissions policy, equity, equality, higher education*

In 1996, Barbara Grutter, a Caucasian Michigan resident with a 161 LSAT score and 3.8 GPA, was denied admission to the University of Michigan's (U of M) Law School. Grutter argued her denial was the result of affirmative action based on an admissions criteria favoring minority applicants, and in response, she filed a lawsuit against the University, the Regents of the University of Michigan, and U of M leaders in position at the time of her rejection: Lee Bollinger, the University president; Jeffrey Lehman, the dean of the law school; and Dennis Shields, the director of admissions. *Grutter v. Bollinger* (539 U.S. 306 (2003) was filed on the grounds of race discrimination in violation of the Fourteenth Amendment, Title VI of the Civil Rights Act of 1964, and 42 U.S.C. § 1981.

At the District level, the Court determined the U of M's Law School use of race for admission was unlawful. The District Court decision was subsequently overturned by the Sixth Circuit Court basing their decision on *Regents of the University of California v. Bakke* (1998) and considered the topic of race classification in assisting minorities in university admission. The Supreme Court affirmed the Sixth Circuit Court's reversal, thereby endorsing the University's admission policy.

To many, this was the beginning of the end of affirmative action. Affirmative action originated with an Executive Order signed by President John F. Kennedy in 1961; these policies were established to increase racial diversity and reduce instances of discrimination, in general, and to explicitly encourage colleges and universities to use an applicant's race as a factor for admissions. Though once understood as a necessity to promote racial diversity on campus, affirmative action is currently perpetuated as an unpopular policy facing increasing enmity in courts of law.

In its place, courts and commentators have been promoting an alternative form of affirmative action that is commonly called "race-neutral affirmative action." The race-neutral affirmative action seeks to change the racial composition of those who benefit from education, by not granting preferences based on race, but by allowing preferences based on characteristics that are correlated with race (Fitzpatrick, 2014). In Florida and Texas, for example, the flagship universities admit any in-state applicant who graduates in the top ten percent of their class (Fitzpatrick, 2014).

Moreover, the Trump Administration has recently launched a project to identify and pursue litigation against universities with affirmative action policies that are perceived to be discriminatory against Whites, in both undergraduate and graduate admissions (Savage, 2017). Thus, the outlook does not appear particularly bright for affirmative action programs in the United States, that grant preferences based on race to blacks, African Americans, Hispanics, in regards to university admissions (Fitzpatrick, 2014).

**The Problem**

Although students of color have made significant college completion gains from the 1980s to 1990s (Knight, Davenport, Green-Powell, & Hinton, 2014), African-American, American Indians, and Hispanic students continue to be less likely to complete college than white and Asian-American students (Tate, 2017). The variation in college graduation rates is reflected in Figure 1.
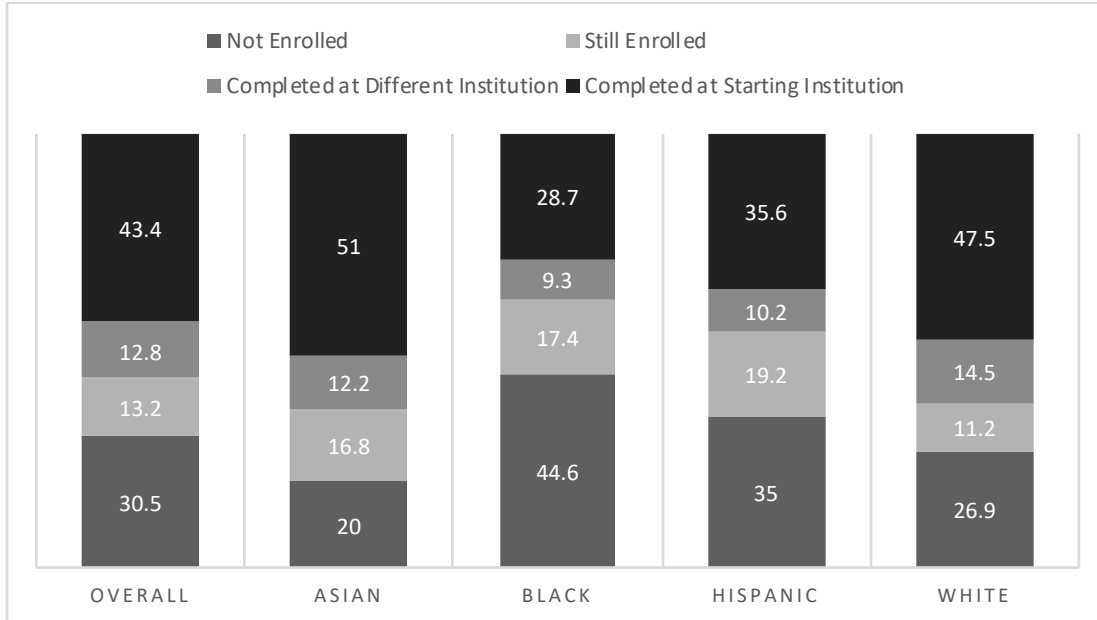
*Figure 1.* College Graduation Rates by Race
*Note.* Reprint from *Graduation Rates and Race.* Retrieved from
https://www.insidehighered.com/news/2017/04/26/college-completion-rates-vary-race-and-ethnicity-report-finds Copyright 2017 by E. Tate.

Chief Justice John G. Roberts Jr. says that "the way to stop discrimination on the basis of race is to stop discriminating on the basis of race "(Turner, 2015). However, any threat to affirmative action policies promotes a more significant potential for continued college graduation disparity between Whites, Asians, and most people of color. Further, Justice Sonia Sotomayor in her dissent in *Schuette* states:

> Race matters. Race matters in part because of the long history of racial minorities being denied access to the political process. ... Race also matters because of persistent racial inequality in society — inequality that cannot be ignored and that has produced stark socioeconomic disparities…."And race matters for reasons that really are only skin deep, that cannot be discussed any other way, and that cannot be wished away. Race matters to a young man's view of society when he spends his teenage years watching others tense up as he passes, no matter the neighborhood where he grew up. Race matters to a young woman's sense of self when she states her hometown, and then is pressed, 'No, where are you really from?', regardless of how many generations her family has been in the country. Race matters to a young person addressed by a stranger in a foreign language, which he does not understand because only English was spoken at home. Race matters because of the slights, the snickers, the silent judgments that reinforce that most crippling of thoughts: 'I do not belong here. (Lithwick D. 2014)

**The Michigan Cases Discussed**

In this article, we continue our focus on *Grutter v. Bollinger,* as well as an examination of *Gratz v. Bollinger,* another University of Michigan affirmative action case. In *Gratz*, the

university's undergraduate admissions program, which awarded underrepresented minorities bonus points on an admissions scale, was struck down as unconstitutional. In *Grutter*, a policy of conferring a favor on individual minority applicants to the university's law school was upheld.

### *Grutter v. Bollinger*

The affirmative action admissions policy of the University of Michigan Law School was the subject of the United State Supreme Court case of *Grutter v. Bollinger* (539 U.S. 306, (2003). At the heart of this case, was the Law School's admission criteria to enhance the diversity of its student body. The goal of this criteria was to attain a "critical mass" of underrepresented minority students by utilizing race as a "plus factor" in admission. The potential rulings on this matter threaten to reverse the forty-year-old Supreme Court's decision *in Regents of the University of California v. Bakke* (1978). Because of the aforementioned case, most colleges and universities continued to follow its guidelines, arguing that student body diversity is a critical element in achieving the institution's mission and that the consideration of race/ethnicity in admissions is needed to achieve that diversity. In the *Grutter* decision, the United States Supreme Court found that the Michigan law school's admission policy fulfilled the requirements of the Equal Protection Clause. On June 23, 2003, the United States Supreme Court declared in a 5-4, a decision that the University of Michigan' racial preferences were legal. Thus, the Grutter decision underscored the importance and legal viability of the diversity rationale for affirmative action in college and university admission. (Boykin & Palmer, 2016)

The *Grutter* majority held that "the Law School had a compelling interest in attaining a diverse student body" and that the Law School's plan was closely tailored to that end, but that the Law School's program had to have a "logical endpoint," probably in about 25 years (539 U.S. 306 (2003). In November of 2006, however, succeeding the *Grutter* decision, a majority of voting Michiganders (58%), apparently disagreeing with the Court majority, passed a referendum prohibiting state-education affirmative action, essentially nullifying the consequence of *Grutter* in Michigan (*Schuette v. Coalition to Defend Affirmative Action*, 2014).

### *Gratz v. Bollinger*

The Court on that same day reversed another U of M policy decision. This case concerned the admission policy for undergraduates. Specifically, in 1998, the University of Michigan Office of Undergraduate Admissions enacted a point-based system admissions policy (*Gratz v. Bollinger,* 2003). Students who earned 100 out of 150 possible points were awarded admission. The criteria used to evaluate student applicants so that can thereby gain points consist of such things as (a) high school grades, (b) standardized test scores, (c) high school quality, (d) the strength of high school curriculum, (d) in-state residency, (e) alumni relationships, (f) a personal essay, (g) personal achievement or leadership, and (h) membership in an "underrepresented" racial or ethnic minority group. In this system, underrepresented groups, such as African Americans, Hispanics and Native Americans received an automatic 20 points towards the 100 points needed for undergraduate admission purposes based upon their race.

In both the fall of 1995 and 1997, two white applicants who were declined admission to the college (*Gratz v. Bollinger*, 2003). In October 1997, the two applicants responded by filing a cause of action for discrimination by the University in the United States District Court for the Eastern District of Michigan. They requested a class action suit against the university, the college,

and each of the people who served as president of the University when one of the applicants sought admission.  The lawsuit alleged that the University's utilization of racial partiality violated the Equal Protection Clause of the Federal Constitution's Fourteenth Amendment.  The case also claimed that this was a violation of federal statutes including a provision of Title VI of the Civil Rights Act of 1964 (42 [***258] USCS §2000d) and 42 USCS § 1981. Also, their proposed resolution included declaratory and injunctive relief, compensatory and punitive damages, and an order instructing the college to admit the later applicant as a transfer student.  The District Court (1) permitted the applicants' class certification, (2) formulated the class, and  (3) bifurcated the proceedings into a liability phase and a damages phase (*Gratz v. Bollinger,* 2003).

The liability phase took place first.  The District Court resolved that the current admission policy was strictly customized to create a diverse student body, as well as, a racially and ethnically diverse community and granted the defendants' summary judgment. The District Court found that the University of Michigan policy, from 1995 through 1998, worked as the functional equivalent of a quota system and granted the plaintiffs summary judgment as to those years (122 F Supp 2d 811).  The interlocutory appeals in the case at hand were undecided in the United States Court of Appeals for the Sixth Circuit. The Court of Appeals in *Grutter v Bollinger* (1) supported the race-conscious admissions policy for the University of Michigan's Law School (288 F3d 732), and (2) the United States Supreme Court granted certiorari in both the *Grutter* and present case. Therefore, in *Gratz v. Bollinger* and *Grutter v. Bollinger*, the U.S. Supreme Court, affirmed that race-based affirmative action policies were not a violation of the Equal Protection Clause of the Fourteenth Amendment and that such policies survive strict scrutiny because obtaining a diverse student body is a compelling purpose for establishing such policy.

## Higher Education Impact

The significance of *Grutter v. Bollinger* on higher education has been extensive.  While some universities have disregarded the "U.S. Supreme Court's reprimand to contemplate other alternatives before utilizing race-conscious admissions policies seriously" (Schmidt, 2008, p. A15), others have persisted in using race in admissions policies (Lyn, 2008).  The importance of the case has been researched widely with some research proposing that *Grutter v. Bollinger* has led to a reduction in diversity in graduate programs (Schmidta, 2010).  Other research notes that the significance of a varied student body has a very limited impact long-term on student learning (Schmidtb 2010). Research indicates that some universities have been resourceful in preserving or proliferating diversity in their educational programs (Kahlenberg, 2010).  While there are varied viewpoints on the impact *of Grutter v. Bollinger*, the importance of *Grutter v. Bollinger* on higher education can be found in the changes, policies, and responses of many institutions of higher education.   Some institutions have reacted to the *Gutter v. Bollinger* ruling with more diversification of initiatives, and others have responded by eliminating race-based admissions policies.  The following is an analysis of a sampling of the responses to *Grutter v. Bollinger* from the academic, the public, and state legislatures.

### Pennsylvania State University

Penn State established its responsibility to diversity utilizing the *Grutter v. Bollinger* case as a declaration of its policies associated with diversity.  As noted by President Spanier in the institution's 2004 – 2009 Framework to Foster Diversity plan, "The Supreme Court has recognized

(in *Grutter v. Bollinger*) that racial diversity is a captivating educational purpose…The Supreme Court rulings in the Michigan cases guarantee Penn State's strategy of inclusiveness" (University, 2004, Introduction). In the framework, the institution conveyed its intentions to enhance diversity in the areas of 1) Campus Climate and Intergroup Relations, 2) Access and Success, 3) Education and Scholarship, and 4) Institutional Viability and Vitality (Pennsylvania State University, 2004). In feedback to *Grutter v. Bollinger*, Penn State answered that as the University wanted to "expand their attentiveness in not only enlisting and preserving a diverse student body but also in improving a supportive and inclusive climate" (Pennsylvania University, 2004, p.1, Introduction).

## University of Maryland

Long before the *Grutter v. Bollinger* adjudication, the University of Maryland had to handle resistance to its race-based policies associated with admissions and financial aid. In 1991, a pupil at the University of Maryland registered a discrimination lawsuit expressing that the University's Banneker Scholarship (granted only to African American pupils) was discriminatory and illegal (Alger, 2003). The Court decided that the University's Banneker Scholarship was "not closely customized to remediate the problems distinguished by the University" (Alger, 2003). The University revamped its policy, and the prevailing Banneker Scholarship is available to all freshman entering the Honors College at the University (Maryland, 2011). After *Grutter v. Bollinger*, the institution could have disputed the earlier judgment, but to date, the Banneker Scholarship remains available to all students instead of just African American students as the scholarship was initially intended (Maryland, 2011).

## University of Georgia

The University of Georgia responded to *Grutter v. Bollinger* by remedying a campus-wide inquiry of its policies associated with admissions and race. In doing so, the institution outlined a diversity statement, which contains language citing the utilization of race as a non-primary disadvantage in admissions (Lyn, 2008). When the institution made its intentions known to the Georgia Attorney General's Office, the Attorney General answered with a memorandum describing the consequences of the University's conclusion along with a recommendation to progress with discretion (Lyn, 2008). As the University was constructing in answer to the Attorney General's considerations, the President of the University decided to terminate the policy of accommodating race in the admissions process (Lyn, 2008). President Adams noted that the cost to guard against lawsuits removed resources from the same students that they were attempting to assist.

## Other Reactions

According to the Pew Research Center, eight states have banned affirmative action in college admissions: Arizona, California, Colorado, Florida, Michigan, Nebraska, New Hampshire, and Oklahoma (see Figure 2). In Florida, the consideration of race is banned in admissions at public universities and in state employment. However, Florida has also enacted a law requiring the development of affirmative action plans by state agencies (Ballotpedia, 2017) Also, 28 states require affirmative action plans in either public employment or apprenticeships. Affirmative action programs that grant racial preferences have come under scrutiny in the courts for potentially

violating the Equal Protection Clause of the Fourteenth Amendment and Title VII of the Civil Rights Act. Institutions in those states have tried to increase diversity by examining applicants' socioeconomic class, accepting more community college transfer students and offering more financial aid (DeSilver, 2014).

**Affirmative Action Bans in the U.S.**

| YEAR | STATE | METHOD |
|---|---|---|
| 2012 | **Oklahoma** | Legislatively referred constitutional amendment |
| 2011 | **New Hampshire** | Statute |
| 2010 | **Arizona** | Initiative constitutional amendment |
| 2008 | **Colorado** | *Failed initiative constitutional amendment* |
| 2008 | **Nebraska** | Initiative constitutional amendment |
| 2006 | **Michigan** | Initiative constitutional amendment |
| 1999 | **Florida** | Executive order by governor |
| 1998 | **Washington** | Initiative statute |
| 1996 | **California** | Initiative constitutional amendment |

*Figure 2.* Affirmative Action Bans in the U.S

*Note.* Reprint from *Supreme Court says states can ban affirmative action; 8 already have* Retrieved from http://www.pewresearch.org/fact-tank/2014/04/22/supreme-court-says-states-can-ban-affirmative-action-8-already-have/ Copyright 2014 by Pew Center in an article by Drew Desilver.

In Texas, California, and Florida, percentage plans, admitting a certain percent of the highest performing graduates of each high school to state public universities, emerged in response to lawsuits, legislation, and public opinion against race-conscious affirmative action (Knight et al., 2014). However, eliminating race-preference affirmative action programs in higher education, and adopting these plans has had a negative impact on the previous population that affirmative action served--African American, Hispanic, and Native American enrollment in three of this nation's most populous states. For example, in Texas, although minority admission rates have increased at some schools, they have declined overall at the top tier Texas law and medical schools (Knight et al., 2014). California in 1998, banned Affirmative Action in higher education and when it did, African American and Hispanic enrollment at the University of California, Berkeley fell from 24% to just 13%. Today, over half of college-age Californians are black or, but only 15% of Berkeley's freshmen belong to either race (Chalabi, (2017).

The Michigan Civil Rights Initiative (MCRI), or Proposal 2, a ballot initiative in Michigan passed into constitutional law by a 58% to 42% margin on November 7, 2006, dimming the prospects of the diversity of higher education in Michigan, as well as across the country (Lewin, 2006). Although three Michigan universities and an advocacy group legally opposed Proposition 2, the Proposal became law on December 22, 2006. In 2014, The U.S. Supreme Court upheld Michigan's controversial ban on affirmative action in public college admissions (*Schuette v. Coalition to Defend Affirmative Action*, 2014).

# Conclusion

According to a *New York Times* analysis after decades of affirmative action, African American and Hispanic students are less likely to attend this nation's top colleges and universities than they were 35 years ago (Ashkenas, Park, Pearce, 2017). In fact, the share of African American first-year students at elite schools is virtually unchanged since 1980. African American students are just 6 percent of freshmen, but 15 percent of college-age Americans. Currently, more Hispanics are attending elite schools, but the increase has not kept up with the growth of young Hispanics in the United States.

The data from the Perspectives on Diversity survey collected at the University of Michigan Law School in *Gutter* and expanded by several empirical research studies at other law schools indicate the need of—and current lack of—diversity discussions in the university setting (Deo, 2011). Many believe that the lack of diversity on top trier campuses has resulted in increased racial incidents across America. For example, according to *Atlantic* magazine, in 2015 at The University of Virginia in Charlottesville, the state's premier institution of higher education (Voght, 2017) African American picketed to call attention to racism and the challenges of black student life. In that same year, The University of Missouri, the president, and chancellor resigned amid protests over the school's handling of racism on campus. Students also marched at the University of California, Los Angeles campus, because, at a Kayne West theme fraternity party, white fraternity members wore blackface. Across town at the University of Southern California, student leaders were demanding action after the undergraduate Indian-American student body president, was accosted with a racial slur by another student who threw a drink at her. Most recently, Iowa's black college students were the subject of a study where they stated they did not feel welcome on their campuses and in which racial hostility was confirmed.

In any event, diversity is a source of opportunity. In a community where people are unified on the basis of shared values and meanings, there is a propensity to develop a commitment to receptive attention and a willingness to respond to the legitimate needs all its members. They (members of the community) draw on a collective to do what they cannot do alone. Diversity within the university community is a valuable educational goal for all campuses and all students. However, the fate of Affirmative Action is now in the hands of the Trump Administration and its Supreme Court nominee.

# References

Alger, J. (2003). *Gratz/Grutter and beyond. The Diversity Leadership Challenge*. Retrieved from http://www.vpcomm.umich.edu/admissions/overview/challenge.html

Anderson, M. (2017, Oct 24). *How Campus Racism Could Affect Black Students' College Enrollment*. Retrieved from https://www.huffingtonpost.com/.../how-campus-racism-could-affect-black-students-c.

Ashkenas, J., Park, H., & Pearce, A. (2017). *Even with affirmative action, Blacks, and Hispanics are more underrepresented at top colleges than 35 years ago*. Retrieved from https://www.nytimes.com/interactive/2017/08/24/us/affirmative-action.html

Public Policy in Florida - *Ballotpedia*. (n.d.). Retrieved from https://ballotpedia.org/Public_policy_in_Florida

Boykin, T., & Palmer, R. (2016). Examining the paradox between dismantling de jure segregation and affirmative action: Implications from contemporary higher education case law. *The Journal of Negro Education, 85*(2), 114.

Chalabi, M. (2017). *The impact of affirmative action at the University of California in one graphic*. Retrieved from https://www.theguardian.com/world/2017/aug/04/affirmative-action-california-black-hispanic-students

Chronicle of Higher Education. Retrieved from http://chronicle.com.ezproxy2.library.drexel.edu/article/New-Research-Complicates/63787/

Deo, M.E. (2011). The Promise of Grutter: Diverse Interactions at the University of Michigan Law School. *Michigan Journal of Race and Law., 17* Mich. J. Race & L. 63 (2011).

DeSilver, Drew (2014). *Supreme Court says states can ban affirmative action; 8 already have* Retrieved from http://www.pewresearch.org/fact-tank/2014/04/22/supreme-court-says-states-can-ban-affirmative-action-8-already-have/

Fitzpatrick, B.T. (2014, April 18). *Is the future of affirmative action race-neutral? A Nation of Widening Opportunities: The Civil Rights Act at Fifty*, Samuel Bagenstos, and Ellen Katz, eds., University of Michigan Press, 2014, Forthcoming; Vanderbilt Public Law Research Paper No. 14-11. Available at SSRN: https://ssrn.com/abstract=2426656

Gratz v. Bollinger, 539 244 (2003)

Grutter v. Bollinger, 123 S. Ct. 2325 (2003)

How Four Higher Education Entities Have Dealt With The ... (n.d.). Retrieved from https://sites.google.com/site

Kahlenberg, R. (2010). *Colorado's affirmative-action experiment*. Chronicle of Higher Education. Retrieved by https://www.luminafoundation.org/files/resources/future-of-affirmative-action.pdf

Knight, L., Davenport, E.K. Green-Powell, P. A., Hinton, A. A. (2014). An analysis of historically Black colleges and universities student retention attrition efforts. *International Journal of Humanities Social Sciences and Education, 1*(8), 123-138.

Lyn, R. S. (2008). *A critical analysis of the University of Georgia's response to the US Supreme Court decisions in Grutter v. Bollinger (2003) and Gratz et al. v. Bollinger (2003)*. Dissertation/Thesis.

Lewin, T. (2006, Nov 9). *Michigan Rejects Affirmative Action and Backers Sue*. Retrieved from https://www.nytimes.com/2006/11/09/us/politics/09michigan.html

Lithwick, D. (2014). What we talk about when we talk about talking about race. Retrieved from http://www.slate.com/articles/news_and_politics/jurisprudence/2014/04/race_and_the_supreme_court_what_the_schuette_decision_reveals_about_how.html

Maryland, U. O. (2011). Banner/Key Scholars Retrieved July 10, 2011, from http://www.bannekerkey.umd.edu/

Pennsylvania State University. (2004). *A framework to foster diversity at Penn State 2004–09*. Retrieved from http://www.equity.psu.edu/framework/archive/2004_09/intro.asp

Regents of Univ. of California v. Bakke, 438 U.S. 265 (1978)

Savage, C. (2017). *Justice Department to take on affirmative action in college admissions*. Retrieved from https://www.nytimes.com/2017/08/01/us/politics/trump-affirmative-action-universities.html

Schmidt, P. (2008). *Researchers bemoan lack of progress in closing education gaps between the races.* Chronicle of Higher Education.

Schmidt, P. (2010a). *Graduate programs grow less diverse without racial preferences, research shows.* Chronicle of Higher Education. Retrieved from http://chronicle.com.ezproxy2.library.drexel.edu/article/Graduate-Programs-Grow-Less/125459/

Schmidt, P. (2010b). *New research complicates discussions of campus diversity—in a good way*.

Schuette v. Coalition to Defend Affirmative Action (BAMN), 134 S.Ct. 1623 (2014)

Tate, E. (2017). *Graduation rates and race*. Retrieved from https://www.insidehighered.com/news/2017/04/26/college-completion-rates-race-vary-race-and-ethnicity-report-finds.

Turner. R. (2015, April). The Way to Stop Discrimination on the Basis of Race. *Stanford Journal of Civil Rights and Civil Liberties, 24*(2015). Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2592570

Vought, K. (2017, Aug 23). *UVA's Troubling Past* - The Atlantic. Retrieved from https://www.theatlantic.com/education/archive/2017/08/the...troubling-past/537615/

# Ready, Set, Grow! Preparing and Equipping the Rural School Leader for Success

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## Abstract

Rural instructional leaders require specialized training and ongoing support to effectively navigate within their local and unique contexts. A review of the literature written predominantly between 2007 and 2017 was conducted to explore effective practices in developing and supporting rural instructional leaders. Approximately 32 studies focused on the rural instructional leader were selected and analyzed for common themes. As a result, a tripartite framework encompassing preparation, induction, and ongoing professional development evolved. The literature review revealed an education preparation curriculum developed in a collaborative effort between the university and a partnering district(s) as the foundation needed for building an effectual rural instructional leader. These collaborative partnerships were also shown to be vital for providing purposeful induction to the novice instructional leader helping bridge the theory and practice gap and resulting in increasing the leader's confidence, efficacy, and instructional leadership skills. Additional support of in-service instructional leaders as they seek to improve student performance was also highlighted as a professional development need in the literature. Just as a cross country runner runs the race course, the rural school leader must "get ready" by completing a relevant education preparation program, "get set" by participating in a quality mentoring program, and "go" or in this case "grow" through a journey of life-long learning with ongoing, meaningful professional development. The tripartite framework for rural instructional leader development presented offers a guide for universities and rural school districts in creating focused preparation, mentoring, and ongoing support for the rural instructional leader.

*Keywords:* rural, leader, preparation, mentoring, professional development

To meet the challenges of their complex courses, cross-country runners prepare differently than those who run in track and road races; therefore, they require specialized support and ongoing training for continued effectiveness. Similarly, rural school leaders must have specialized preparation to meet the unique challenges they face and then they need focused ongoing, professional development to stay the course. The purpose of this paper is to describe and discuss the current research on preparation, induction, and ongoing professional development focusing on the impact on novice instructional leaders in a rural setting.

## Research Design and Methodology

A systematic literature review was conducted to examine the practices in place to prepare and support instructional leaders to thrive in a rural environment. The purpose of the systematic literature review is to objectively report on current knowledge on a topic (Green, Johnson, & Adams, 2006), and "uses a specific methodology to produce a synthesis of available evidence in answer to a focused research question" (Bearman et al., 2012, p. 627). Hart (2001) further explained that a systematic literature review is especially useful for a small number of studies.

The study began by performing a preliminary search of the current literature and an attempt was made to find all primary research studies, focusing on peer-reviewed journal articles. The review was delimited to work published predominantly in the last 10 years (2007-2017). The primary keywords that were used in the search were: rural, leader, preparation, mentoring, and professional development. From this review, a tripartite framework encompassing preparation, induction, and ongoing professional development evolved.

## Preparation of the Rural Instructional Leader

Cross-country runners spend years receiving precision instruction and applying the techniques in a supervised setting. In the same manner, educational preparation lays the foundation upon which an instructional leader begins or "gets ready" for the journey to school leadership. The principal has an impact on the effectiveness of the school and likewise, student achievement (Wood, Finch, & Mirecki, 2013); therefore, it is vital that preparation programs impart the knowledge and skills needed by leadership candidates as they begin the race toward effective school leadership. Moreover, the rural school instructional leader must be uniquely prepared to face the contextual nuances and challenges specifically found in the rural setting. In what follows, aspects of leadership preparation elucidated from a review of the literature on rural leader preparation are discussed.

### University-District Partnerships

Collaborative relationships between university educational preparation programs and rural district partners have the potential to create and support effective leaders equipped with the knowledge and skills to address the academic, social, and cultural needs of the rural school district. Challenges such as high poverty, high teacher turnover, low school funding, and low principal salaries make recruitment to geographically isolated rural schools difficult. The "grow your own" philosophy, where future instructional leaders are selected by the district for leadership preparation programs, ensures a sustainable pipeline of instructional leaders vested in the quality of the school and community (Sanzo, Myran & Clayton, 2011; Versland, 2013).

**Authentic field-based experiences.** University-district partnerships offer candidates opportunities for authentic, field-based learning experiences to better prepare them for the challenges and opportunities of the rural school. Researchers have shown that course work not taught in isolation, but rather in conjunction with authentic field experiences helps bridge the gap between theoretical concepts and practical applications (Brown, 2016; Myran, Sanzo, & Clayton, 2011; Sanzo, et al., 2011; Versland, 2013;). Field-based experiences assist an instructional leader candidate in the development and envisioning of his/her leadership style and its effectiveness in a rural setting (Parson, Hunter, & Kallio, 2016). Effective internships collaboratively designed (Myran, et al., 2011) to furnish a holistic picture of leadership in the rural school (Sanzo, et al., 2011) and to provide experience across all grade levels as well as central office (Griffin, Taylor, Varner, & White, 2012) prepare the future leader to meet the challenges of leading a rural school.

**Mentoring.** Collaborative partnerships afford the instructional leader candidate the opportunity for mentoring and professional development experiences that otherwise may not exist. Mentoring by established in-service district administrators is effective in increasing the "grow your own" candidate's leadership self-efficacy (Griffin, et al., 2012; Versland, 2013) and offers benefits such as modeling of day to day activities, data gathering, and decision-making in the rural school atmosphere (Brown, 2016; Dodson, 2014). Furthermore, candidates involved in strategic planning and delivering district professional development gain first-hand knowledge of the rural district's needs and experience as instructional leaders (Myran, et al., 2011). The partnership benefits not only the university, but also the rural district partners. Universities provide training in instructional leadership theory for district administrators serving as mentors and in turn, the district mentor provides mentees with first hand practical knowledge and skills, painting a realistic picture of rural school leadership (Sanzo, et al., 2011).

**Challenges of partnerships.** The current literature reviewed also comprised studies highlighting the negative side to university-district partnerships (Browne-Ferrigno, 2011; VanTuyle, & Reeves, 2014). For some rural districts, forming partnerships adds an undue financial burden to the already underfunded rural K12 educational system. The geographic distance between the rural district and the nearest university is one concern due to the increased travel costs and release time required for travel between the university and rural district. Using district mentors has been postulated as an area of inequity as well. Some concerns surrounding mentoring instructional leader candidates lie in potential inequalities in mentoring abilities and lack of time on behalf of the district administrator. However, most research indicates that mentoring during the educational preparation program is beneficial (Dodson, 2014; Griffin, et al., 2012; Sanzo, et al., 2011; Versland, 2013). Collectively, these concerns raise the need for future research involving online and onsite in-district course offerings to reduce the cost of travel and time as well as effective mentoring strategies to support district administrators as candidate mentors.

## Preparation Programs

Effective preparation programs need to not only be comprehensive in their coverage of theory, knowledge, and skills; but also, accessible to potential candidates for rural school leadership positions. Geographic isolation of rural schools often prohibits candidates traveling to universities due to both the financial cost as well as the time commitment. Cray and Millen (2010) identified the in-district university cohort program as the preferred delivery method. In this method the principal candidates come together at a site within the district and instruction is delivered face-to-face or online by university instructors.

**Recruitment and selection of cohorts.** Wood, et al., (2013) recognized "grow your own" initiatives as the top method for recruiting principals to isolated rural school districts. However, due to limited experience and lack of a variety of instructional leader role models, "grow your own" candidates may lack a realistic view of the role of an instructional leader and/or be deficient in leadership theory. This shortfall in theoretical foundations and narrow vision of what an instructional leader is or does in a rural school negatively impacts leadership self-efficacy (Versland, 2013). To address these deficits and recruit highly qualified instructional leadership candidates, preparation programs need a rigorous application and selection process which includes not only candidate's educational accomplishments, but also, an interview component to ascertain the candidate's core value/beliefs (Brown, 2016). Preparation programs which employ a cohort model for acceptance and matriculation provide a trusting environment which promotes the development of lasting relationships and ensures a regional professional learning community for continued support (Brown, 2016; Fusarelli & Militello, 2012; Griffin, et al., 2012). Recruitment of strong candidates as well as the formation of cohorts are two strategies for increasing the success of instructional leader candidates.

**Knowledge and skill needs.** Parson, et al. (2016) postulated the need for preparation programs tailored to meet the needs of the future rural instructional leader. A key area in need of attention during preparation is the multi-faceted role a rural school leader plays. Teaching principal, principal/superintendent, disciplinarian, manager, custodian, bus driver, athletic director and most importantly instructional leader are all roles that an instructional leader in a rural school may play (Lynch, 2012; Myran, et al., 2011; Parson, et al., 2016; VanTuyle, & Reeves, 2014). Other researchers identified skills such as data gathering, decision making, finance and budgeting as needed in preparation programs (Dodson, 2014). Preparing for multiple roles and leadership in a rural school environment can be a daunting task; however, a standards-based course sequence with integrated authentic rural school-based experiences in conjunction with quality mentoring provide the foundational structure for success (Carlson, 2012; Myran, et al., Parson, et al., 2016; 2011; Sanzo, et al., 2011; Versland, 2013).

## Induction for Rural Instructional Leaders

Novice instructional leaders in rural schools need additional training and support beyond their preparation program as they learn to connect knowledge to practice in the unique settings. This is similar to the cross-country runners' reliance on their coach to help maneuver through new courses even though they are physically and mentally prepared to win races. Browne-Ferrigno (2007) stated, "Successful completion of a graduate program in educational administration and passage of licensure examinations makes one eligible to serve as a principal. Becoming a successful school leader, however, requires important dispositions and skills" (p. 21). Transitioning from the preparation program to practice is overwhelming and an induction program with a mentoring component can help new leaders move past the initial challenges to have a positive impact (Augustine-Shaw, 2016; Augustine-Shaw, 2015; Browne-Ferrigno, 2007; Spiro et al., 2007; Wood, et al., 2013).

Induction and mentoring are especially important for rural instructional leaders learning to navigate within the rural culture with its distinct needs and unique perceptions of the stakeholders (Augustine-Shaw, 2016; Duncan & Stock, 2010; Preston, Jakubiec, & Kooymans, 2013). Ashton and Duncan (2012) stated that "when a new leader assumes the principal role, the combination of being both inexperienced and in a rural setting can be overwhelming" (p. 2). In order to thrive,

new rural leaders must have support (Augustine-Shaw, 2016).  The following discussion focuses on induction and mentoring of rural leaders unveiled in the review of the literature and emphasizes the value of partnerships.

**Positive Outcomes of Rural Instructional Leader Induction Partnerships**

The reviewed literature revealed there are many positive benefits of induction and mentoring for rural school leaders.  Networks and partnerships created in mentoring and coaching are vital for helping new school leaders grow and become more competent. Moreover, "the value of such networking lies as much in the awareness that they are not alone in facing difficulties and challenges as in gaining knowledge" (Duncan & Stock, 2010, pp. 306-307).  Mentoring partnerships are reciprocal in benefits to the mentor and the mentee as both report professional growth as they learned to look at their own practices with new eyes (Augustine-Shaw & Hachiya, 2017; Browne-Ferrigno, 2007; Clayton, Sanzo & Myran, 2013; Sanzo, Myran & Clayton, 2011).

Many times, rural principals feel their most important role is that of instructional leader, but this is also the area they feel least trained in and prepared to do effectively (Sanzo, et al., 2011). Sciarappa and Mason (2014) found that mentoring support provided growth in instructional leadership skills, developed trust, improved school culture, and supported the development of effective communication with staff.  Mentoring has also shown to help new rural leaders increase their confidence and efficacy as an instructional leader as well as in other areas of the principalship (Augustine-Shaw & Hchiya, 2017; Browne-Ferrigno, 2007; Clayton, Sanzo, & Myran, 2013; Duncan & Stock, 2010;).  Fusarelli and Militello (2012) reported 83% of first year principals involved in a mentoring program met or exceeded growth in high-need, Title I Schools compared to 75% of experienced principals in all other schools in the state.  The literature reviewed validated that mentoring partnerships provided professional growth of new rural instructional leaders in the areas of socialization, decision-making, communication, and management skills (Browne-Ferrigno, 2007; Duncan & Stock, 2010; Versland, 2013).  The literature highlights the effectiveness of induction and mentoring programs through district and university partnerships.

**Induction Support Through University-District Partnerships**

Preston, Jakubiec, and Kooymans (2013) conducted an extensive literature review that illuminated the importance of relationships to the rural leader's success which supports partnerships of various types.  The partnerships prominent in the literature reviewed on rural induction programs were university-district partnerships that contained a purposeful mentoring component, which Versland (2013) argued is vital for supporting new rural leaders.  The university and district partnerships offer more focused and intentional induction programs by utilizing their combined resources including personnel and funds received from grants, foundations, state programs, and district funds to assist with providing quality mentoring (Browne-Ferrigno, 2007; Fusarelli & Militello, 2012; Hartung & Harvey, 2015).

To provide induction and mentoring that supports personal and professional growth of novice leaders in the development of the leadership skills needed in 21st Century schools, universities help keep the focus on national and state standards as well standards-based strategies, and best practice (Augustine-Shaw, 2015; Augustine-Shaw, 2016; Augustine-Shaw & Hachiya, 2017; Augustine-Shaw & Liang, 2016; Browne-Ferrigno, 2007; Clayton, Sanzo, & Myran, 2013). The university and district partnerships help ensure the rural leaders apply the knowledge gained

in preparation programs to their new practices and bridge the gap that often exists (Browne-Ferrigno, 2007; Fusarelli & Militello, 2012).  Trainings, mentoring and professional development offered through formal induction programs expand the novice leader's standards-based instructional leadership skills (Clayton, Sanzo, & Myran, 2013).

In contrast, when rural districts do not have the opportunity to partner with universities, formal induction programs that are district mandated and funded are usually not provided (Duncan & Stock, 2010).  Duncan and Stock (2010) found that while 97% of the participants surveyed considered mentoring important, only 13% of the districts were involved in formal mentoring.  Versland (2013) identified that many principals were the lone administrator in their schools and did not have an opportunity for any type of mentoring.  When districts do not provide formal induction and mentoring, rural leaders often initiate their own mentoring partnerships to get the social interaction and learning and advice needed; however, even that may not be enough and there is a great danger of failure.  One relevant study that spotlights this, even though it is over 10 years old, was conducted by Morford (2002) in Utah where he found that at the end of two years, eight of ten new principal participants left their positions because they were disillusioned and overloaded with work.  When districts partner with universities they are supporting the growth of the novice leaders and retention of quality administrators.

**Strategic mentor and mentee partnerships.**  Careful attention to matching mentors and mentees according to communication styles and responsibilities has an impact on success and satisfaction (Clayton, et al., 2013).  Mentors and mentees that were matched according to geographic location provided the best setting for sharing of skills applicable to the local setting and context of the smaller rural districts (Augustine-Shaw, 2016).  Providing opportunities for partnering with others in regional and state-wide organizations and meetings was also found to be beneficial (Augustine-Shaw & Liang, 2016).

Differentiation is also a key component of effective induction and mentoring programs.  Varying the delivery formats of induction programs supports the growth of mentees by allowing for individualization of support.  Cohorts allow the participants to progress through the program together while experiencing strategic team building in a safe learning environment and affording opportunities to expand networking (Brown-Ferrigno, 2007; Fusarelli & Militello, 2012).  Being able to have face-to-face interactions in either the mentor's or the mentee's school allowed for collaboration and individualized support opportunities (Augustine-Shaw & Liang, 2016; Sanzo, et al., 201).  Once successful partnerships are formed, the research revealed that mentors and mentees often continue their partnerships into the second year and beyond allowing for more personalized support at a deeper level.

**Enhancing partnerships with technology.** Utilizing technology as a tool in mentoring with rural leaders can be effective and efficient.  Using an electronic network with social media platforms, video conferencing, emails, etc. gives mentors and mentees opportunities to network with those in other locations, while also saving time and costs (Augustine-Shaw, 2016; Duncan & Stock, 2010; Fusarellli & Militello, 2012; Hartung & Harvey, 2015; Wood, et al., 2013).  Technology offers opportunities for leaders to experiment with technology in a safe environment and the flexibility to participate when convenient.  Online mentoring also allows for the participants to be better matched to those who have similar situations and needs in areas that may not otherwise be accessible (Augustine-Shaw, 2016; Duncan & Stock, 2010; Fusarelli & Militello, 2012; Hartung & Harvey, 2015; Wood, et al., 2013).  In evaluating a program that infused technology and mentoring, Hartung and Harvey (2015) found that most participants indicated they would continue using a social media platform in their future professional growth.  Taking

advantage of social media for access to professional development is especially beneficial to leaders who serve in rural schools.

Once rural instructional leaders have been strengthened and supported during their preparation and early years of practice through induction and mentoring, participation in continuous learning is still needed. Professional development in schools is often focused on teachers and not the leaders. Rural school leaders will have a more positive impact on student achievement and teacher development when they also focus and reflect on their own learning.

## Professional Development

Rubio (2009) stated that cross-country racing requires a runner to apply "strengths as a runner to the various courses while minimizing weaknesses" (p. 5). In much the same way, rural school leaders can minimize weaknesses and maximize strengths by participating in ongoing professional development. Salazar (2007) stated

> Leadership today requires the ability to mobilize constituents to do important but difficult work under conditions of constant change, overload, and fragmentation. This requires ongoing professional development opportunities to help principals update their leadership knowledge and skills on a continuing basis. (pp. 25-26)

To determine appropriate professional development requirements, consideration of the specialized responsibilities for rural school leaders is suggested. A review of current literature revealed both challenges faced by rural leaders as well as professional development needs and preferred modes of delivery.

### Challenges Faced by Rural School Leaders

Ewington, et al. (2008) shared research confirming a lack of study regarding small, rural schools, and the limited research that does exist has not recognized the complexity of small schools. Stewart and Matthews (2015) reported that there is also limited research on professional development for principals, and even less research on the topic for principals of small, remote, rural schools. Because these principals serve in remote, isolated locations, limited resources and limited access to colleagues are barriers to appropriate professional development. However, principals in small, rural schools frequently are in their initial principalship and note a need for assistance in "providing strong and shared leadership and using resources effectively while working collaboratively" (Ewington, et al., 2008, p. 8). While all leaders must overcome obstacles in their path to success, rural school principals face numerous unique challenges which must be addressed when designing effective professional development.

The rural school principal often wears multiple hats leaving little time for the role of instructional leader. For example, Starr and White (2008) studied small rural schools in Australia and found principals in these schools are expected to perform additional duties not required of their more urban counterparts. Rural school principals serve as teachers, receptionists, bookkeepers, and groundskeepers in addition to their leadership roles. The important role of leading instruction takes second place to more urgent demands.

Rural school principals often must utilize different types of skills, and assume diverse responsibilities in their work (Versland, 2013). Principals' efforts to set direction, develop faculty and staff, improve the organization, and manage instruction are influenced by their self-efficacy. Leader self-efficacy is critical to school success. Positive self-efficacy leads people to action,

while negative self-efficacy causes leaders self-doubt and lack of action. Negative self-efficacy inhibits the ability to set high goals, formulate collaborative relationship with peers, and address minor obstacles Because rural leaders are often the only administrator in their school, their numerous responsibilities and stressful job expectations can lead to isolation and self-doubt. (Versland, 2013). Participation in professional development increases knowledge and skills; thereby, increasing self-efficacy and positively impacting the rural leader's effectiveness.

**Professional Development Needs for Rural School Leaders**

Researchers have examined the unique professional development needs of rural school leaders (Parson, et al., 2016; Salzar, 2007). Salazar's study (2007) of principals in the United States' Northwest sought to both determine the participants' preferred mode of receiving professional development and to identify professional development needs of high school principals. The results of Salazar's survey identified principals' most important professional development needs as maintaining focus on improvement through team commitment; setting appropriate instructional direction, and communicating to effect change when indicated. The study went on to identify conferences and seminars, followed by workshops, as the most preferred delivery mode for professional development.

Additionally, Stewart and Matthews (2015) studied the perceptions of Utah rural school principals regarding their professional development needs. The researchers ascertained that small, rural school principals have specific needs relative to supervision, student behavior, and budgeting. The community connection to the school is quite strong when the community is isolated from larger populated areas Those principals in small schools located in rural areas also expressed a need for professional development in community collaboration in order to maximize the potential of the community-school relationship.

Student achievement was highlighted in a study of professional development for assistant principals in the state of Hawaii (Enomoto, 2012). Because Hawaii was on the verge of facing a serious shortage of school leaders, they worked to identify and train future leaders. Training included "five aspects: (a) content knowledge and skill development, (b) application to school standards, support, systems, (c) opportunity to network with peers and resource teachers, (d) conversations with principals, and (e) reflections for continuous learning" (p. 267). District leaders desired that school leaders have an understanding of leadership skills as well as the importance of being life-long learners.

Parson, et al.'s research focused on leadership styles needed for effective leadership (2016). The researchers noted leadership styles such as transactional, participatory, instructional, and transformative in rural principals in North Dakota. Through a review of the data gathered, little evidence was found of either participatory leadership, collective decision-making of the principal and leadership team, or transformative leadership, the principal's role in creating schools that are inclusive, diverse, and equitable. Outcomes indicated both a need for specialized training for rural principals to develop leadership styles effective in their schools and to address other areas such as equity and diversity (Parson, et al.,2016).

While the principals of small, rural schools recognize the importance of networking to enhance their own professional growth, most report that they have little, if any, time for such endeavors. Leadership placements and assignments often include extra tasks in addition to being the schools' principals. They report much on-the-job training and learning by trial and error in place of more formal professional development activities (Clarke & Stevens, 2009). Because time

is limited, rural principals often seek professional development opportunities that will benefit them as school leaders, but, more importantly, will also profit teachers and the school as a whole. Geographically isolated locations and time constraints support the need for networks or learning groups where resources to sustain continued growth and development of the rural administrator and to benefit all school stakeholders are shared.

Findings from all of the aforementioned studies provide examples of the uniqueness of the professional development needs of rural schools. There is no "one size fits all" when designing effective professional development for rural school leaders. Knowing the professional development needs and preferred modes for delivering such, is the first step in designing engaging, beneficial professional development for the rural school leader. The message is clear. More research into the professional development needs of rural school leaders is essential. Results of continued research will provide data to be studied as educators plan for imminent and future training. Empowering both current and aspiring school leaders with strategies to be successful in guiding school improvement will benefit students and communities.

## Discussion/Conclusion

The goal of cross-country training is to "learn to employ a steady effort rather than set an even pace" (Rubio, 2009, p. 1), and with the support of coaches and peers in the preparation and ongoing training, the runner is able to be successful. A similar tripartite framework for developing effective rural school leaders resulted from a comprehensive review of recent literature (see Figure 1). By receiving the proper initial training (preparation), getting support during the first experiences (induction), and then being provided with ongoing reinforcement (professional development), a rural instructional leader, like a cross-country runner, will gain the knowledge, persistence, and confidence to be successful in the journey.

Preparation is the foundation of the proposed Tripartite Continuous Growth Model. Programs intent on preparing aspiring rural instructional leaders are best developed as a collaborative effort between the university and surrounding rural districts. The university program benefits from having access to experienced rural school administrators as mentors, the district benefits from receiving instructional leaders who understand the needs of the districts, and candidates benefit from authentic leading and learning experiences on site in rural schools. Programming should include a standards-based course sequence with embedded authentic field-based experiences in a rural setting that prepares the aspiring leader to face the challenges and nuances of leadership in a rural school. The university-district partnership model for instructional leadership preparation offers the greatest opportunity for a holistic learning experience.

As in many professions, learning how to navigate in a new school leadership position requires encouragement and support from a more knowledgeable person. Research indicates that many rural school districts do not offer formal mentoring or coaching programs for school leaders in the same way they do for teachers. Quality mentoring for the new rural school leader during the first years is the second aspect of the proposed Tripartite Continuous Growth Model for the nurturing and development of effective rural school leaders. Ashton and Duncan (2012) identified that new principals can gain insight into their roles by working with a mentor and discovering skills to deal with the various situations faced daily. However, there is a lack of research to indicate how rural school districts support new leaders, especially if they are not supported through a university-district partnership. More research needs to be conducted in this area as well as how technology may be used to help alleviate the geographical isolation many rural school leaders face.

In addition, Spiro (2007) discussed the scarcity of data in regards to efficacy of mentoring new principals, specifically noting that more research needs to be conducted to determine whether mentoring fosters retention of new leaders and/or impacts the ability to lead improvement in a school. Therefore, there is a need for more research in this area to help rural districts create effective mentoring programs that are part of a comprehensive plan and are evaluated so changes can be made as needed.

Ongoing professional development completes the triadic framework of the Tripartite Continuous Growth Model, yet there is no "one size fits all model" of professional development to be implemented for rural school leaders. Because rural schools are often geographically isolated, and because schools are often small, the hurdles that must be overcome are magnified tremendously. Each community requires unique support; therefore, additional research could assist in identifying specific needs as well as effective methods of delivery. District and state leaders, along with other providers of professional development would have a clearer foundation upon which to focus.
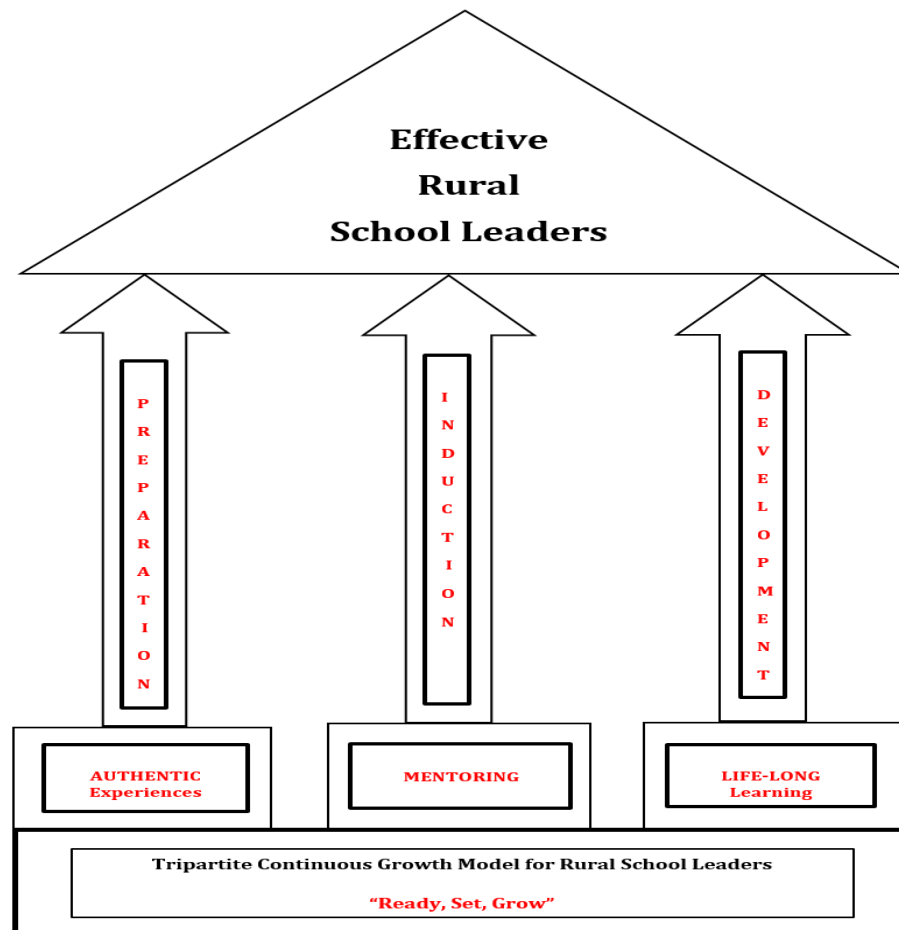


*Figure 1.* Tripartite Continuous Growth Model

**Implications**

The Tripartite Continuous Growth Model for the development of effective rural school leaders resulted from a comprehensive review of available literature on the preparation, induction,

and development of rural school leaders (see Figure 1). This model addresses the unique challenges faced by rural school leaders through preparation, induction, and continued professional development specific to the needs of the rural district. If implemented in rural areas, it is expected that new rural school leaders will be more likely to be retained as well as more effective in improving schools and student achievement; however, further study is needed to fully assess the effectiveness of the model.

# References

Ashton, B. & Duncan, H.E. (2012). A beginning rural principal's toolkit: A guide for success. *The Rural Educator, 34 (1).*

Augustine-Shaw, D. (2015). Leadership and learning: Identifying an effective design for mentoring new building leaders. *The Delta Kappa Bulletin, 81 (2),* 21-30.

Augustine-Shaw, D. (2016). Developing leadership capacity in new rural school district leaders: The Kansans Educational Leadership Institute. *The Rural Educator, 37 (1),* 1-13.

Augustine-Shaw, D., & Hachiya, R. (2017). Strengthening decision-making skills of new leader through mentoring and service. *Servant Leadership: Theory & Practice, 4 (1),* 32-52.

Augustine-Shaw, D., & Liang, J. (2016). Embracing new realities: Professional growth for new principals and mentors. *Educational Considerations, 43 (4),* 10-17. https://doi.org/10.4148/0146-9382.1016

Bearman, M., Smith, C.D., Carbone, A., Slade, S., Baik, C., Hughes-Warrington, M., & Neumann, D.L. (2012). Systematic review methodology in higher education. *Higher Education Research & Development, 31(5),* 625-640. http://dx.doi.org/10.1080/07294360.2012.702735

Brown, K. M. (2016). "Racing to the top" to prepare turnaround principals in North Carolina: Homegrown regional leadership academies. *Educational Leadership and Administration: Teaching and Program Development, 27,* 101-144.

Browne-Ferrigno, T. (2011). Mandated university-district partnerships for principal preparation: professors' perspectives on required program redesign. *Journal of School Leadership,* (5), 735.

Browne-Ferrigno, T. (2007). Developing school leaders: Practitioner growth during and advanced leadership development program for principals and administrator-trained teachers. *Journal of Research on Leadership Education, 2 (3),* 1-30.

Carlson, C. B. (2012). From partnership formation to collaboration: Developing a state mandated university-multidistrict partnership to design a PK-12 principal preparation program in a rural service area. *Planning & Changing, 43*(3/4), 363-375.

Clarke, S., & Stevens, E. (2009). Sustainable leadership in small rural schools: Selected Australian vignettes. *Journal of Educational Change, 10,* 277-293. doi:10.1007/s10833-008-9076-8

Clayton, J.K., Sanzo, K.L., & Myran, S. (2013). Understanding mentoring in leadership development: Perspectives of district administrators and aspiring leaders. *Journal of Research on Leadership Education, 8 (1),* 77-96.

Cray, M., & Millen, E. M. (2010). Rural Superintendents' perceptions of principal preparation. *Rural Educator, 31*(3), 30.

Dodson, R. L. (2014). Which field experiences best prepare future school leaders? An analysis of Kentucky's principal preparation program. *Educational Research Quarterly, 37*(4), 41-56.

Duncan, H.E. & Stock, M. J. (2010). Mentoring and coaching rural school leaders: What do they need? *Mentoring & Tutoring: Partnership in Learning, 18(3),* 293-311.http://dx.doi.10.1080/13611267.2010.492947

Enomoto, E. K. (2012). Professional development for rural school assistant principals. *Planning*

*and Changing, 43*(3/4), 260-279. Retrieved January 8, 2018.

Ewington, J., Mulford, B., Kendall, D., Edmunds, B., Kendall, L., & Silins, H. (2008). Successful school principalship in small schools. *Journal of Educational Administration*, 46(5), 545-561.

Fusarelli, B.C. & Militello, M. (2012). Racing to the top with leaders in rural, high Green, B.N., poverty schools. *Planning and Changing, 43 (1/2),* 46-56.

Green, B.N., Johnson, C.D., & Adams, A. (2006). Writing narrative literature reviews for peer-reviewed journals: Secrets of the trade. *Journal of Chiropractic Medicine, 5(3),* 101-117.

Griffin, L. L., Taylor, T. R., Varner, L. W., & White, C. L. (2012). Staying the course: A model leadership preparation program that goes the distance. *Planning and Changing*, *43*(1-2), 57-71.

Hart, C. (2001). *Doing a literature review: A comprehensive guide for the social sciences.* London: Sage Publications.

Hartung, K. & Harvey, T. (2015). Social media as a professional support system for educational leaders: Our Google+ Hangout journey. *Planning for Higher Education Journal, 43(4),* 40-47.

Lynch, J. M. (2012). Responsibilities of Today's Principal: Implications for Principal Preparation Programs and Principal Certification Policies. *Rural Special Education Quarterly*, *31*(2), 40-47.

Morford, L.M. (2002). Learning the ropes or being hung: Organizational socialization influences on new rural high school principals. Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 1-5, 2002).

Myran, S., Sanzo, K. L., & Clayton, J. (2011). Tracing the development of a rural university-district partnership: encouraging district voice and challenging assumptions leadership. *Journal of School Leadership*, (5), 684.

Parson, L., Hunter, C. A., & Kallio, B. (2016). Exploring educational leadership in rural schools. *Planning & Changing*, *47*(1/2), 63-81.

Preston, J.P., Jakubiec, B.A., & Kooymans, R. (2013). Common challenges faced by rural principals: A review of the literature. *The Rural Educator, 35(1),* 1-9.

Rubio, J. (2009). Cross-country specific training tips: Adapting normal workouts for hill and dale. *Runners World.* Retrieved from http://www.runnersworld.com/workouts/cross-country-specific-training-tips.

Salazar, P. S. (2007). The professional development needs of rural high school principals: A seven-state study. *The Rural Educator, 28*(3), 20-27.

Sanzo, K. L., Myran, S., & Clayton, J. K. (2011). Building bridges between knowledge and practice. *Journal of Educational Administration, 49*(3), 292-312. doi:http://dx.doi.org/10.1108/09578231111129073

Sciarappa, K. & Mason, C.Y. (2014). National mentoring: does it achieve its purpose? *International Journal of Mentoring and Coaching in Education, 3(1),* 51-71.

Spiro, J., Mattis, M.C., & Mitgang, L.D. (2007). *Getting principal mentoring right: Lessons from the field.* New York: Wallace Foundation. Retrieved from: http://www.wallacefoundation.org/knowledge-center/Documents/Getting-Principal-Mentoring-Right.pdf

Starr, K., & White, S. (2008). The small rural school principalship: Key challenges and cross-

school responses.  *Journal of Research in Rural Education*, 23(5).  Retrieved January 10, 2018 from http://jrre./psu.edu/articles/23-5.pdf.

Stewart, C., & Matthews, J. (2015). The lone ranger in rural education: The small rural school principal and professional development. *The Rural Educator, 36*(3), 49-60. Retrieved January 8, 2018, from http://epubs.library.msstate.edu/index.php/ruraleducator/article/view/301/322

VanTuyle, V., & Reeves, A. (2014). "Forgottonia"? The Status of Rural Schools in Illinois' Principal Preparation Reform. *International Journal of Educational Leadership Preparation*, *9*(2), 111-127.

Versland, T. M. (2013). Principal efficacy: Implications for rural 'Grow Your Own' leadership programs. *Rural Educator*, *35*(1), 13-22.

Wood, J., Finch, K., & Mirecki, R. (2013). If we get you, how can we keep you? Problems with recruiting and retaining rural administrators. *The Rural Educator, 34*(2).

# The Effective Implementation of Professional Learning Communities

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**Abstract**

During recent decades, professional learning communities (PLCs) have enhanced education from lower grade levels through college years, with many resulting benefits. PLCs provide an environment that encourages professional development, collaboration and innovation among teachers. Research suggests positive school reform occurs when teachers participate in authentic PLCs, with improved student achievement as a by-product (Wilson, 2016). The authors' review will explore the role of the school leader in creating successful professional learning communities and will explain how PLCs have improved K-12 education for both teachers and students.

*Keywords:* professional learning communities, STEM research, professional development, collaboration, student learning

When discussing professional learning communities, it is important to understand there have been several major contributors to this innovative concept reshaping the field of education and reforming the way educational services are provided to children. Richard DuFour and Mike Schmoker are authors, former educators and administrators who have defined professional learning communities and pioneered this change in the educational arena.

According to DuFour (2004), the term professional learning community has often been used to describe every conceivable alliance of individuals with a common interest in education, such as a grade-level teaching team, a school committee, a high school department, an entire school district, a state department of education, or even a national professional organization. However, DuFour noted in the creation of an authentic professional learning community, the concentrated focus is more on learning than on teaching, and he emphasized collaboration and accountability are the keys to successful PLCs (Hoaglund, Birkenfeld, & Box, 2014).

Professional learning communities were further defined (Hoaglund et al., 2014) as a group of committed educators working collaboratively in an ongoing process resulting in better student achievement. Mike Schmoker (as cited in Hoaglund et al., 2014) claimed in order to create and maintain a genuine PLC, teachers must meet regularly to improve already established goals and to assess their progress using formative data. He expressed his belief on how the structure for improved results already exists within what has been identified as professional learning communities (Hoaglund et al., 2014). Overall, the most consistent themes emerged from these attempts to define PLCs are leadership and collaboration.

According to Wilson (2016), real professional learning communities involve a shared governance among members that will ultimately result in school improvement. Boyd & Hord (1994) pointed out schools exist in order to provide a space for children to be valued, respected and cared for. Therefore, fostering an atmosphere of community, where teachers and paraprofessionals work together, is important to student achievement and success. Similarly, the essence of Schmoker's concept of professional learning communities was collaboration among teachers by working in groups, borrowing and generating ideas, would ensure improved student learning (Joyce, 2004).

The significant difference between collaboration in professional learning communities and collaboration in other cooperative teams is the fact PLCs are created for a specific purpose (Hoaglund et al., 2014). Professional learning communities are designed not only to determine what students will learn, but also to develop a space for teachers to determine how to respond when students do not learn (Hoaglund et al., 2014). The purpose not only places a focus on student outcomes, but shines a light on teacher outcomes as well, with an implicit belief PLCs can lead to significant changes in teaching cultures and practices (Ning, Lee, & Lee, 2015). According to Ning et al. (2015), individual professional development courses do not result in the continuous collaborative efforts generated in PLCs. This collaboration, is in fact, the rudimentary principle of professional learning communities; it refers to the cooperative practices and activities in which teachers engage in order to achieve shared-determined goals (Ning et al., 2015).

Ning et al. (2015) noted that Hord conceptualized teacher collaboration in PLCs into two main dimensions: collective learning and shared personal practice. According to their research, collective learning requires a prioritization of professional advancement by teachers as well as an effort for them to develop the best strategies to provide effective student learning and outcomes (Ning et al., 2015). The second dimension, the sharing of personal practice, requires teachers to participate in activities such as peer coaching, classroom observations, and discussions in order to enhance their professional development (Ning et al., 2015).

**Enhancing Student Learning Through Professional Learning Communities**

DuFour & Reeves (2016) observed there are schools which purportedly have created professional learning communities, but do not fully implement the strategies real professional learning communities put into practice. These PLCs are referred to by DuFour & Reeves (2016) as "PLC Lite." They point out genuine PLCs must follow five established tenets (DuFour & Reeves, 2016). First, educators work together as teams and not in isolation, and they take responsibility as a group for student learning (DuFour & Reeves, 2016). Second, they work together to establish a curriculum that meets the needs of learners step by step, taking into account the attitudes, skills, and knowledge the students bring to the unit (DuFour & Reeves, 2016). Third, educators develop relevant assessments, created as a group, and based on a practical curriculum (DuFour & Reeves, 2016). Fourth, they use the results of a common formative assessment to recognize students who need more time and more help for learning, to identify students who benefit from enhanced or expanded learning, to pinpoint areas of individual strength and weakness in teaching based on the proof of student learning, and to address areas where teachers are not able to help learners (DuFour & Reeves, 2016). Fifth, they create a system in which students who need additional support can receive the support without losing class time (DuFour & Reeves, 2016).

According to DuFour & Reeves (2016), teachers need to consider four questions if they are to work as a true professional learning community. First, in what areas do students need to be knowledgeable? Second, how will we know what they have learned? Third, what do we do about what they have not learned? Fourth, what can we do for learners who have already mastered the necessary content? By asking and answering these types of questions, teachers can create a genuine professional learning community (DuFour & Reeves, 2016).

DuFour & Reeves (2016) thus established conducting relevant assessment and knowing how to use the resulting data are key tenets for creating authentic PLCs. They noted intervention also plays a large role in guiding students back toward their learning goals, with the most effective interventions eliminating the type of teaching repeatedly implemented without success, replacing it with methodical, intense, clear, and swift individual or small-group instruction. They pointed out intervention is a much better option than retention, one that leads to increased student promotion (DuFour & Reeves, 2016).

**Professional Learning Communities in STEM Research**

Professional learning communities have also been studied in the context of STEM research. In one such study, PLCs, project-based learning, sustained professional development, and K-12 partnership were implemented to fidelity by a team of researchers from Texas A&M University (Capraro et al., 2016) as a part of a theoretical framework. The goals of their research were to improve student achievement and teacher perception over the course of three years (Capraro et al., 2016). Their theoretical framework was implemented over three years at three urban high schools in Texas, with a total of six science and math focus groups being interviewed (Capraro et al., 2016). There were several subthemes for each theme from the qualitative interview focused on positive outcomes (Capraro et al., 2016). For example, project based learning increased student engagement a subtheme for theme one, which is general experiences from using project based learning in the class room (Capraro et al., 2016). Student achievement on the Texas Assessment of Knowledge and Skills showed significant improvement for students who received the greatest fidelity of implementation (Capraro et al., 2016). In addition, the resulting qualitative data showed

teachers' perceptions were positive in many PLC areas such as project-based learning (Capraro et al., 2016). One teacher perceived using PLCs in his/her classroom promoted individual student accountability and ownership (Capraro et al., 2016).

Additional STEM research was conducted by Rick Hodges, a retired Army veteran who used professional learning communities and hands-on learning to successfully implement CASE (Curriculum for Agricultural Science Education), which puts a high emphasis on incorporating STEM education (Fritsch, 2017). It was found professional learning communities allow for more hands-on training within the CASE program (Fritsch, 2017). Hodges, who hated the lack of hands-on activities in his own childhood schooling, became an instructor in an effort to implement hands-on training programs in the context of professional learning communities (Fritsch, 2017).

## Professional Learning Communities as Highly Reliable Organizations

Professional learning communities utilizing the established practices of highly reliable organizations (HROs) have been found to orient their school leaders toward positive cultural change (Kruse & Gates, 2016). The HRO process traditionally involves five tenets (Kruse & Gates, 2016). First, HROs are not afraid of failure and look to learn from it (Kruse & Gates, 2016). Second, HROs do not take their failures lightly, but have a healthy understanding of them (Kruse & Gates, 2016). Third, HROs are results-driven; they look at how failure affects the data and results of the organization (Kruse & Gates, 2016). Fourth, HROs are marked by a high resilience in the face of failure and a tenacity when learning from failure (Kruse & Gates, 2016). Fifth, HROs utilize experts when it comes to problem solving instead of just counting on formal organization (Kruse & Gates, 2016). These five practices, implemented in a mindful process, can, according to Kruse & Gates (2016), enable professional learning communities to focus more on the goals and objectives of the organization so they may reach a higher level of cultural change.

## Professional Learning Communities in School Reform Initiatives

Ariel Sacks is a 13-year veteran teacher who has found success in several different types of schools, most of all in the Renaissance Charter School in New York, New York (Sacks, 2017). One of the keys to her success has been the implementation of professional learning communities (Sacks, 2017). Sacks (2017) stated her school was better able to implement a professional learning community by following five protocols which have emerged from the School Reform Initiative non-profit organization. First, in order to ensure everyone is heard, everyone is given a voice and an opportunity to participate (Sacks, 2017). All teachers are given an opportunity to speak at certain intervals in the session (Sacks, 2017). Second, to ensure everyone has the time to think clearly about their concerns, the pace is slowed down (Sacks, 2017). Many teachers need time to write or think about their ideas (Sacks, 2017). Third, reflection is required, so time is given for personal reflection before each person responds (Sacks, 2017). This assists teachers to think more deeply about the question at hand and process more fully what their colleagues are saying (Sacks, 2017). Fourth, structure is provided, since structure facilitates time management and organization to keep everyone on track (Sacks, 2017). The correct protocol ensures teachers manage their time well and arrive at a meaningful conclusion (Sacks, 2017). Fifth, hierarchies are flattened. For example, the role of the facilitator is rotated throughout the process, giving everyone the chance for leadership (Sacks, 2017). In this way, professional learning communities can be enhanced and

focused through the use of protocols devised by the School Reform Initiatives non-profit organization (Sacks, 2017).

## Role of a School Leader in a Professional Learning Community

Just as leadership is important to shaping organizational culture, school culture likewise requires the attention of leaders as well as the presence of what Boyd and Hord (1994) referred to as primary and secondary mechanisms to initiate change.  One study conducted on an urban school in the United States revealed 17 indicators conducive to change.  These indicators emerged from interviews and observations of principal by researchers and resulted in the school moving from the closure list and becoming a magnet school (Boyd & Hord, 1994).  Based on those results, Boyd & Hord (1994) proposed a learning community is comprised of and enacts four functions that are fundamental to positive change.  They identified those four functions as reducing isolation, increasing staff capacity, providing a caring, productive environment, and promoting increased quality.  They also noted principals who first seek to understand existing school culture tend to be successful in the change occurring within their school (Boyd & Hord, 1994).

Brown (2016) proposed school leaders can achieve great success in implementing their professional learning communities by using a system based on a theoretical framework.  In a qualitative study conducted on a 15-year veteran principal leading a high-performing, diverse elementary school, Brown (2016) attempted to gain information to be shared with other principals to replicate the success of the school, which had maintained high math and reading scores on state assessments. The researcher interviewed the principal, teachers, and district employees, and the data from those interviews was triangulated using a conceptual framework (Brown, 2016).

One of the five types of support that the exemplary principal provided was found to be the creation of professional learning communities (Brown, 2016).  In order to implement PLCs, this principal used a system called TRIBES, a process which allows for a shared philosophy of how all teachers teach and promote learning in their classrooms (Brown, 2016).  TRIBES operates on four agreements: mutual respect, no put-downs, attentive listening, and the right to pass (Brown, 2016).  The principal's use of such a system in the creation of a PLC greatly facilitated its successful implementation (Brown, 2016).

Principals have been found to play a central role in communicating key reform initiatives because most teachers do not have direct access to such initiatives (Buttram & Farley-Ripple, 2016).  The research of Buttram and Farley-Ripple (2016) used a sequential mixed-methods approach in which interviews, observations, and document analysis influenced survey design.  This study was conducted in the State of Delaware, where the state department of education has placed a strong emphasis on professional learning communities (Buttram & Farley-Ripple, 2016).   The study was restricted to a small sample of only four schools in two districts and relied primarily on principal and teacher self-reports (Buttram & Farley-Ripple, 2016).  Teachers in the four elementary schools were surveyed about the implementation of grade-level professional learning communities and about the assistance they received (Buttram & Farley-Ripple, 2016). Qualitative and survey data revealed an impact from principals on what teachers in PLCs will take on and also on how well they shoulder those undertakings (Buttram & Farley-Ripple, 2016).  Buttram and Farley-Ripple (2016) thus helped to establish the importance of the role of principals in taking on reform initiatives such as professional learning communities and implementing them successfully in their schools.

## Conclusion

In conclusion, professional learning communities, when successfully instituted by school leaders and embraced by participants, have been shown to improve student achievement as well as teacher perception. A clear understanding from literature or practice of exactly what PLCs are and what factors have thus far facilitated their creation will enable more educators to smoothly implement their productive use.

# References

Boyd, V. & Hord, S. (1994). *Principals and the new paradigm: Schools as learning communities*, presented at the Annual Meeting of the American Educational Research Association, New Orleans, April 4-8, 1994.

Brown III, G. (2016). Leadership's influence: A case study of an elementary principal's indirect impact on student achievement. *Education*, *137*(1), 101-115.

Buttram, J. L., & Farley-Ripple, E. N. (2016). The role of principals in professional learning communities. *Leadership & Policy in Schools*, *15*(2), 192-220. doi:10.1080/15700763.2015.1039136

Capraro, R. M., Capraro, M. M., Scheurich, J. J., Jones, M., Morgan, J., Huggins, K. S., & Han, S. (2016). Impact of sustained professional development in STEM on outcome measures in a diverse urban district. *Journal of Educational Research, 109*(2), 181-196. doi:10.1080/00220671.2014.936997

DuFour, R. (2004). What is a professional learning community? *Educational Leadership, 61*(8), 6-11. Retrieved March 7, 2018, from http://www.ascd.org/publications/educational-leadership/may04/vol61/num08/What-Is-a-Professional-Learning-Community¢.aspx

DuFour, R., & Reeves, D. (2016). The futility of PLC lite. *Phi Delta Kappan*, *97*(6), 69-71. doi:10.1177/0031721716636878

Fritsch, J. (2017). Case and professional development for nontraditional teachers. *Techniques: Connecting Education & Careers, 92*(8), 44-47.

Hoaglund, A.E., Birkenfeld, K., & Box, J.A. (2014). Professional learning communities: Creating a foundation for collaboration skills in pre-service teachers. *Education 134*(4), 521-528.

Joyce, B. (2004). How are professional learning communities created? History has a few messages. *Phi Delta Kappan*, *86*(1), 76-83.

Kruse, S. D., & Gates, G. S. (2016). Leading professional learning communities: Applying a high reliability organization perspective. *Proceedings of the Multidisciplinary Academic Conference*, 38-45.

Ning, H.K., Lee, D., Lee, W.O. (2015). Relationships between value orientations, collegiality, and collaboration in school professional learning communities. *Social Psychology of Education 18*:337-354. doi: 10.1007/s11218-015-9294x

Sacks, A. (2017). Empowering teachers to respond to change: With high levels of change expected, schools must set up structures that help teachers share their best thinking and manage change effectively. *Educational Leadership*, *74*(9), 40-45.

Wilson, A. (2016). From professional practice to practical leader: Teacher leadership in professional learning communities. *International Journal of Teacher Leadership, 7*(2), 45-62.