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"Now I Know": An Examination of How a STEM School Impacts Students' STEM Perspectives

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Abstract

Early college high schools are small schools designed to allow students to serve groups underrepresented in higher education. Many early colleges adopt a thematic focus and build their curriculum and student experiences accordingly. This qualitative case study collected data to explore how the school's focus on science, technology, engineering, and mathematics (STEM) impacted the postsecondary aspirations of Black male students. Emergent themes demonstrate that while students may not always be inclined to pursue STEM careers, they become increasingly self-aware and observant of disparities in the STEM fields.

Keywords: Black males, STEM education, early college high schools

"Now I Know": An Examination of How a STEM School Impacts Students' STEM Perspectives

Of the fastest-growing jobs in the nation, 80% of them require math and science competency (Carvalho, 2015). As STEM jobs increase, efforts to impact students' interests in STEM fields or into the "STEM pipeline," initiatives have shifted from focusing on students at the postsecondary level to concentrating on them earlier in high school (Franco, Patel, & Lindsey, 2012). One approach to ensure early exposure at the secondary level is to create public high schools that specialize in STEM (Eisenhart et al., 2015; Subotnik, Tai, Rickoff, & Almarode, 2010). One example of a specific schooling model that often adopts a STEM approach is the early college high school. Early college high schools (ECHS) are small schools which allow students to be dually enrolled in both high school and college simultaneously with the option to earn up to two years of transferable college credit (Webb & Gerwin, 2014). Furthermore, the ECHS model was created to serve students underrepresented in higher education, namely first-generation college students, English language learners, low-income students, and students of color (Bernstein et al, 2010). North (2011) reports that of all of the ECHS in the nation, about a third of them utilize a STEM thematic focus. The purpose of this research study was to examine the experiences of Black males attending a STEM-focused early college high school. Specifically, the study sought to understand how the school's STEM environment impacted the participant's postsecondary aspirations seeking to answer: *how does a STEM early college high school impact Black males' perceptions of STEM subjects and STEM careers?*

Review of Relevant Literature: Black Males Participation in STEM

The STEM fields suffer from persistent underrepresentation of people of color and women (Landivar, 2013), so there is heavy focus on increasing diversity in these fields

(Strayhorn, 2015). Literature on Black males in STEM is scant (Lundy-Wagner, 2013) but does reveal that of the Black males entering STEM fields, they do so largely because of the influence of historically Black colleges and universities (HBCUs) (May & Chubin, 2003). Historically Black colleges and universities are often the top producers of Black STEM graduates in the United States (Adams, Robinson, Covington, & Talley-Matthews, 2017). Museus and Liverman (2010) explain that people of color are underrepresented in STEM and earn STEM degrees at lower rates compared to their peers. Out of the underrepresented groups, Black males are one of the underrepresented subgroups (Bidwell, 2015).

Landivar (2013) highlights that Blacks only occupy six percent of STEM-related jobs. Additionally, among males in all racial groups, median earnings for Blacks were less than Asian, White, Biracial and Hispanic males in STEM occupations (Ross et al., 2012). In an analysis done to examine rates of attrition in STEM fields, Chen (2013) found students who entered college as STEM majors that were male or from a lower socioeconomic status were more likely to drop out of college than females and more affluent students. While many have assumed African American students enter STEM majors in college at lower rates than their counterparts, Anderson and Kim (2006) contend the data instead shows that the aspirations in STEM fields across student demographic groups are the same but persistence through the programs is where disparities are seen.

Taking a qualitative approach in efforts to understand Black males' participation in STEM fields, Moore (2006) researched factors that contribute to Black males entering engineering at the undergraduate level. Thematically, this research revealed that Black males pursuing engineering degrees had received substantial support from their families, teachers, and counselors to explore the fields, performed well in math and science, were exposed to and

participated in STEM-related opportunities throughout their K-12 experiences, and showed overall high interest in the fields. Wang's (2013) research reveals the decision to study STEM in college is highly correlated to math achievement in high school. Similarly, in a study to assess the correlation between high school STEM course taking and future STEM degree attainment, Tyson, Lee, Borman, and Hanson (2007) found that when Black and Hispanic students complete higher level coursework in high school, they are just as likely as White students to pursue degrees in STEM fields. Yet the racial disparities are persistent because these students are often found to be underprepared for STEM subjects during their high school tenure (Tyson et al. 2007). Taking all of this context into consideration, this study sought to learn more about how being in a rigorous ECHS with a STEM thematic focus impacted Black male students' perceptions about the fields.

Methods and Findings

Using qualitative methods, students who identified as Black males and that were classified as at least a junior at Denton STEM Early College High School (pseudonym) were invited to participate in the study. To participate in the study, students had to identify as Black, male, and be in the 11th grade or higher. Focus groups and individual semi-structured interviews were used to collect data. Eight participants were divided equally into two focus groups. At the conclusion of the focus groups, students were invited to participate in a semi-structured individual interview. Of the original eight participants, seven students returned for individual interviews. To analyze the data, Braun and Clark's (2006) approach to thematic analysis was used.

Three themes were found in the data under the heading "now I know": 1) now I know STEM is the way of the future, 2) now I know more about myself because of STEM, and 3) now

I know the importance of having diversity in STEM. Together these themes show how students were able to make well-informed decisions regarding their postsecondary aspirations because of their STEM exposure.

Now I Know: STEM is the Way of the Future

Students in the study discussed the ways in which their school's curriculum and activities allowed them to strengthen their understanding of STEM subjects and STEM careers. For some of the participants, they articulated their choice to attend a STEM school because they come to learn that the jobs in those areas were increasing and that they came with higher salaries than some other fields. For them, they felt these market changes could offer a sense of security. In addition to the students understanding of how STEM fields are positioned within the larger economy, they also shared what they learned at their school about the STEM subjects particularly subject intensity as shown in the following theme.

Now I Know: More about Myself Because of STEM

This second theme captures the ways in which students explained how they came to learn more about their strengths, weaknesses, and interests because of the school's thematic focus. Several of the students identified the STEM subjects as being their favorites while others acknowledged that being in a STEM immersive environment helped them see they did not enjoy the content as much as they originally thought. Many students entered the school and developed early interests in computer science, aerospace engineering, and architectural engineering. Of the eight participants, four still intended to pursue a STEM-related field, while others had made firm decisions to do something different. One participant, in particular, was left with uncertainty because of struggles with mathematics. Despite the student's individual decisions, collectively, the students felt their early college high school helped them explore all of their options. Lastly,

participants noted the ability that their STEM subjects at school enforced 21st century skills and that as a result of that, they can still use a lot of those same skills in whatever field they choose in the end.

Now I Know: STEM Needs Diversity

The final theme encompasses participant observations they made in their STEM environment. In their environment, students noticed racial and gender disparities. Not only did their STEM ECHS have more males than females enrolled, they saw racial disparities on the university campus when they traveled to classes there. One participant had the opportunity to complete a STEM internship his school secured for him and from that experience, he saw the same phenomenon in his office. The participants' understanding of what they were seeing around them was said to be confirmed by research they completed around topics of digital inclusion and technology access in urban areas. For these participants, they concluded that it becomes difficult to pursue subjects and content areas when your understanding and access is limited. Through detailed examples of them not seeing obvious diversity in the STEM fields, they were adamant about their desire to see an increase in representation. The participants in this study articulated the need for representation and how it helps impact them and other students of color in a positive way.

Solutions

As we seek to build a solution-oriented discourse, this research explains how programs with a STEM focus can equip students for the "real world" whether or not they see themselves in a STEM career. This work is significant because the findings advance our understanding of the personal growth and social critique that can occur when students have access to STEM experiences. By way of solutions, two recommendations are made to begin to work toward

impacting the participation of Black males in STEM fields: establish mentoring programs and change the ways in which students have access to college credits while enrolled in high school.

Mentoring programs would allow Black male students an opportunity to experience representations in the fields. Early colleges uniquely can utilize students and faculty from their college partner. Other school types can intentionally connect with community partners to provide opportunities and experiences. The early college model is unique in the fact that students can obtain significant college credit free of charge. Policymakers must begin to address ways that more high school students can obtain college credit while still in high school. Most traditional programs such as advanced placement courses and dual enrollment programs are reserved for students who traditionally perform well in school and often have GPA requirements. More programmatic initiatives are needed because these programs created for high achievers overlook a large number of students that could be motivated to pursue postsecondary opportunities if given the opportunity to obtain college credit while in high school. Research on early college high schools and accelerated learning programs show that students do not have to be already designated as a "high achiever" to be successful in these spaces.

References

Adams, T., Robinson, D., Covington, A., & Talley-Matthews, S. (2017). Fueling the STEMM pipeline: How historically Black colleges and universities improve the presence of African American scholars in STEMM. *Journal of Urban Learning, Teaching, and Research, 13*, 9-25.

Anderson, E., and Kim, D. (2006). *Increasing the Success of Minority Students in Science and Technology*. Washington, DC: American Council on Education.

Bernstein, L., Yamaguchi, R., Unlu, F., Edmunds, J., Glennie, E., Willse, J., Arshavsky, N., & Dallas, A. (2010, March 4). Early findings from the implementation and impact study of early college high school. Paper presented at the conference for the Society for Research on Educational Excellence, Washington, DC.

Bidwell, A. (2015, May 7). African-American men: The other STEM minority. *US News.* Retrieved from www.usnews.com

Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. http://dx.doi.org/10.1191/1478088706qp063oa

Carvalho, A. M. (2015). *Broadening student's participation in STEM*. Retrieved from http://www.advanc-ed.org/source/broadening-students-participation-stem

Chen, X. (2013). *STEM attrition: College students' paths into and out of STEM fields* (NCES 2014-001). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Eisenhart, M., Weis, L., Allen, C. D., Cipollone, K., Stich, A., & Dominguez, R. (2015). High school opportunities for STEM: Comparing inclusive STEM-focused and comprehensive high schools in two US cities. *Journal of Research in Science Teaching, 52*(6), 763-789.

Franco, S. M., Patel, N. H., & Lindsey, J. (2012). Are STEM high school students entering the STEM pipeline. *NCSSSMST Journal, 17*(1), 14-23.

Landivar, L. C. (2013). *Disparities in STEM employment by sex, race, and Hispanic origin*. Retrieved from http://www.census.gov/prod/2013pubs/acs-24.pdf

Lundy-Wagner, V. C. (2013). Is it really a man's world? Black men in science, technology, engineering, and mathematics at historically Black colleges and universities. *Journal of Negro Education, 82*(2), 157-168.

May, G. S., & Chubin, D. E. (2003). A retrospective on undergraduate engineering success for underrepresented minority students. *Journal of Engineering Education, 92*(1), 27-39.

Moore, J. L. (2006). A qualitative investigation of African American males' career trajectory in engineering: Implications for teachers, school counselors, and parents. *Teachers College Record, 108*(2), 246-266.

Museus, S., & Liverman, D. (2010). High-performing institutions and their implications for studying underrepresented minority students in STEM. *New Directions for Institutional Research,* 148, 17-27. doi: 10.1002/ir.358

North, C. (2011). *Designing STEM pathways through early college: Ohio's Metro Early College high school.* Jobs for the Future. Retrieved from http://www.jff.org/sites/default/files/publications/ECDS_DesigningSTEMPathways_081511.pdf

Ross, T., Kena, G., Rathbun, A., KewalRamani, A., Zhang, J., Kristapovich, P., and Manning, E. (2012). *Higher Education: Gaps in access and persistence study* (NCES 2012-046). U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office.

Subotnik, R. F., Tai, R. H., Rickoff, R., & Almarode, J. (2010). Specialized public high schools of science, mathematics, and technology and the STEM pipeline: What do we know now and what will we know in 5 years? *Roeper Review, 32*(1), 7-16. doi:10.1080/02783190903386553

Tyson, W., Lee, R., Borman, K. M., & Hanson, M. A. (2007). Science, technology, engineering, and mathematics (STEM) pathways: High school science and math coursework and postsecondary degree attainment. *Journal of Education for Students Placed at Risk, 12*(3), 243-270.

Wang, X. (2013). Why students choose STEM majors: Motivation, high school Learning, and postsecondary context of support. *American Educational Research Journal, 50*(5), 1081-1121.

Webb, M. & Gerwin, C. (2014). *Early college expansion: Propelling students to postsecondary success, at a school near year.* Retrieved from https://files.eric.ed.gov/fulltext/ED559689.pdf

Disrupting Oppressive Urban Educational Environments: Using Authentic and Critical Cultural Competency Trainings to Foster Healthy Classrooms

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Abstract

The purpose of this paper is to report on the development and implementation of cultural competency training work with a moderately-sized urban school district in the southeast. This paper will discuss cultural competence and ways to move beyond a deficit approach to close the achievement gap and increase student engagement in a socially and politically conservative context. Through these trainings, the goal is to develop more effective teaching and learning, with educators that are equipped to engage with the community to establish sustainable, equitable partnerships in urban, but socially conservative contexts.

Keywords: cultural competency, professional development, university-school partnerships

Disrupting Oppressive Urban Educational Environments: Using Authentic and Critical Cultural Competency Trainings to Foster Healthy Classrooms

The purpose of this paper is to report on the development and implementation of Cultural Competency Trainings (CCT) with a moderately-sized urban school district in the southeast. The CCTs is the first district-wide training specifically focused on cultural competence. We use this paper to not only highlight the development of training materials but also to explore issues related to the process of implementation in a socially and politically conservative context. This training focused on the best conditions for learning, the manifestations of strengths and talents across cultures, and ways to move beyond a deficit approach to close the achievement gap and increase student engagement. This paper explores effective practices in establishing positive and affirming partnerships, establishing collective trust, and cultural considerations that are needed in navigating K-12 settings. This paper not only explores the structural components of the cultural competency trainings, but the resistance encountered in the delivery and implementation of the training.

Theoretical Framework

Historically, in public schools across the United States, students from racially and culturally different backgrounds have experienced and continue to experience disproportionate underachievement, which is often referred to as the achievement gap (Delpit, 1995, 2006; Ford, 2011; Howard, 2006; Ladson-Billings, 1994, 2001; Tatum, 1997). Explanations for these disparities have long been studied, acknowledged, and contested in the United States as well as in other countries (Banks, 2009). Some researchers have posited that the most prevalent academic gaps are mostly a by-product of the disparities that exist in society at large and are only magnified in schools (Rothstein, 2004). Darling-Hammond (2007) argues that there is a "legacy

of inequality in U.S. education" which explains the different levels of outcomes across racial and social groups. In that same vein, she maintains that "educational outcomes for students of color are much more a function of their unequal access to key educational resources, including skilled teachers and quality curriculum, than they are a function of race." (p. 320). Teel and Obidah (2008) assert that personal and institutional racism contributes most significantly to the achievement and opportunity gap that students of color experience.

From years of empirical research, the field understands and maintains that addressing the issues of racism and racial and cultural inequities is crucial to the success of students of color. Several researchers and practitioners alike call for a more intentioned focus on diversity and identity in teacher preparation programs and explicit cultural competence training with teachers in urban school contexts (Delpit, 1995; Gay, 2010; Howard, 2010; Ladson-Billings, 1994, 2001; Teel & Obidah, 2001). According to Diller and Moule (2005), cultural competence is the ability to successfully teach students who come from cultures other than our own. Cultural competence entails developing certain personal and interpersonal awareness and sensitivities, developing certain bodies of cultural knowledge, and mastering a set of skills that can underlie effective cross-cultural teaching. Particularly in urban contexts, Bennett (1995) added that cultural competence is a commitment to combating racism and "all forms of prejudice and discrimination, through the development of understanding, attitudes, and social action skills" (p. 263). The development of cultural competence is an ongoing process and is grounded in the belief that individuals continue to learn from, respect, and appreciate the broad range of cultures in a diverse society (Howard, 2010).

In order to disrupt oppressive, racialized, and conservative paradigms in urban education, collective partnerships that aim to dismantle inequitable environments for culturally,

linguistically, and economically diverse groups must be called to action and engage from a critical perspective. The CCTs are rooted in a critical, culturally responsive, pedagogical lens and uses the work of hooks (1994), Ladson-Billings, (1995), and Teel and Obidah (2008) to provide methods, strategies, and reflective practices to help teachers understand how these institutional and systemic forces create personal and pragmatic biases that consequently effect curricular practices, classroom management, and student and family engagement. Using the work of hooks (1994), we view education and classroom practices as a means of liberation and emancipatory thinking, with both students and teachers linking their empowerment to transform the curriculum, decrease biases, and dismantle systems of domination. The project utilizes the core tenets of Ladson-Billings' (1995) culturally relevant pedagogy to counter hegemonic practices of schooling, to make learning relevant, maintain high expectations, encourage critical consciousness, and assist educators with understanding the individual needs of students.

Disparities in academic achievement and discipline are the results of systemic forces of oppression and must be tackled through ongoing efforts of diverse coalitions of committed individuals. Teel and Obidah (2008) assert that individual teachers and other school personnel should strive to transform their own racial and cultural understanding and attitudes, and therefore become racially and culturally competent, with the understanding that this is a journey. Thus, cultural competence will not occur as a result of one-shot training; instead, it hinges on developing relationships and long-term capacity. Discipline and achievement disparities will not disappear through exposure to workshops and conversations about educational equity. Instead, these challenges need to be addressed by unrelenting efforts to build communities committed to establishing and maintaining a district-wide culture around addressing difference and disparities. During this project, we proposed multi-year, district-wide protocols, initiatives and trainings to

address cultural competency. This plan is comprised of sessions designed to address various sectors of diversity: implicit bias, identity, culturally relevant pedagogy and strategies, language, and family-community engagement. In order to develop the session materials, the trainers were intentional in bridging theoretical knowledge with their experience in K-12 settings. Facilitators of the CCTs were intentionally chosen because of their expertise in education, sociology, and psychology. Areas of expertise included urban education, gifted education, multiculturalism, sexual orientation, educational leadership, gender, linguistics, STEM, and community counseling. Overarching topics for each participant included an overview of identity, implicit bias, and culturally responsive teaching and strategies.

Research Methodology

Milner (2009) uses the term, next level education, to discuss how education must shift beyond the rhetoric of policy and reform, to practice (action), commitment, effort, and results. When it comes to the work of racial and cultural competence, unpacking, reflecting, and disrupting centuries of racialized biases will take time, require challenging effort, consistency, and evaluation of our practices. To this end, the project used critical action research as a methodology. Critical action research is a validation and extension of action research or participatory action research, with processes that combines critical theory with the action research paradigm (Given, 2008).

In addition to critical theory, this research utilizes the social theory perspective of group behavior. We are in an era where group behavior and "group think" leans toward evidence being shunted; it is incumbent upon the greater educational community to counter lies and misinformation when it comes to the welfare of our children. Blumer (1965) examined race prejudice as group position and found that once a set of racial inequalities have been

institutionalized there are meaningful interests that attach to such group positions in a hierarchical and racially stratified social order. Blumer's (1965) work was during the heart of the Civil Rights Movement and spoke directly to the role of interests and of organized interest groups as playing an influential role in the ongoing process of re-creating and defending the sense of group position in politics and other sectors. Currently, cultural competency is only discussed when there is an issue or problematic behaviors have occurred (e.g., Starbucks), and are treated as "quick fixes; we have to intentionally examine "group think" and our approach to critical cultural competence training. We are witnessing powerful leaders appealing to their personal beliefs and emotions based on their interests, and their following adopting similar policies in our schools, local school boards, and other legislature.

Using Lewin's (1946) model of action research, our team developed and delivered critical cultural competence training based on identified need, monitored and evaluated group position around the needs of marginalized populations. Lewin's (1946) model positioned the research team to analyze the situation (group dynamics) correctly, identify all the possible alternative solutions and choosing the one most appropriate to the situation at hand. We draw on Lewin's model of action research due to Lewin's work on Field Theory to identify why group members behave in a way they do when subjected to content, ideas, and situations that are potentially different from their group position.

Findings

From the online evaluations, observations, and anecdotal notes, each facilitator noted overt and covert resistance. This resistance was across assemblies, from school board members to teachers; one school board member stated, "I have not witnessed racism in my 30 years teaching in this district" all the while spewing microaggressions to one of the facilitation trainers.

It is important to note, this was before any training occurred, thus, setting a precedent for the upcoming trainings. One of the most prominent findings was around leadership engagement; if leaders were involved and showcased buy-in, that alone had substantial influence on the engagement of the school personnel. If principals were engaged and involved in the training process, the staff of that campus was attentive, willing to be reflective, and ask questions. Some of these same principals have followed up with our team for additional training, specifically around the culturally responsive strategies. On the contrary, at one of the sites, an administrator told his staff the cultural competency training was a waste of time, and educators proceeded to throw the materials away. Not all principals were outright dismissive, but if they engaged in other projects, left the room, or neglected to participate, the members of their team followed. Essentially, the school's administration sets the tone. At the same time, the degree of support varied depending on geographical region and historical context (e.g., formerly segregated schools) of the campus. Regions that served sizeable minoritized populations, the response and buy-in to the training material increased. Members of these campuses asked engaging questions and participated in discussion at a higher level in comparison to regions that served dominant and/or higher-income populations.

Visible resistance was given to the facilitators of color, which can be the norm for many of these professional development seminars focused on cultural competence (Vasquez, 2006); however, varying degrees of resistance was also given to white members of the team. In addition to the visible resistance, the level of mental gymnastics used to deny the evidence of racism and bias was noted, particularly with the Implicit Association Test (IAT), aligning with the work of Bonilla-Silva (2014), specifically the style of colorblindness and racism. Participants were more willing to engage in conversations of class and gender rather than issues of race. Based on the

preliminary findings from evaluations and informal feedback, some participants are finding value in the trainings and professional development. For the team of facilitators, we have to employ creative strategies to combat the resistance; we strategize methods to de-escalate situations with participants, how to navigate disengagement, and what to do when participants challenge facts because of their group position.

In bridging university-school partnerships, university facilitators are finding that schools working with our most vulnerable populations were often more open, flexible, and willing to grapple with the issues of race and class. In that same vein, educators on these campuses are operating under several constraints: using scripted texts and curriculum, standardized testing, and meeting the needs of diverse learners (e.g., emerging bilinguals, gifted, students with special needs). Members of these campuses were excited about ways we can assist them in the multi-year plan, at their individual schools.

Solutions for the Field

It is imperative to have culturally competent teachers to meet the needs of our students, in addition to closing the achievement gap, and decreasing behavioral disparities, particularly in urban contexts. Cultural competence leads to more effective teaching and learning, and educators are better equipped to engage with the community to establish sustainable, equitable partnerships. There were several lessons learned during the time of the training, as well as several questions asked to improve the experiences of the facilitators and participants. We found that in order to establish positive, affirming partnerships and collective trust, our approach had to be transparent and centered on the needs of minoritized students. Our facilitation team has an invested interest in the community; many of our university students are placed in this district for internships and practicums. Our team also made ourselves available to administrators and staff

who needed additional resources and continued professional development. In addition to being transparent and maintaining a level of candor with the participants, we utilized a strengths-based approach, assisting participants in recognizing biases, deficit views of the students and communities, and operating under the supposition that we are all at different stages of racial identity and awareness, making room for all individuals to feel validated. In the development of the training sessions, we leaned on theory to establish foundational knowledge, but also incorporated a combination of practical applications for participants.

To counter resistance, the extended team utilized strategies to defuse potentially derailing situations/obstructions to the training. There were several in each session that began to derail the conversation and openly argued with the facilitator, nevertheless, the team was well-equipped to handle those situations. We frequently met to cover material and discuss strategies to encourage cooperation and counter resistance, creating a collaborative learning space for the trainers. During each training session, the team was deliberate in setting norms and expectations, in addition to stating our positionality to our work on cultural competency. The team was also intentional about centering the students and not ourselves during the training. Although the team used some personal examples for practicality purposes, we utilized information from research studies and theories to guide the conversation, positioning the facts. However, even in doing this, several participants mentioned in the evaluations that we were pushing a "liberal" agenda and were biased in our work. Lastly, we focused their attention on sustainable practices that the campuses could employ. Participants were asked to draft goals and action steps to develop a cultural sustainability plan. We plan to work with them the next four years to address these goals, and follow-up with additional professional development at each school, prioritizing the highest-needs schools. In order to do this work, consistent work overtime must be done. Infiltrating and

disrupting oppressive group position(s) on issues related to the welfare and needs of marginalized populations is imperative for the academic and psychological welfare of our youth.

References

Bennet, C. L. (1995). Mistaken identity and issues of multicultural education. *Journal of Teacher Education, 46*, 259-265.

Blumer, H. (1965). The future of the color line. *The South in Continuity and Change*, 322-336.

Bonilla-Silva, E. (2014). *Racism without racists: Color-blind racism and the persistence of racial inequality in America* (4th ed.). New York: Rowman & Littlefield.

Delpit, L. D. (1995). *Other people's children: Cultural conflict in the classroom*. The New Press.

Diller, J. V., & Moule, J. (2005). *Cultural competence: A primer for educators*. Thomson/Wadsworth.

Ford, D. Y. (2011). *Multicultural gifted education (2nd ed.)*. Waco, TX: Prufrock Press.

Gay, G. (2010). *Culturally responsive teaching* (2nd ed.) New York: Teachers College Press.

Given, L. M. (2008). *The SAGE encyclopedia of qualitative research methods* (Vols. 1-0). Thousand Oaks, CA: SAGE Publications.

hooks, B. (1994). *Outlaw culture: Resisting representations*. New York, NY: Routledge.

Howard, T. C. (2010). *Why race and culture matter in schools: Closing the achievement gap in America's classrooms* (Vol. 39). New York: Teachers College Press.

Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues*, *2*(4), 34-46.

Milner, R. (2009). *The space and motion of communicating agents*. Cambridge University Press.

Teel, K. M., & Obidah, J. E. (Eds.). (2008). *Building racial and cultural competence in the classroom: Strategies from urban educators*. Teachers College Press.

Vasquez, H. (2006). Article for "Diversity stories in community research and action" facing resistance in waking up to privilege. *American Journal of Community Psychology, 37*(3), 183-189.

Inclusion, Education, and School Psychology

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Abstract

The following review covers the topic of inclusion in education, specifically the importance and perceptions of stakeholders. Several studies examined the perceptions of inclusion from parents, teachers, and administrators. Although much of the literature stated the importance that school psychologist play in inclusion education, there was minimal research on their attitudes toward inclusion education. School psychologists play a key role in special education and have many skills which benefit teachers in inclusive practices. Future research should investigate school psychologists and their attitudes, perceptions of current trends in inclusive education, and the role they play in facilitating inclusive practices.

Keywords: Inclusion, Education, School Psychology

Inclusion, Education, and School Psychology

The terms inclusion, integration, and mainstreaming are interchangeably used in the realm of education. Hornby (2015) attempted to clarify the definition of what inclusive education is by utilizing the Ministry of Education and Centre for Studies on Inclusion Education and stated that; inclusion education seeks to increase the amount of time students with special needs interact with students within the general education setting while providing additional supports appropriate to the severity of the student's needs. Inclusion also supersedes the term integration as it pertains to special education, and proposes to strengthen social acceptance of all students in the educational environment where integration focuses on providing additional supports through accommodations and modifications of the educational curriculum (Cowan, McGoey, & Quallich, 2007; DeLuca, 2013; NASP, 2003; Thomas, 2012)

In 1975 the United Nations established the Declaration of Rights of Disabled Persons, and in the U.S. the Education for All Handicapped Children Act (EHA) was reauthorized to address inclusive practices, now known as the Individuals with Disabilities Education Improvement Act (IDEA, 2004). IDEA requires children with disabilities be educated in the least restrictive environment, and natural environments for early intervention services. The term least restrictive environment (LRE) states that students with disabilities receive their education to the maximum extent with nondisabled peers, and that these students only are placed in a separate setting if supplemental aides and services are not sufficient enough to provide satisfactory education. The American with Disabilities Act (ADA, 1990) and Section 504 of the Rehabilitation Act (Sec. 504, 1973) have mandated that schools provide equal access and opportunities for students with disabilities. In 2015 the Every Student Succeeds Act (ESSA), formerly known as the No Child Left Behind Act (NCLB) of 2001, extended this for students

with learning disabilities in ensuring they were given opportunities to achieve high levels of academic standards just as their nondisabled peers. Inclusion is not a matter of opinion as it is addressed through the term 'least restrictive environments' and 'natural environments' by IDEA, ADA, as well as enforced by the Office of Civil Rights (OCR). This leaves educators with the tasks of finding the best practices toward inclusion, understanding what works, and what seems to be preventing progress.

International Attitudes on Inclusion

Inclusion has evolved from focusing on categorizing disability to now supporting all learners in the same school regardless of their particular needs under the Education Act and Code of Practice in the UK (Forlin, 2010). The Association of Educational Psychologists (AEP), in England, has provided guidelines for the government, local agencies, and educational psychologist to promote inclusion (Farrell, 2004). In Canada, the Canadian Human Rights Act in 1977 and the Canadian Charter of rights and Freedoms of 1982 were amended to guarantee rights to people with disabilities within their own constitution (DeLuca, 2013). Inclusion is a process which has been examined internationally with perceptions from teachers, parents, and administration. Available research has shown that parents of students, from kindergarten to twelfth grade, overall hold positive attitudes towards inclusion (De Boer & Munde, 2015; Soponaru, Paduraru, Dumbrava, Starica, & Iorga, 2016; Turnbull & Turnbull, 2015; Tafa & Manolitsis, 2003).

Dimitrios, Georgia, Eleni, and Asterios (2008) found that parents saw inclusion as a way of being socially accepted and having experience of interacting with different peers as this would help their child prepare for real world scenarios. Kuyini and Desai (2007) found that attitudes and knowledge of inclusion were good predictors of effective teaching practices from both

teachers and principals. Other studies indicated that ecological factors in both urban and rural areas impacted the amount of opportunities of interaction with peers (Tamayo, Rebolledo, & Besoaín-Saldaña, 2017; Šukys, Dumčienė, & Lapėnienė, 2015). A review of literature has also suggested that perceptions of meeting the needs of students with physical needs are more easily met than students with emotional or behavioral needs. General perceptions were that students with emotional or behavioral needs would hinder the progress of their peers unlike those students with physical needs (Runswick-Cole, 2008; Honk Kong, Lai & Gill, 2013).

However, teachers in Ghana and Scotland did not find students with emotional and behavioral concerns to be problematic (Gyimah, Sugden, & Pearson, 2009; Rae, Murray, & McKenzie, 2010). Chong and Ng (2011) found that four themes emerged to approaches with students with emotional and behavior disorders (EBD) which were; behavioral, systematic (ecological), cultural, and social. The researchers noted that the medical approach, identifying and focusing on deficits, was least mentioned. The researchers suggested that the adoption of a whole school approach (WSA) was responsible for this, as it changed systematic, cultural, and school policy thinking. Overall, much of the literature observed the same issue of finding the most appropriate training for teachers and school-wide based practices for inclusion (Chong & Ng, 2011; Hill & Sukbunpant, 2013; Nagano & Weinberg, 2012)

Attitudes toward Inclusion in the United States

In 1998, Cochran created The Scale of Teachers Attitudes Toward Inclusive Classrooms (STATIC) to obtain teachers' attitudes as well as shape attitudes in regard to modifying curriculum, guide placement decisions for special education students, and help shape teacher education programs. Cochran's findings were similar to international studies of negative attitudes with inclusive education due to unrealistic learning outcomes, lack of training, and lack of

support (Chong & Ng, 2011; Forlin, 2010; Hill & Sukbunpant, 2013; Mock & Kauffman, 2002; Nagano & Weinberg, 2012; Rae, Murray, & McKenzie, 2010). Sugita and Busse (2015) utilized the STATIC with both special education and general education classroom teachers and found that the STATIC possessed strong internal consistency as well as the ability to re-assess across time. In 2016, Sugita and Busse looked to validate the content and wording of the STATIC, however analysis of the items did not support current wording and terminology of IDEA. The researchers are currently in the process of revising that scale.

School Psychologists and Inclusion

Traditionally, school psychologists have provided testing and counseling services (S.R. Schroeder, C.S. Schroeder, & Landesman, 1987). More recently, the National Association of School Psychologist stated that school psychologists; improve academic achievement and support diverse learners, promote positive behavior and mental health, create safe positive school climates, strengthen family-school partnerships, and improve school-wide assessment and accountability and monitor individual student progress in academics and behavior (NASP, 2017). Thus, school psychologists play an important role in the inclusion process and see themselves as the ultimate authority in determining eligibility, although have expressed their frustrations with wanting to follow a more collaborative model (Cowan, McGoey, & Quallich, 2007). Another issue is that school psychology is rooted in the medical model of disability, which focuses on deficits within the individual, and does not account for the ecological factors (Runswick-Cole, 2008; Sheridan & Gutkin, 2000).With the emerging movement towards Response to Intervention (RTI), there is hope that school psychologists are able to provide more time for consultation and progress monitoring on academic and behavior interventions (Leader-Janssen, Swain, Delkamiller, & Ritzman, 2012; Oakland, 2000). Unfortunately, the only available literature that

attempted to conceptualize school psychologists' attitudes towards inclusion was in 1992 (Wilczenski, 1992) and there is a need to update terminology in accordance with IDEA.

Discussion and Designated Solutions-based Implications

Overall there are positive perceptions on inclusion from parents, teachers, and administrators. The issue that these stakeholders face is figuring out what the best approach to inclusive education should be. Other common concerns include students with emotional and behavioral needs, training and competency of teachers, as well as support and follow up. Lohse-Bossenz, Kunina-Habenicht, and Kunter (2013) found that teachers perceived topics in psychology vital in creating curriculum and practices within their own classroom which would benefit their students. Watson (2009) suggested incorporating pre-service training for mainstream practices in teacher programs. This requires a change in teaching programs, which is not always feasible, thus this is where school psychologist can be of assistance. Because school psychologists play such an important role in prevention, intervention, and collaboration; they should be utilized in helping to develop more inclusive practices at a school-wide level.

Scales, like the STATIC, are beneficial in assisting with developing school-wide supports in order to gauge for school-wide perceptions and areas of need. However, these scales need to include school psychologists as they play an important role in special education. Future research should not only look at school psychologists' perceptions of inclusion and inclusion practices, but also their knowledge of progress monitoring, curriculum-based measures and assessments to obtain functional skills and know where to start, and ability to provide consultation to administrators and teachers.

References

Americans with Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 328 (1990).

Chong, S. S., & Ng, K. K. (2011). Perception of what works for teachers of students with EBD in mainstream and special schools in Hong Kong. *Emotional and Behavioural Difficulties,16*(2), 173-188. doi:10.1080/13632752.2011.569404

Cochran, H.K. (1998). *Differences in teachers: Attitudes toward inclusive education as measured by the Scale of Teachers Attitudes Towards Inclusive Classrooms*. Paper presented at the annual meeting of the Midwestern Educational Research Association, Chicago, IL.

Cowan, R.J., McGoey, K.E., & Quallich, K. (2007). The side effects of inclusion for students with learning disabilities: the perceptions of practicing school psychologists. *Learning Disabilities: A Multidisciplinary Journal, 14*(3), 167-176.

De Boer, A.A., & Munde, V.S. (2015) Parental attitudes toward inclusion of children with profound intellectual and multiple disabilities in general primary education in the Netherlands. *The Journal of Special Education, 49*(3), 179-187.

DeLuca, C. (2013). Toward an interdisciplinary framework for educational inclusivity. *Canadian Journal of Education, 36*(1), 305-348.

Dimitrios, K., Georgia, V., Eleni, Z., & Asterios, P. (2008). Parental attitudes regarding inclusion of children with disabilities in Greek education settings. *Electronic Journal for Inclusive Education, 2*(3).

Farrell, P. (2004). School Psychologists. *School Psychology International, 25*(1), 5-19. doi:10.1177/0143034304041500

Forlin, C. (2010). The role of the school psychologist in inclusive education for ensuring quality learning outcomes for all learners. *School Psychology International, 31*(6), 617-630. doi:10.1177/0143034310386535

Gyimah, E.K., Sugden, D., & Pearson, S. (2009). Inclusion of children with special educational needs in mainstream schools in Ghana: influence of teachers' and children's characteristics. *International Journal of Inclusive Education, 13*(8), 787-804.

Hill, D.A. & Sukbunpant, S. (2013). The comparison of special education between Thailand and the United States: Inclusion and support for children with autism spectrum disorder. *International Journal of Special Education, 28*(1), 120-134.

Individuals with Disabilities Education Act of 2004 (IDEA), Pub. L. No. 108-446. U.S.C.

Kuyini, A. B., & Desai, I. (2007). Principals and teachers' attitudes and knowledge of inclusive education as predictors of effective teaching practices in Ghana. *Journal of Research in Special Educational Needs, 7*(2), 104-113. doi:10.1111/j.1471-3802.2007.00086.x

Lai, Y. C., & Gill, J. (2013). Multiple perspectives on integrated education for children with disabilities in the context of early childhood centres in Hong Kong. *Educational Review, 66*(3), 345-361. doi:10.1080/00131911.2013.780007

Leader-Janssen, E., Swain, K.D., Delkamiller, J., & Ritzman, M.J. (2012). Collaborative relationships for general education teachers working with students with disabilities. *Journal of Instructional Psychology, 39*(2), 112-118.

Lohse-Bossenz, H., Kunina-Habenicht, O., & Kunter, M. (2013). The role of educational psychology in teacher education: expert opinions on what teachers should know about learning, development, and assessment. *European Journal of Psychology of Education, 28*(4), 1543-1565. doi:10.1007/s10212-013-0181-6

Mock, D.R., & Kauffman, J.M. (2002). Preparing teachers for full inclusion: Is it possible? *The Teacher Educator, 37*(3), 202-215.

`Nagano, M., & Weinberg, L.A. (2012). The legal framework for inclusion of students with disabilities: A comparative analysis of Japan and the United States. *International Journal of Special Education, 27*(1), 128-143.

National Association of School Psychologists. (2003, April). *Position statement on inclusive programs for students with disabilities*. Bethesda, MD: Author.

National Association of School Psychologists. (n.d.). Who are School Psychologists? Retrieved from https://www.nasponline.org/about-school-psychology/who-are-school-psychologists

Nishimura, T., & Busse, R.T. (2016). Content validation of the Scale of Teachers' Attitudes Towards Inclusive Classrooms (STATIC). *International Journal of Special Education, 31*(2), 186-190.

Nishimura, T.S., & Busse, R. (2015). A factor analytic validation study of the scale of teachers' attitudes towards inclusive classrooms (STATIC). *International Journal of Special Education, 30*(3), 1-8

Oakland, T. (2000). International school psychology. In T. Fagan, & P.S. Wise (Eds.), *School Psychology: Past, present and future* (2nd ed., pp. 355-382). Washington, DC; National Association of School Psychologists.

Rae, H., Murray, G., & McKenzie, K. (2010). Teachers' attitudes to mainstream schooling. *Learning Disability Practice, 13*(10), 12-17

Rehabilitation Act of 1973, Pub. L. No. 93-112. U.S.C.

Runswick-Cole, K. (2008). Between a rock and a hard place: parents' attitudes to the inclusion of

children with special educational needs in mainstream and special schools. *British Journal of Special Education,35*(3), 173-180. doi:10.1111/j.1467-8578.2008.00390.x

Schroeder, S. R., Schroeder, C. S., & Landesman, S. (1987). Psychological services in educational settings to persons with mental retardation. *American Psychologist, 42*(8), 805-808. doi:10.1037/0003-066x.42.8.805

Section 504 of the Rehabilitation Act of 1973, 34 C.F.R. Part 104. (1973)

Sheridan, S., & Gutkin, T. (2000). The ecology of school psychology: Examining and changing our paradigm for the 21st century. *School Psychology Review, 29*, 285-502

Soponaru, C., Paduraru, C., Dumbrava, A., Starica, E.C., & Iorga, M. (2016). Annals of A.I. I. Cuza University, Psychology Serie. *Iasi Universitatea Alexandru Ioan Cuza, 25*(2), 19-28.

Šukys, S., Dumčienė, A., & Lapėnienė, D. (2015). Parental involvement in inclusive education of children with special educational needs. *Social Behavior and Personality: An International Journal, 43*(2), 327-338. doi:10.2224/sbp.2015.43.2.327

Tafa, E., & Manolitsis, G. (2003). Attitudes of Greek parents of typically developing kindergarten children towards inclusive education. *European Journal of Special Needs Education,18*(2), 155-171. doi:10.1080/0885625032000078952

Tamayo, M., Rebolledo, J., & Besoaín-Saldaña, A. (2017). Monitoring inclusive education in Chile: Differences between urban and rural areas. *International Journal of Educational Development, 53*, 110-116. doi:10.1016/j.ijedudev.2017.01.002

Thomas, G. (2012). A review of thinking and research about inclusive education policy, with suggestions for a new inclusive thinking. *British Educational Research Journal , 39(3),* 1–18. http://dx.doi.org/10.1080/01411926.2011.652070.

Turnbull, R., & Turnbull, A. (2015). Looking backward and framing the future for parents' aspirations for their children with disabilities. *Remedial and Special Education, 36*(1), 52-57

U.S. Department of Education. (2016). *Thirty-five Years of Progress in Educating Children With Disabilities Through IDEA.* Retrieved from https://www2.ed.gov/about/offices/list/osers/idea35/history/index_pg10.html

Watson, S. F. (2009). Barriers to inclusive education in Ireland: the case for pupils with a diagnosis of intellectual and/or pervasive developmental disabilities. *British Journal of Learning Disabilities, 37*(4), 277-284. doi:10.1111/j.1468-3156.2009.00583.x

Wilczenski, F. L. (1992). Measuring attitudes toward inclusive education. *Psychology in the Schools, 29*(4), 306-312. doi:10.1002/1520-6807(199210)29:4<306::aid-pits2310290403>3.0.co;2-1

Beyond Please and Thank You: Teaching Civility in the Classroom

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Abstract

Civility is declining at an alarming rate. Parents, teachers, students, and other school personnel are reporting higher rates in uncivil behavior, thinking, and attitudes over the last ten years. This article presents a framework teachers can use to teach civility, and any other value attribute, in their classrooms and schools. The Model of Influences (MOI) moves along a hierarchical process from awareness to action—action that represents genuine thoughts and behaviors, to create opportunities for change to occur from the local classroom to the global community.

Keywords: teaching civility, social and emotional learning, civility curriculum

Beyond Please and Thank You: Teaching Civility in the Classroom

The civility crisis is real. Civility, or the lack thereof, has become a hot button issue in our society. There are fewer examples of people exercising civility in their communities, the workplace, and too often, in the classroom. Many politicians, role models, and the overall public, are failing to engage in civility. In fact, the word civility has become polarizing across a vast landscape of discourse communities. The negative connotation is challenging how many individuals engage in discussions about civility, expose incivility when they witness it, or even advocate for someone who has experienced incivility in the workplace, in the community, or school setting. Why does the word civility invoke negative connotations? The answer is oleaginous attitudes by those in power who have indicted others for their lack of civility, when they themselves practice incivility.

Civility has become a battering ram against decency. In some circles, civility is used as cover for barbaric rhetoric and behavior. In a recent speech to a group at the University of Illinois, Former President Barack Obama shared his thoughts on the state of civility in America. While his commentary was directed toward politics, his comments served as an example of how civility is defined by the current social context in which we lived. He cautioned to move away from the idea of being polite, so long as you get what you want. He furthered his disdain for incivility by drawing attention to the abdication of one's responsibility to act when they witness incivility, and not just bring attention to those in positions of power who engage in incivility (Politico, 2017). Much too often this idea—this definition of civility is perpetuated. It is indignation dressed up as civility. Therefore, it is necessary to broaden the context in which we teach civility, demonstrate civility, and think about civility.

Understanding the Decline of Civility

For the past ten years, Weber-Shanwick have produced the *Civility in America* report. These reports have presented a sobering picture of Americans' experiences with incivility or uncivil behavior in greater numbers. For example, more than 60% of people who participated in the 2017 survey reported incivility leads to harassment, violence, and threats to persons and personhood. In that same survey, participants overwhelmingly reported they are civil, but also indicated that the general U.S. public are uncivil (Weber-Shanwick, 2017). Therefore, taking little to no responsibility for being a part of the general public who might engage in incivility. In fact, Gaines-Ross (2017) reported that one quarter of Americans have left their jobs because of incivility and claim intimidation, harassment, and in some instances, violence and discrimination as the most serious ramifications of incivility. However, incivility is not relegated to the workplace.

Since 2010, parents have reported their children are experiencing more incivility in schools and neighborhood (Weber-Shandwick, 2016). We view videos of incivility demonstrated in our schools through social media. We witness incivility in our communities that spills over into our schools and classrooms. We hear about incidents between teachers and students, student-to-students, and between colleagues. While it is a fact that we experience some incivility during of lifetime, incivility should not be, or become, our new normal. The way in which we interact with each other through social media, across our cultural diaspora, is arguably, abysmal. Unfortunately, schools are experiencing incivility at an exponential rate.

The Root Cause of Incivility in Today's World

Generally, there are three primary reasons why this author believes there has been an exponential decline in civility, especially in schools. One, there is a lack of cultural humility and cultural capital. The inability to expand thinking, actions, and behaviors to broaden the context

by which one interacts and engages with others in an authentic way, is a detriment to our schools and classrooms. When one engages in the life-long process of self-discovery and learning about others, they are exercising cultural humility and applying cultural capital to deepen their understanding of social norms and the status of individuals. New experiences will then shape and mold one's thinking, action, and behaviors toward self and others.

However, when one consistently engages in reinforcing negative social patterns, those individuals arrest their opportunity to expand their schemes of thinking and understandings of others. There are numerous examples of this unfortunate truth. When groups of people and individuals are marginalized because of a conscious, and perhaps, unconscious carelessness toward their humanity, those individuals can become victims of those negative social patterns and thinking.

Two, incivility in politics has strained and challenged many social and cultural ideologies related to equity and equality. Thus, leading to a resurgence or unearthing of false narratives and disenfranchising beliefs about marginalized groups of people. This coupled with the social and cultural ideologies embedded within the current U.S. political administration, for instance, is greatly affecting how people engage and interact with each other nationally and internationally. Politicians are seen as some of the most uncivil people in society (Weber-Shandwick, 2017). The current political landscape, unfortunately, bears that truth. Moreover, in America, one could argue that some politicians' pleas for increased civility is actually a plea used to eliminate decorum and free thought.

Three, technology has made it easier to disengage from society, engage in bullying, and represent civility as no more than cordial commentary. It is commonly known that cyberbullying has led to some unfortunate and unrecoverable incidents. While organizations, schools, and

higher education institutions provide employees and students with email etiquette workshops and protocols to help stem the tide of incivility behind the computer screen; the problem persists. For all the wonderful evolution that technology has provided society, it has also caused new challenges in how people interact with respect and decency toward one another. Therefore, there must be a change in the narrative and the context in which we define, discuss, and teach civility.

Teaching Civility: A Solution to a Broader Issue

An approach to support moving from awareness to action is implementing the Model of Influence (MOI) (Kohler-Evans & Barnes, 2015). This hierarchical framework, introduced in *Civility, Compassion and Courage: Strategies for Implementing in K-12 classrooms,* suggests four levels of outcomes. Level one calls for awareness development. One of the first tasks is to define civility and build an understanding for civility to grow within groups and individual students.

Once an awareness is achieved, one moves to the second level—affirming beliefs and values. This level is based on the idea that one should affirm other's beliefs and values and allow space for those individuals to affirm yours. This is an important level because it addresses the notion that one should respect and appreciate the bias boundaries, norms, etc.…, that guide their experiences, thinking, and behavior.

The third level suggests that one recognizes the benefit of, in this instance, civility, to self and others. Of course, valuing the benefit to self and others is a most important step. This step is predicated on adequate abilities, discerning thoughts, and transparent actions to guide how one engages in discourse, respond to disagreements, and make decisions to achieve mutual respect. That is the essence of civility competency and moves the conversation about, and definition of, civility beyond please and thank you.

The last level of the model is to take action to advocate for, and influence, others. The idea is to make a commitment to take action to create change and become an influencer. Taking action is more than just engaging in discourse. It is how teachers engage students in social justice projects, for example, to gain a deeper understanding of how their behavior and thinking can create significant change for their local, national, and global communities.

In closing, civility is defined by an individual's thoughts, yes, but also by their actions and behaviors—genuine behaviors and actions which demonstrates care, respect, and an investment in the humanity around us. Civility speaks to the greater angles in all of us to arrest the indecencies that drown our civility in negative narratives and ideologies. By teaching students to engage their civility, teachers are helping to create a toolbox of social and emotional competencies students may draw on throughout their lives.

References

Gaines-Ross (2017). Offices can be bastions of civility in an uncivil time. *Harvard Business Review*. Retrieved from: https://hbr.org/2017/07/offices-can-be-bastions-of-civility-in-an-uncivil-time.

Kohler-Evans, P., & Barnes, C. D. (2015). Compassion: How do you teach it? *Journal of Education and Practice, 6*(11), 33036.

Kohler-Evan, P. & Barnes, C.D. (2015). *Civility, compassion and courage in schools today: Strategies for implementing in K-12 classrooms*. Rowman & Littlefield, Publishers: Lanham, MD.

Politico (2017). Transcript: Former President Obama's speech at the University of Illinois. Retrieved from: https://www.politico.com/story/2018/09/07/obama-university-of-illinois-speech-811130

Weber-Shandwick. (2016). Civility in America VI: The state of civility. Retrieved from: https://www.webershandwick.com/news/civility-in-america-2016-us-facing-a-civility-crisis/

Weber-Shandwick. (2017). Civility in America VII: The state of civility. Retrieved from: https://www.webershandwick.com/wp-content/uploads/2018/04/Civility_in_America_the_State_of_Civility-1.pdf

Eerie Elements of Education Reform: Eugenics Past and Present

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Abstract

Based on the recent release of NAEP data, this paper will explore why education reform initiatives have not significantly impacted academic growth for students in marginalized communities. Since the adoption of No Child Left Behind in 2001, education reforms have saturated urban school districts, national policy, and legislative agendas in America. Gleaning from the theoretical framework of a phenomenological research study, participants will gain insight into the historical underpinnings of the education reform narrative. Researchers will conduct a brief historical analysis of Eugenics in education as it relates to reform strategies and the impact on America's most vulnerable communities.

Keywords: culturally sustaining pedagogy, eugenics, education reform

Eerie Elements of Education Reform: Eugenics Past and Present

"History has a way of repeating itself, and black children have a history of being pawns in other people's agenda" Lisa Delpit.

The purpose of this paper is to trace the Eugenics movement in American education with the supposition that a "new eugenics" has re-emerged in schools under the auspices of education reform. Despite eugenics shaping education policy in the 1920s, the history of American eugenics has disappeared from our collective memory. Albeit, colleges, and universities openly embraced the movement as noted through the increase of eugenics course offerings rising from 44 in 1914 to 376 in 1928 (Ladson-Billings, 2012), when exploring the historical context of Eugenics, education is rarely mentioned alongside this ideological stance.

The term eugenics means "well-born" (Stoskopf, 2012), and it is derived from the Greek word eugenes, meaning "good in birth." Galton defined eugenics broadly as "the science which deals with all influences that improve the inborn qualities of a race" as well as those that "develop them with the utmost advantage. Eugenicists used the science of those times to advance a social agenda widely accepted in White America—to breed the best and the brightest, always White, and breed out society's "worst and weakest of all colors" (California Newsreel, 2003).

According to historical accounts, after being embraced within the social landscape, Eugenics eventually nestled itself into educational policy in the form of intelligence or IQ exams. Moreover, all the early leaders in educational and psychological statistics, educational psychology, and mental measurement—Galton, Pearson, Fisher, Thorndike, Goddard, and Brigham—were also deeply involved and influential in the development and spread of eugenic ideology in American universities (Stoskopf, 2012). A common theme in eugenics literature was

that "African Americans were so inferior in both mind and body that their extinction was inevitable, if not imminent" (Stoskopf, 2012, p.16).

Concept

If eugenic ideology, rhetoric, and studies have exhibited a traceable confluence between Black students' inferiority and their perceived educational outcomes, then critical scholarship is paramount in determining if such historical practices are presently manifesting in K-12 school districts with large populations of Black and Brown students. The concept for this paper emerged after conducting a phenomenological study that explored America's largest and most influential alternative teacher certification program during the height of the K-12 education reform movement. Organizational elements were glaring because of the language utilized to recruit prospective teachers, the racial demographics of those accepted, and the intuitions in which the organization's ideal intuition in which they selected potential candidates.

While the research study was published in 2014, the theoretical framework can be utilized today to explicate the realities related of the education reform movement spanning almost two decades. Education reformers purported to deliver transformational results for black and brown children, but the policies have yet to render significant improvements for Black students. We must ask ourselves, why? Within the context of our current political, societal and educational climate, if Eugenic ideology is hovering beneath the surface of the reform movement it will continue to hinder academic progress of students in communities of color.

Data-driven Support

In 1896, Frederick Hoffman presented statistical data as impeccable science in *Race, Traits, and Tendencies of the American Negr*o, which was the same year the Supreme Court legalized segregation (California Newsreel, 2003). In April 2018, The National Assessment of

Educational Progress (NAEP) released their student performance results. NAEP data gauges student progress in the areas of reading and math, across multiple grade levels, states, districts, and overtime to provide trend data for U.S. schools. Despite the billions of dollars utilized to support transformational reform for students of color, recent data reveal the stagnation of academic progress when comparing Black students to their White peers (West, 2018). In our modern era of accountability and reform, the rhetoric behind the movement failed to deliver on the promise.

While further analysis of the data is forthcoming, early findings show that reading results for 4th grade have remained unchanged and nine states have saw a decrease in student performance (Loeb, 2018). In addition to the reading results, data have shown that the over the last eight years (reform movements began to gain momentum in 2008-2009), Black students have shown minimal movement which would result in the narrowing of the "achievement gap". Even more troubling, based on preliminary analysis of the data, in the late 1990s to early 2000s the nation witnessed significant progress for lowest performing students, students of color, and students in underserved communities. This trend held for grades 4 and 8. Now, there appears to be a consistent decline in reading and math across grades 4 and 8 (Loeb, 2018).

Goals

Ultimately, as researchers and practitioners it is imperative to examine the historical connection between present-day education reform initiatives, policies, and their tendency to further marginalize Black students and provide actionable steps for advocacy within their current role(s). It is necessary for research scholars to explore the policies that have a historical link to a philosophy designed, implemented, and perpetuated to impede the academic success of Black students in K-12 schools.

Implication of Concept

Building requires knowing the foundation in which one has decided to construct something new. Many of the reform strategies being adopted have not proven successful for students of color. Our duty is to disrupt narratives operating under the guise of social justice, equity, and civil rights by engaging in an interdisciplinary approach whereby history converges with K-12 education policy to deconstruct the prevailing rhetoric and challenge disparate practices in America's schools. As researchers, leaders, and policymakers, we must have a thorough understanding of the historical context of such reforms which will allow us to advocate, transform, and deliver solutions that rail against the status quo.

This new age of accountability based on student assessment scores has been utilized to rank schools, determine teacher effectiveness, close schools, and foster an insurgence of charter schools in historically marginalized communities (Heilig, Brewer, & White, 2018).

Solutions Based

Many researchers argue that to move schools in a different direction critical analyses are needed to combat structural, institutional and systemic racism in K-12 schools. Professional learning opportunities can be designed to help educators and leaders translate critical scholarship into practice. Collaborative professional learning opportunities should begin with examining their beliefs and perceptions about students of color to examine current practices, reflect on teaching and learning, and determine which practices can be enhanced, adjusted, or eliminated to address the needs of all students.

Examples of professional development solutions include 1) job-embedded support/coaching, 2) teacher-led professional development, and 3) classroom modeling. All three approaches provide opportunities for educators to improve their practice. Job-embedded

professional learning is a collaborative partnership, where teachers are supported individually or in small groups to provide guidance, training, new ideas, and resources that focus on practical strategies for engaging learners and improving student outcomes (Habegger & Hodanbosi, 2011).

Teacher-led professional development recognizes the authority and expertise resides with teachers. Through this avenue, teachers who build culturally sustaining classroom environments can scale effective practices across a school or district. Finally, classroom modeling occurs in an authentic space- the classroom. Modeling is a student-centered approach where planning incorporates students' needs, teachers are observing their students, instructional outcomes align to practice which can increase intentionality when responding to the needs of all learners. If we are to combat reforms in schools, teachers and leaders must engage in professional opportunities that lead them to advocate, disrupt deficit narratives, and permanently empower students of color.

References

California Newsreel. (Producer). (2003). Race: The power of illusion [DVD]. Available from http://newsreel.org/video-transcripts

Habegger, S., & Hodanbosi, P. (2011, February). Embedded instructional coaching: What works. *Principal Leadership, 11*(6), 36-41

Gillborn, D. (2010). Reform, racism and the centrality of whiteness: assessment, ability, and the 'new Eugenics'. *Irish Educational Studies*, *29*(3), 231−252.

Kise, J. A. (2006). *Differentiated coaching: A framework for helping teachers change.* Thousand Oaks, CA: Corwin Press.

Kohn, A. (2000). *The case against standardized testing: Raising the scores, ruining the schools.* Portsmouth, NH: Heinemann.

Ladson-Billings, G. (2012). Through a glass darkly: The persistence of race in education research and scholarship. *Educational Researcher, 41*(4), 115−120.

Loeb, S. (2018, April 10). Low-Performing Students No Longer Making Gains on NAEP [Web log post]. Retrieved from https://www.educationnext.org/low-performingstudents-no-longer-making-gainsnaep/

Stoskopf, A. (2002). Echoes of a forgotten past: Eugenics, testing, and education reform. *Educational Forum, 66*(2), 126−133. doi:10.1080/00131720208984814

Vasquez Heilig, J,. Brewer, T.J. & White, T. (2018). What Instead?: Reframing the debate about charter schools, Teach For America, and testing. In R. Ahlquist, P. Gorski and T. Montano (Eds.), *Assault on Kids and Teachers: Countering privatization, deficit ideologies and standardization of U.S. schools*, (pp. 201-217) New York: Peter Lang.

West, M. (Producer). (2018, April 11). EdNext Podcast: A Lost Decade for U.S. Education? [Audio podcast]. Retrieved from https://www.educationnext.org/ednext-podcast-lost decade-u-s-education/

Mathematics Teachers' Learning to Enact Change in Oppressive Systems

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Abstract

This paper investigates why some teachers in a large urban school district are able to disrupt oppressive systems in their schools that limit students' access to STEAM education, while other similarly-motivated teachers are not. Using constant comparison across four focal cases drawn from ethnographic field notes and interview data, we suggest that teachers' efficacy in removing institutional barriers depends on an alignment between their professional vision, agency, and affordances in the system. Findings from this study suggest that supporting motivated teachers to discern possibilities for disrupting oppressive systems can help teachers advance access to STEAM learning opportunities for urban students.

Keywords: oppression, ethnography, teacher efficacy

Mathematics Teachers' Learning to Enact Change in Oppressive Systems

Why are some teachers able to disrupt oppressive systems in their schools that limit students' access to STEAM education, while other similarly-motivated teachers are not? Current teacher activism literature suggests that in order to create social change, teachers need to know more (Picower, 2012) or to be more motivated (Palmer, Rangel, Gonzales, & Morales, 2014). Theories that focus on individual teachers' knowledge or motivation, however, often overlook the complexity of the systems in which teachers are embedded. Social change-making—or the enactment of "equitable forms of learning and teaching that contribute to a socially just democracy" (Bang & Vossoughi, 2016, p. 173)—requires a collective effort. Schools are known to be difficult places to create change (Little, 2003), so this project seeks to better understand how teachers are able to make change in their schools.

Theoretical Framework

In alignment with sociocultural perspectives on learning that consider activity and agency to be a joint accomplishment of the actors and artifacts in a particular situation (Greeno & MMAP, 1997), we draw on Norris and Jones' (2005) conceptualization of *agency* as resulting from tensions circulating through the sociocultural setting. As individuals move through a setting, they interact with *mediational means*, which are resources (e.g., discourses, tools) that offer particular affordances in particular contexts in particular moments of time (Norris & Jones, 2005; Wertsch, 1994). As the affordances of these resources interact with actors' intentions, the resulting tensions within the activity system bring to light the agency that is distributed across these mediational means and individual teachers in their sociocultural settings.

For example, classrooms in some urban schools still have desks bolted to the floor, which evoke discourses suggesting that the desks are at risk of being moved or misplaced by rowdy or

irresponsible students. In such a classroom, the intentions of a teacher who seeks to promote collaborative learning by arranging students' desks in groups may be thwarted by the particular affordances of resources within the system. Agency is thus distributed across this sociocultural setting and shaped by mediational means, rather than being located solely within the individual teacher; despite the teacher's intentions, immovable desks and discourses in the sociocultural context restrict the possibility of collaborative learning.

In this paper, we draw on Goodwin's (1994) concept of *professional vision* to understand individual teachers' roles within the distributed agency of a complex system. Goodwin defines professional vision as a socially-situated way of seeing with political consequences. What a teacher sees as salient within a system produces a particular connection between specific phenomena such as bolted desks and abstract, categorical ideas such as "collaborative learning." For example, if a teacher's vision of collaborative learning (categorical idea) depends on students gathering around standing whiteboards (specific phenomena) instead of deskwork (specific phenomena), the particular affordances of bolted desks are no longer salient enough for the distributed agency of the system to threaten the possibility of collaborative learning.

For the focal teachers in our study, using a systemic rather than individual lens to focus their professional vision shifted the contours of distributed agency such that the specific phenomena they observed and the categorical ideas to which they linked these phenomena enabled them to make change and disrupt systems in their schools that they perceived as oppressive. Next, we describe our study context and analytic methods.

Data Collection and Analysis

This study was embedded within a longitudinal research-practice partnership between our university and a professional development (PD) organization that focuses on mathematics,

pedagogy, social justice and teacher leadership. From a rich set of ethnographic data on teachers in both school and PD settings, including semi-structured interviews and field notes from classroom observations and PD workshops, we identified a subset of five teachers who believed that particular policies at their urban schools unfairly limited students' possibilities for STEAM learning. Each teacher has intentions, in other words, of creating equitable learning environments for their students. These teachers teach mathematics in public middle and high schools in a large urban district and have between 8 and 18 years of full-time teaching experience.

Seeking to understand how teachers were able to disrupt oppressive systems in urban school settings, we analyzed these ethnographic data using grounded theory and constant comparison (Boeije, 2002). To understand teachers' agentic action in a sociocultural context, we took mediated action as our unit of analysis (Norris & Jones, 2005). This unit of analysis allows us to account for individual teachers' actions, as well as the agency and mediational means available within sociocultural settings.

In the following sections, we present three cases where teachers effectively challenge oppressive systems, and one where teachers do not. We argue that a significant difference between these cases is whether teachers' professional visions mark as salient—and link to categorical ideas about opportunity and justice—individual or systemic phenomena, thus determining what can be accomplished by the distributed agency in the sociocultural setting. These cases illuminate how teachers may be disruptors or conductors of systems that limit urban students' access to important STEAM experiences.

Findings

Lauren

Lauren teaches ninth-grade algebra to students who she feels are often unprepared for algebra; many students enter high school testing on a third-grade level, and Lauren found herself trying to squeeze remedial skills and algebra content into her lessons. Her school used a block schedule, where classes met for 90 minutes every other day, but Lauren felt that this schedule limited students' opportunities to learn. She wanted more total time in class with her students, and she wanted to see them more often. Lauren asked if she could teach "lab periods" that focused on remedial content in addition to algebra classes that prioritized algebra content. Her principal agreed and adjusted the school schedule accordingly. Under this new plan, most students enroll in both an algebra class and a "lab" class; Lauren teaches both of these classes, and thus has twice as much time with her students. She only teaches half as many students, and another teacher now teaches algebra and algebra lab as well.

For years, Lauren's professional vision framed her own classroom instruction as the most salient factor in students' algebra success. This individualistic view did not account for mediational means—such as discourses blaming teachers or students for academic failure, a bell schedule and student load that limited teacher-student interaction—whose affordances meant that the distributed agency within the system was insufficient to change students' algebra outcomes. Shifting to a systemic view that made some of these mediational means more salient, however, linked students' algebra success to school-wide policies rather than individual teaching practice, enabling a different set of possibilities for distributed agency within the system.

Now, Lauren's strong relationship with her principal, the willingness of other mathematics teachers to adjust their teaching loads, and school funding to purchase an online remediation curriculum became mediational means with affordances aligned to Lauren's professional vision in ways that they had not been before. These features of the environment, on

their own, would not have produced change had Lauren continued to view the issue of students' algebra success as an individual problem. With a systemic view, however, she was able to marshal the distributed agency of the setting to realize a mathematics schedule that better supported the mathematics learning of ninth-grade students.

Lorenzo

Lorenzo teaches at a school where most of his students are racially-minoritized and eligible for free or reduced-price lunch. He is strongly committed to ensuring access to educational opportunities for his students, so he was troubled when school administrators decided that they should stop offering Algebra 2 because students were failing it and thus failing to graduate from high school. Lorenzo believed that eliminating Algebra 2 limited students' preparation "for college and college-placement." When a group of students expressed frustration that the state mathematics exam felt harder than what they had learned in their math courses, Lorenzo encouraged them to speak to the principal because their voices "carr[ied] a lot of weight." Then, he offered to "sacrifice and give up Geometry to teach [Algebra 2]." Due to the combination of his students' petition and his volunteering, Algebra 2 was reinstated.

When Lorenzo's professional vision limited what he saw as salient resources and affordances within the system to individual factors, he funneled his energy into building additional algebra content into his Geometry course so that students would be better prepared for college placement exams and college courses. In doing so, he linked the categorical idea of students' preparedness to the specific phenomenon of classroom instruction. Later, when he saw the specific phenomena of the state mathematics exam, students, his relationship with students, students' relationship with the principal, and his own curricular flexibility as salient—rather than

irrelevant—mediational means, the distributed agency of the system coalesced to bring about a concrete change in students' course-taking and STEAM learning opportunities.

Isabella

Isabella teaches at a school where recent shifts in administrative leadership led to replacing mathematics textbooks with teacher-created curricula. Isabella felt that the new curricula did a disservice to students because of their "hodge-podge" and procedural nature, and many teachers did not have the same experience and supportive professional network that she relied on to create quality materials for her own students. She "realized this is the time, if we're going to make change, that I step up," and suggested to the new superintendent and new assistant superintendent that they reorganize the district's mathematics course trajectory from the traditional course sequence of Algebra 1, Geometry, and Algebra 2 to an integrated mathematics approach, which blends algebra, geometry, and statistics with the aim of building connections across topics. Integrated mathematics is common internationally (Grouws et al., 2013), and Isabella saw many advantages for both her students and colleagues, including the availability of high-quality professionally-produced curricula.

Isabella planned to "be discreet" with her advocacy and give people "time to digest" her recommendations; she shared research articles, suggested to the assistant superintendent that they visit schools with integrated mathematics courses, and "very casually" chatted with teachers that she "knew were so skeptical." After diplomatic engagement with both administrators and teachers, Isabella convinced district leaders to adopt an integrated mathematics course sequence and pilot the curricula she suggested. Sharing a photo of students collaborating on rich mathematical tasks at a PD workshop, she exclaimed, "now I can really say every classroom in our school looks like this."

Isabella initially took a narrow view of how to achieve her intentions of providing a meaningful mathematics experience for all students, seeking curricular resources for her classroom alone. However, change occurred when her professional vision shifted to link this categorical idea of a meaningful mathematics experience for all students to the specific, systemic phenomenon of district curricular policy. Moreover, among other mediational means, she realized that after having taught at the same school for nearly two decades, she had professional expertise and the trust of her colleagues and district leaders; being part of this PD organization inspired her to be "a teacher leader;" attending the conference presentation enabled her to see a potential solution; she had access to relevant research articles; nearby schools were successfully implementing an integrated mathematics approach; and high-quality curricula were available. Although nearby schools had been implementing integrated mathematics and high-quality curricula had been available for years, these features did not become affordances for Isabella's mediated action until she took a systemic view. Once she did, however, she detected mediational means in her sociocultural setting that enabled her to press for substantive change: to reorganize a district-wide mathematics program that she perceived as limiting students' STEAM learning.

Kayla and Chloe

Lauren, Lorenzo, and Isabella's systemic lenses enabled them to identify previously imperceptible mediational means in their sociocultural settings that could be leveraged to change policies that limited students' STEAM learning opportunities. It was not merely their intentions or abilities as teachers, nor was it solely the resources in environments, but the interaction between their professional visions and the distributed agency in the system, that led them to disrupt oppressive policies. To further illustrate this relationship, we next present a contrasting case in which two teachers similarly found a school policy to be limiting but saw themselves as

individuals in opposition to a system rather than as participants in the agency distributed across a sociocultural setting. We argue that this individual view foreclosed potential opportunities to act, despite teachers' intentions to create change.

Kayla and Chloe teach at a high school that became a charter school in the early 2000s in order to avoid district oversight. Among the reasons, according to Chloe, was that the school had stricter attendance policies than the district believed were fair: students automatically fail the year after fifteen absences, and teachers are required to lock their classroom doors once the first bell rings so that tardy students are counted as absent. Kayla and Chloe found the policy draconian, but when asked if they had shared their concerns with anyone else, Chloe responded by describing a situation in which she secretly let a tardy student into her class when the student had what she felt was a valid reason for being late, and Kayla noted that students can always appeal their absence records. Their professional vision linked the categorical idea of fairness to the specific phenomena of individual teachers' and students' choices, rather than to the specific phenomena of policies that remove students from their STEAM classes and ultimately, from high school. They did not see as salient their status as well-respected veteran teachers who had strong relationships with their colleagues and administrators, the material and social resources they could access in and outside of school, or other potential mediational means that might better accomplish their stated intentions of social justice. As a result, the distributed agency within this system perpetuated patterns that limited, rather than expanded, urban students' opportunities for STEAM learning.

Discussion and Implications

As long as teachers individualize their understanding of the institutional barriers to STEAM they would like to change, rather than taking systemic views of the possible actors and

opportunities within a system, it is difficult for them to mobilize the mediational means available to disrupt oppressive systems. We do not claim that a systemic view is *sufficient* for this kind of agentic action, merely that it seems to be an important facet of these teachers' professional vision. Without it, our data suggest, they would not have been able to create the kind of change we saw. These findings point to the important role that teachers can play in removing institutional barriers to urban students' success in mathematics, if and when they are able to see affordances within the distributed agency of the sociocultural setting to enact change. Future research might examine how and why teachers' professional vision begins to shift from an individual to a systemic perspective. Our findings suggest that supporting teachers toward a more systemic view of inequities may be crucial for urban students; future research should explore how this shift may be supported and the conditions under which it holds true.

Potential Solutions for Education Stakeholders	
For teachers	• When faced with an oppressive policy or system, ask not only about changes that can be made at the level of its manifestation in your classroom, but what policies or practices might be behind this injustice. In other words, proactively take a systemic view (Lauren). • Think creatively about how changes can be made at the systemic level. Going through official channels to create change may not always be the most effective pathway (Isabella). • Connect with community leaders, families, and other people. Listen to their ideas (Lorenzo). • Think expansively about with whom and where you may have influence, and when it might be best to discreetly advocate (Isabella).
For principals / school leaders	• Be transparent with your staff about the external expectations you face in your position, and about where you do and don't have flexibility in making decisions (Lauren).
For other education stakeholders	• When looking to make changes, look beyond just talking to teachers; think about others who might be able to change the policy or system (Kayla & Chloe). • Collect information from multiple perspectives about what is possible and who to talk to (Isabella). • Consider a multi-fronted effort: approach multiple people at multiple levels of the system about what they can change (Isabella).

	• Find allies who have similar interests and form a coalition (Lorenzo).

References

Bang, M., & Vossoughi, S. (2016). Participatory design research and educational justice: Studying learning and relations within social change making. *Cognition and Instruction*, *34*(3), 173–193.

Boeije, H. (2002). A purposeful approach to the constant comparative method in the analysis of qualitative interviews. *Quality and Quantity, 36*(4), 391-409.

Goodwin, C. (1994). Professional Vision. *American Anthropologist*, *96*(3), 606–633.

Greeno, J. G., & MMAP. (1997). Theories and practices of thinking and learning to think. *American Journal of Education*, *106*(1), 85–126.

Grouws, D. A., Tarr, J. E., Chávez, Ó., Sears, R., Soria, V. M., & Taylan, R. D. (2013). Curriculum and implementation effects on high school students' mathematics learning from curricula representing subject-specific and integrated content organizations. *Journal for Research in Mathematics Education, 44*(2), 416-463.

Little, J. W. (2003). Constructions of teacher leadership in three periods of policy and reform activism. *School Leadership & Management, 23*(4), 401-419.

Norris, S., & Jones, R. H. (2005). *Discourse in action: Introducing mediated discourse analysis.* New York, NY: Taylor & Francis Inc.

Palmer, D., Rangel, V. S., Gonzales, R. M., & Morales, V. (2014). Activist teacher leadership: A case study of a programa CRIAR bilingual teacher cohort. *Journal of School Leadership, 24*(5), 949-978.

Picower, B. (2012). Teacher activism: Enacting a vision for social justice. *Equity & Excellence in Education, 45*(4), 561-574.

Wertsch, J. V. (1994). The primacy of mediated action in sociocultural studies. *Mind, Culture, and Activity, 1*(4), 202-208.

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Hidden Figures No More: The Gifted Gap, STEM Education and Critical Inquiry Professional Development

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Abstract

Racial and socio-economic disproportionality in Gifted Education has a negative impact on Black and Latinx student enrollment in advanced science, technology, engineering and math (STEM) courses, reducing opportunities for students in STEM professions. Data from a large, urban Southeastern school district reveals an extensive Gifted Gap including low numbers of students in gifted education programs at high poverty schools and district-wide racial disproportionality. Solution-focused strategies include Critical Inquiry Professional Development (CIPD). Incorporating active learning and reflection, CIPD challenges stakeholders to develop strategies that expand advanced academic opportunities for Black and Latinx students to broaden participation in STEM.

Key words: Gifted education, STEM, Critical Inquiry Professional Development

Hidden Figures No More: The Gifted Gap, STEM Education and Critical Inquiry Professional Development

"We will break down doors to get a student qualified for Special Education services. Are we willing to do the same for our gifted students?" Classroom Teacher Participant in CIPD

Broadening participation in careers engaged in science, technology, engineering and math (STEM) research and innovation requires equitable opportunities for all students. Participation in gifted education programs in elementary and middle school significantly increases the potential that a student will enroll in advanced courses in high school that positively impact college admission, retention and completion of a STEM degree (Darity & Jolla, 2009; Flores, Park & Baker, 2017; Grissom & Redding, 2016). An exploration of the Gifted Gap reveals systemic inequities limiting access for students experiencing poverty, and Black and Latinx students of all socioeconomic backgrounds.

Gifted education disproportionality is not a new phenomenon (Ford, 1995; Goings & Ford, 2018). The re-segregation of urban school districts, however, reveals restricted access to advanced curriculum hidden in formerly "integrated" schools. Data exposing racial disproportionality at the school, district and state levels is now widely available to educators, parents, students and other stakeholders via the Department of Education Office of Civil Rights (U.S. Dept. of Education, 2018). As stakeholders utilize data to investigate the Gifted Gap, they are equipped to become advocates for equity in their classrooms, schools and district.

Purpose

The purpose of this research is to explore gifted education disproportionality in a large, urban school district and investigate solutions through which inequities can be addressed. The Gifted Gap is defined as the difference in the percent of students enrolled in gifted education

programs at high poverty schools compared to low poverty schools (Yaluma & Tyner, 2018). While gifted education disproportionality has been studied at the national and state level (Hodges, Tay, Maeda & Gentry, 2018; Kettler, Russell & Puryear, 2015; McBee, 2010: Wright, Ford & Young, 2017), district level analyses are rare. Black students, Latinx students and students experiencing poverty are less likely to be identified for and retained in gifted education programs than White, Asian and affluent students (Goings & Ford, 2018; Grissom & Redding, 2016; McBee, 2010; Moore, Ford, & Milner, 2005; Wright, Ford & Young, 2017). Consequently, it is hypothesized that the Gifted Gap in urban districts will be larger than equivalent gaps at the national or state level. Correlations between participation in gifted education and Advanced Placement (AP) Math and Science enrollment are also predicted.

A second purpose of this study was to explore solutions to the Gifted Gap. Previous research indicates that educators at urban schools are discouraged from expanding curriculum through creative, thematic approaches (Berliner, 2011; Moon, Brighton, & Callahan, 2003) and lack awareness of their tendency to overlook giftedness in students whose backgrounds differ from their own (Allen, 2017; Milner & Ford, 2007). Professional development is warranted that promotes awareness of the Gifted Gap and encourages educators to reflect on ways that their practices may perpetuate inequities in education.

Methods

Data for a large, southeastern United States Metropolitan School District was disaggregated by school. The percent of students participating in gifted education programs for high poverty (>75% FRPL) and low poverty (<25% FRPL) schools was calculated at the district level and compared to state and national findings. Correlations between gifted education program participation, AP course enrollment, AP course availability and student socioeconomic

status were explored. Previous research indicates a lack of awareness on the part of teachers in urban schools regarding the existence and impact of the Gifted Gap (Allen, 2017). A pilot Critical Inquiry Professional Development (CIPD) session was conducted with teachers and instructional coaches (N=28) at three high poverty elementary schools.

Findings

While the national Gifted Gap is 6% and the Gifted Gap for the state in which the district analyzed for this study is located is 12% (Yaluma & Tyner, 2018), the equivalent gap for Metropolitan School District is 15.5%; while 18% of students attending low poverty schools in this district participate in gifted education programming, only 2.45% of students enrolled in high poverty schools receive equivalent services. Racial disproportionality in gifted education programs at low poverty schools is extensive. Enrollment in gifted education programs predicts patterns in participation in AP Math and Science courses.

Proposed Solutions

The availability of data regarding gifted education enrollment democratizes research and provides opportunities for students, parents, educators and other stakeholders to explore and address inequities. Critical Inquiry Professional Development (CIPD) introduces teachers to the Gifted Gap. In CIPD sessions, teachers are encouraged to explore school-level data. In a pilot study, teacher participants at three high poverty schools indicated that gifted education programming is not something they think about. Participants brainstormed in small groups and shared ways they can personally address the Gifted Gap. Proposed solutions included using portfolios to identify students for gifted education services, raising awareness of gifted education identification procedures with parents and other student advocates, and utilizing culturally relevant pedagogies that increase exposure to challenging curriculum for all students.

References

Allen, J. (2017). Exploring the role teacher perceptions play in the underrepresentation of culturally and linguistically diverse students in gifted programming. *Gifted Child Today, 40*(2), 77-86.

Berliner, D. (2011). Rational responses to high stakes testing: the case of curriculum narrowing and the harm that follows. *Cambridge Journal of Education*, *41*(3), 287-302.

Darity Jr, W., & Jolla, A. (2009). Desegregated schools with segregated education. In C. Hartman & G. Squires (Eds.), *The integration debate: Futures for American Cities* (99-117). New York: Routledge.

Flores, S. M., Park, T. J., & Baker, D. J. (2017). The racial college completion gap: Evidence from Texas. *The Journal of Higher Education*, *88*(6), 894-921.

Ford, D. Y. (1995). Desegregating gifted education: A need unmet. *Journal of Negro Education*, *64*(1), 52-62.

Ford, D. Y. (2011). Closing the achievement gap: Gifted education must join the battle. *Gifted Child Today*, *34*(1), 31-34.

Goings, R. B., & Ford, D. Y. (2018). Investigating the intersection of poverty and race in gifted education journals: A 15-year analysis. *Gifted Child Quarterly*, *62*(1), 25-36.

Grissom, J. A., & Redding, C. (2016). Discretion and disproportionality. *AERA Open*, *2*(1) 1-25.

Hamilton, R., McCoach, D. B., Tutwiler, M. S., Siegle, D., Gubbins, E. J., Callahan, C. M., Brodersen, A. V. & Mun, R. U. (2018). Disentangling the roles of institutional and individual poverty in the identification of gifted students. *Gifted Child Quarterly*, *62*(1), 6-24.

Hodges, J., Tay, J., Maeda, Y., & Gentry, M. (2018). A meta-Analysis of gifted and talented

identification practices. *Gifted Child Quarterly*, *62*(2), 147-174.

Kettler, T., Russell, J., & Puryear, J. S. (2015). Inequitable access to gifted education: Variance in funding and staffing based on locale and contextual school variables. *Journal for the Education of the Gifted*, *38*(2), 99-117.

McBee, M. (2010). Examining the probability of identification for gifted programs for students in Georgia elementary schools: A multilevel path analysis study. *Gifted Child Quarterly*, *54*(4), 283-297.

Milner, H. R. & Ford, D. Y. (2007). Underrepresentation of culturally diverse elementary students in gifted education. *Roeper Review, 29*(3), 166-173.

Moon, T. R., Brighton, C. M., & Callahan, C. M. (2003). State standardized testing programs: Friend or foe of gifted education? *Roeper Review*, *25*(2), 49-60.

Moore III, J. L., Ford, D. Y., & Milner, H. R. (2005). Recruitment is not enough: Retaining African American students in gifted education. *Gifted Child Quarterly*, *49*(1), 51-67.

United States Department of Education. (2018). *Office for Civil Rights* (Data Collection). Retrieved from http://ocrdata.ed.gov/

Wright, B. L., Ford, D. Y., & Young, J. L. (2017). Ignorance or indifference? Seeking excellence and equity for underrepresented students of color in gifted education. *Global Education Review*, *4*(1), 45-60.

Yaluma, C. B. & A. Tyner (2018). *Is there a gifted gap? Gifted education in high poverty schools.* Retrieved from https://edexcellence.net/publications/is-there-a-gifted-gap.

"Je m'appelle. Ima fail." Perceptions of Academic Success for Community College Composition Students

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Abstract

This paper discusses contributing factors to the commonly occurring lack of engagement and student motivation in community college composition courses, as well as the ostensibly decreased desire for academic success. The author will explore factors that have played a role in the "mediocrity phenomenon" affecting many students in higher education. Information pertaining to pressing issues regarding engagement and motivation that English and composition instructors at two-year institutions are currently facing will be explored as well. This paper will offer insight into educational experiences that serve as contributing factors to the growing gap between established course and instructor expectations compared to those held by students enrolled in composition courses at two-year institutions. Additionally, there are often external factors linked to pre-college student experiences that serve as barriers. Those influences include but are not limited to: (a) negative experiences with discourse in K-12; (b) language and/or dialect barriers and; (c) technological advancements. Finally, successful strategies to yield positive outcomes in composition and academic discourse will be outlined.

Keywords: student success, academic engagement, composition

"Je m'appelle. Ima fail." Perceptions of Academic Success for Community College Composition Students

As a community college instructor, I find myself engaging with students of various ages, ethnicities, socioeconomic backgrounds, and more over the course of any given school year. While it often becomes clear to me fairly early on in the semester which students will produce acceptable and adequate levels of work during the course of our time together, I often find myself confounded by the number of students who are willing to submit mediocre work; or in some cases, no work at all. As a result, I first reached out to my peers to see if my experiences were, by chance, an isolated incident. I quickly learned that many of them were facing the very same challenges. Secondarily, I sought out existing research with the hopes that I would discover helpful strategies to readjust my pedagogical practices, and to motivate my students toward being enthusiastic about their educational outcomes. However, in order to successfully attempt to reverse the mediocrity phenomenon, I had to look more closely at the root causes of it in order to develop effective solutions.

Some scholars argue that due to the rapid advancements in technology over the last two decades and the problematic model of the American public school system, long gone are the days when college classrooms consist primarily of the "perfectionist" student (Biggs, 2003; Halgin & Leahy, 1989). As the world around them provides information instantaneously through devices in their pockets or the palms of their hands, student expectations with regards to how they acquire knowledge have shifted as well. Consequently, the faces of teaching and schooling – their primary means of obtaining knowledge – have evolved at a much slower rate (Nilson, 2016).

Through personal observations and conversations with students, I began the probing process of trying to identify what previous experiences they had in academia impacted their perceptions of what it means to be a successful student. I concluded that there are three key factors that played a role in molding them into pre-college students. Those factors include: (a) negative experiences with discourse in K-12; (b) language and/or dialect barriers and; (c) technological advancements.

Academic discourse plays a major role in all of the courses that I teach. From the rudimentary writing for academia courses to research-based or in-depth literature courses, my traditional/seated and online classes all require some level of actively participating in conversations about learning and about writing. It has been discussed that student perceptions of power and academic authority plays a vital role in their willingness to engage in classroom discussions (King, 2018). Oftentimes in K-12 settings, students are encouraged to "speak up" or raise their hands if they have the *correct* answer the question the teacher has posed. However, in post-secondary learning environments, instructors are seldom in search of "right" answers. Essentially, offering one wrong answer, being rejected by the teacher, and sometimes humiliated by peers could cause a student to withdraw from the process of academic discourse for the remainder of their educational careers (Gall, 1970). This also applies to students who speak different languages and dialects. Encouraging *all* students to realize their voices and thoughts are welcome during discussion – regardless of how it sounds – fosters an inclusion-based environment.

Finally, meeting students where they are gives educators a unique opportunity to incorporate learning tools that students are already familiar with. In doing so, instructors can reach students who may be disengaged or disinterested due to the traditional lecture model

(Nilson, 2016). Finding ways to incorporate social media, and other technological tools has proven to increase interest, motivation, and engagement in many of my courses. Combating the mediocrity phenomenon has involved readjusting and reframing how writing is taught in my classrooms. In addition to encouraging student voice and integrating multi-modalities, challenging them to explore and write about topics that align with their personal interests has been tremendously effective as well.

References

Biggs, J. (2003). *Teaching for quality learning at university* (2nd ed.). Berkshire, UK: Society for Research into Higher Education and Open University Press.

Gall, M. D. The use of questions in teaching. *Review of Educational Research, 40*, 707-721. doi: 10.3102/00346543040005707

Halgin, R. P. & Leahy, P. M. (1989). Understanding and treating the perfectionist college students. *Journal of Counseling & Development, 68*(2), 222-225. doi: 10.1002/j. 1556-6676.1989.tb01362.x

Kenner, K. (2016). Student rationale for self-placement into first-year composition: Decision making and directed self-placement. *Teaching English in the Two-Year College, 43*(3), 274-289.

King, E. (2018). Understanding classroom silence: How students' perceptions of power influence participation in discussion-based composition classrooms. *Teaching English in the Two-Year College, 45*(3), 284-305.

Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors* (4th ed.). San Francisco, CA: Jossey-Bass.

Cooperative Controversy for Conceptual Shift

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Abstract

This study investigated the impact of extending the cooperative controversy activity over a period of four weeks (without extending the on-task time from the original sixty minutes) on the degree and nature of conceptual shift in beliefs regarding the nature of science. We were able to find evidence for the impact of time on the nature and degree of conceptual shift which we interpret as a function of critical reflection, an important step towards the development of critical pedagogy among pre-service teachers.

Keywords: Critical Pedagogy, Cooperative Controversy, Conceptual Shift

This study investigated the impact of extending the cooperative controversy activity over a period of four weeks (without extending the on-task time from the original sixty minutes) on the degree and nature of conceptual shift in beliefs regarding the nature of science, an important step towards the development of critical pedagogy among pre-service teachers.

Conceptualizations of Science

Conceptions teachers hold about the nature of science have a direct impact on their practices as educators (Kearney, 1984; Kincheloe, 2003; Lakoff & Johnson, 1999; Smith, 1990). Helping students in teacher preparation programs to engage in critical reflection regarding their conceptualizations of science is a crucial aspect of preparing the next generation of teachers to cultivate complex conceptualizations of science (Meyer, Shanahan, & Laugksch, 2005) and to engage their students in transformational critical constructivist learning (Kincheloe, Steinberg, & Tippins, 1999). Instructional strategies aimed at facilitating conceptual change are the subject of increasing research interest (diSessa, 2014; Kalra & Baveja, 2012; Sinatra & Chinn, 2012; Vosniadou & Mason, 2012). Results of prior studies (Cellitti, Donaldson, & Hammrich, 2017; Donaldson, Cellitti, & Hammrich, 2017) indicated either mixing or slight shifts in conceptualizations of science and suggested that facilitation of conceptual shift requires a longer period of time to allow for critical reflection.

Cooperative Controversy

Cooperative Controversy is an effective instructional strategy in engaging students in critical reflection and conceptual shift (Hammrich, 1998; Jacobs, 2010). Teams of participants prepare and conduct debates regarding the nature of science, after which they switch sides and debate the opposing viewpoint. Typically, the activity is conducted in one 60-minute session.

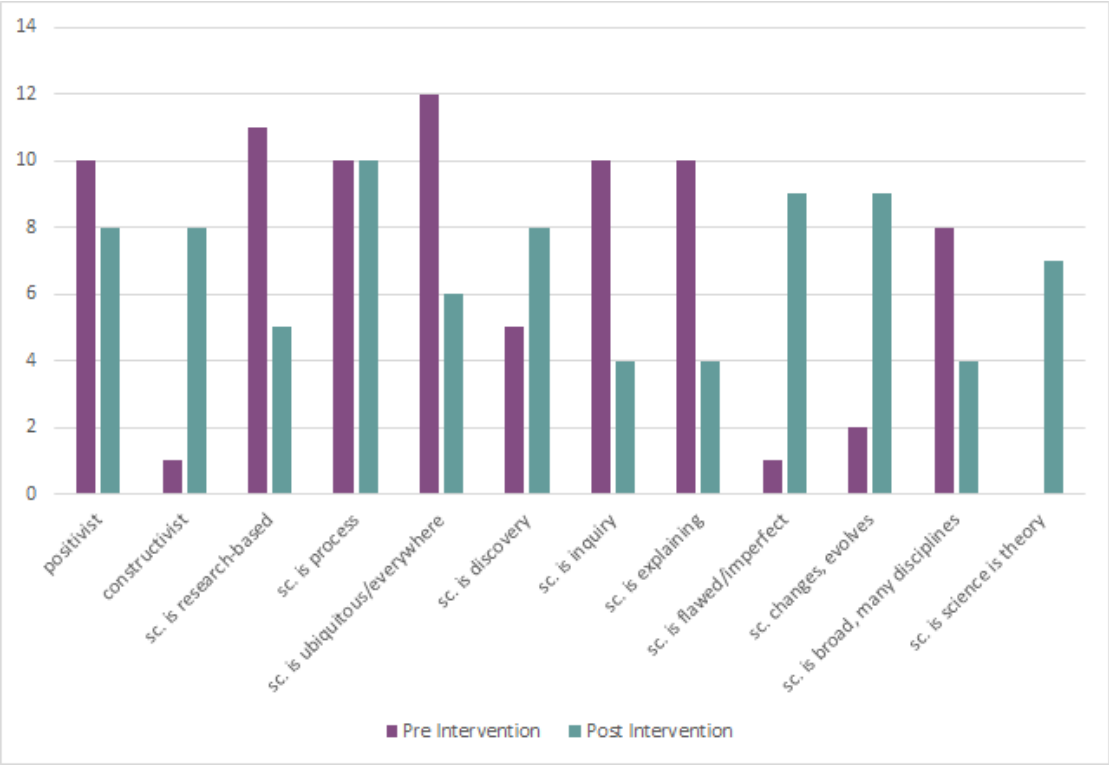
This study extended the cooperative controversy activity over four weeks in order to determine the impact of time.

Methods

This study used case study methodology. Pre-and post-intervention short essays were collected after participants engaged in four 15-minute cooperative controversy sessions over a period of one month. Participants' papers were analyzed by content analysis and grounded theory coding strategies. Pre- and post-intervention essays were collected from thirteen participants. Analysis was conducted independently by the researchers and compared for inter-rater reliability. Pre-intervention findings were compared to post-intervention findings in light of the literature in the fields of conceptual change and conceptualizations of science, including Thagard & Findlay (2012), Thagard (2014), Sinatra & Pintrich (2003), Koponen (2014), Jaber & Hammer (2016), Gentner et al (1997), and Amin (2009). Overall findings were compared to findings our previous research (one-hour intervention) to determine short-term impact (change over time).

Findings

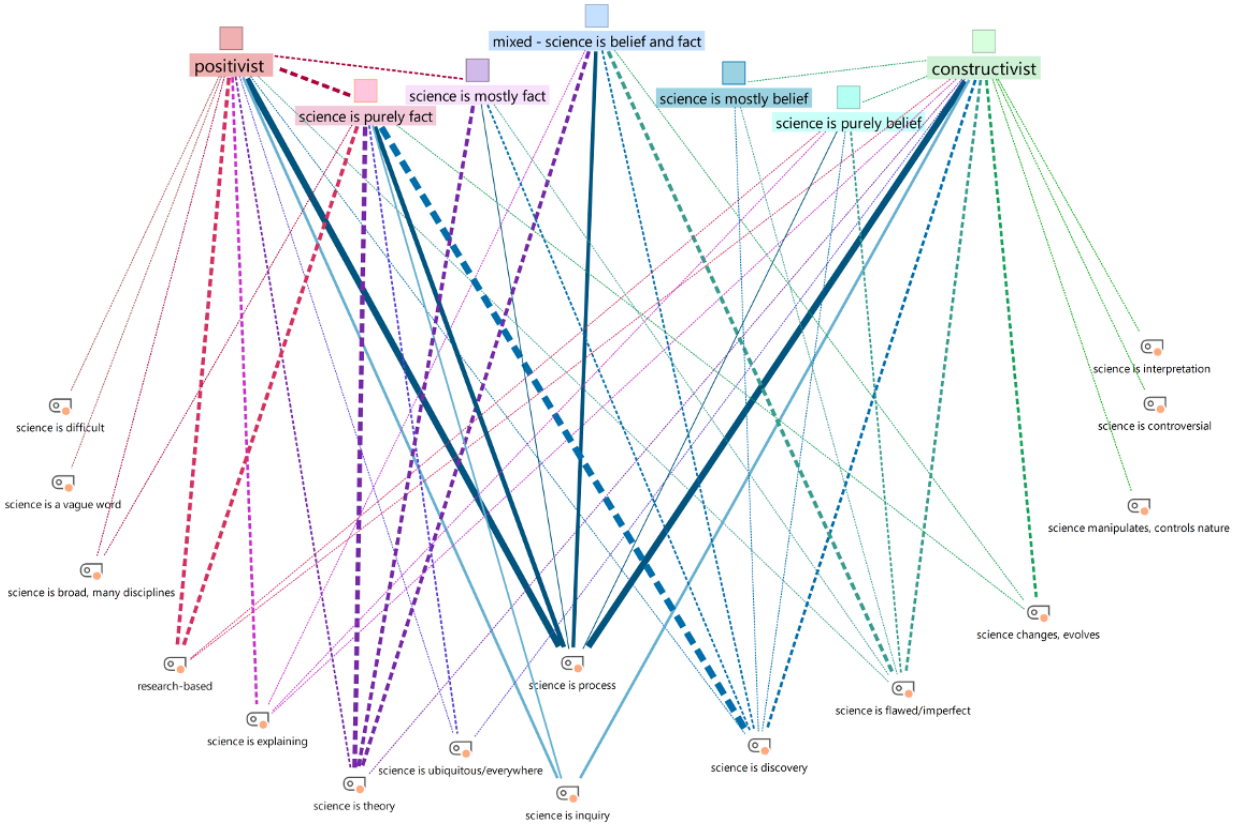
Findings revealed evidence that participants had problematized their conceptualizations of the nature of science to a greater degree than in previous one-hour interventions. The participants' post-intervention responses revealed an increase in constructivist worldviews and a decrease in positivist worldviews. There was a significant increase in characterizations of science being flawed or imperfect. Another marked increase was seen as participants discussed science as a notion that changes or evolves. Another increase in the characterizations was science being discussed as discovery.



The pre- to post-intervention findings revealed decreases in number of characterizations of science. One of the most frequent characterizations of science in the pre-intervention data set was the notion that science is ubiquitous or everywhere. Other characterizations that decreased were of science as being research-based, science as inquiry, and science as explaining. Another characterization that was common in the pre-intervention data set was the description of scientific disciplines (e.g., biology, chemistry), which also decreased post-intervention.

Overall, some concepts clustered around particular worldviews: positivist, constructivist, and pragmatist. When looking at the participants with a positivist worldview, science was generally described as being fact-based or research-based. For example, participants discussed how science "can be proven to be true" and how "facts are the building blocks on which scientists can explore." The notion of science being based on "facts" was repeated throughout this worldview. The positivist worldview was also evident as participants described science as being used to explain the world around us and how the purpose of science is to "figure out why

somethings happens, when something happens." Participants with this worldview also described science as being "broad," "hard to define," and often described it in relationship to specific science disciplines. On the constructivist side, participants described science as something that changes over time, as well as being imperfect or flawed. Between these poles, students with a pragmatist worldview tended to describe science as a process that leads to discovery.



Significance

Overall, we have found that the cooperative controversy activity was more effective over time. This is supported by the findings that suggest the extended intervention led to a greater degree of conceptual shift. More specifically, the 4-week intervention increased constructivist conceptualizations and decreased positivist conceptualizations while the 1-hour intervention had an opposite effect and actually increased positivist conceptualizations while decreasing

constructivist conceptualizations. Additionally, the 1-hour intervention increased confusion in participants while the 4-week intervention increased complexity of thought. This can be seen in one participants description, "The act of simply questioning the way the world works and coming up with a hypothesis to understand it can be considered the basics of science and scientific discovery." These findings suggest that the 1-hour intervention was not long enough for participants to reflect on the intervention, leading them to surface their problematic beliefs without having time to adapt them. Because of this, we found that the 4-week intervention prompted deeper problematization and in turn, led to more complex thinking.

We were able to find evidence for the impact of time on the nature and degree of conceptual shift, which we interpret as a function of critical reflection. This adds to the literature on designing activities for conceptual shift, a crucial matter for schools of education—particularly for the development of STEM teachers capable of engaging in critical pedagogy.

Solutions-based Implications

The findings discussed above have informed our work within the School of Education, which has directly impacted urban educational environments. More specifically, this cooperative controversy strategy is being used with pre-service teachers at a university that resides within a large urban school district. The pre-service teachers that have participated in this activity have been able to further shift their conceptualizations regarding the nature of science into more informed viewpoints that more closely align with scientists. Additionally, this experience has provided these pre-service teachers with a pedagogical technique they can use in their future classrooms. The findings of this study suggest that educators who wish to engage their students in conceptual shift activities should construct activities to be spread over time to allow for reflection.

References

Amin, T. G. (2009). Conceptual metaphor meets conceptual change. *Human Development, 52*(3), 165-197.

Cellitti, J., Donaldson, J. P., & Hammrich, P. L. (2017, January). *Worldviews and conceptualizations of teaching, learning, and inquiry in two teacher education programs*. Paper presented at the Fifteenth Annual Hawaii International Conference on Education, Honolulu, HI.

diSessa, A. A. (2014). A history of conceptual change research. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (2nd ed., pp. 88-108). New York, New York: Cambridge University Press.

Donaldson, J. P., Cellitti, J., & Hammrich, P. L. (2017, January). *Shifting conceptualizations of science through cooperative controversy*. Paper presented at the Fifteenth Annual Hawaii International Conference on Education, Honolulu, HI.

Gentner, D., Brem, S., Ferguson, R. W., Markman, A. B., Levidow, B. B., Wolff, P., & Forbus, K. D. (1997). Analogical reasoning and conceptual change: A case study of Johannes Kepler. *Journal of the Learning Sciences, 6*(1), 3-40. doi:10.1207/s15327809jls0601_2

Hammrich, P. L. (1998). Cooperative controversy challenges elementary teacher candidates' conceptions of the "nature of science". *Journal of Elementary Science Education, 10*(2), 50-65.

Jaber, L. Z., & Hammer, D. (2016). Engaging in science: A feeling for the discipline. *Journal of the Learning Sciences, 25*(2), 156-202. doi:10.1080/10508406.2015.1088441

Jacobs, G. (2010). Academic controversy: A cooperative way to debate. *Intercultural Education, 21*(3), 291-296.

Kalra, M. B., & Baveja, B. (2012). Teacher thinking about knowledge, learning and learners: A metaphor analysis. *Procedi -Social and Behavioral Sciences, 55*, 317-326. doi:http://dx.doi.org/10.1016/j.sbspro.2012.09.509

Kearney, M. (1984). *World view*. Novato, CA: Chandler & Sharp Publishers.

Kincheloe, J. L. (2003). *Teachers as researchers. Qualitative inquiry as a path to empowerment, Second edition*. New York: RoutledgeFalmer.

Kincheloe, J. L., Steinberg, S. R., & Tippins, D. J. (1999). *The stigma of genius: Einstein, consciousness, and education*. New York, NY: Peter Lang

Koponen, I. T. (2014). Introduction: Conceptual change and its models. *Science & Education, 23*(7), 1411-1412. doi:10.1007/s11191-014-9689-7

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York, NY: Basic books.

Meyer, J. H. F., Shanahan, M. P., & Laugksch, R. C. (2005). Students' conceptions of research. I: A qualitative and quantitative analysis. *Scandinavian Journal of Educational Research, 49*(3), 225-244. doi:10.1080/00313830500109535

Pintrich, P. R., & Sinatra, G. M. (2003). Future directions for theory and research on intentional conceptual change. In G. M. Sinatra & P. R. Pintrich (Eds.), *Intentional Conceptual Change* (pp. 429-441). Mahwah, N.J.: Routledge.

Sinatra, G. M., & Chinn, C. A. (2012). Thinking and reasoning in science: Promoting epistemic conceptual change. In K. R. Harris, S. Graham, T. Urdan, A. G. Bus, S. Major, & H. L. Swanson (Eds.), *APA educational psychology handbook, Vol 3: Application to learning and teaching.* (pp. 257-282). Washington, DC, US: American Psychological Association.

Sinatra, G. M., & Pintrich, P. R. (2003). The role of intentions in conceptual change learning. In G. M. Sinatra & P. R. Pintrich (Eds.), *Intentional Conceptual Change* (pp. 1-18). Mahwah, N.J.: Routledge.

Smith, E. L. (1990, March). *Implication of teachers' conceptions of science teaching and learning.* Paper presented at the Annual National Science Teachers Association. 1-54.

Thagard, P. (2014). Explanatory identities and conceptual change. *Science & Education, 23*(7), 1531-1548. doi:10.1007/s11191-014-9682-1

Thagard, P., & Findlay, S. (2012). *The cognitive science of science: explanation, discovery, and conceptual change*. Cambridge, Mass: MIT Press.

Vosniadou, S., & Mason, L. (2012). Conceptual change induced by instruction: A complex interplay of multiple factors. In K. R. Harris, S. Graham, T. Urdan, S. Graham, J. M. Royer, & M. Zeidner (Eds.), *APA educational psychology handbook, Vol 2: Individual differences and cultural and contextual factors.* (pp. 221-246). Washington, DC, US: American Psychological Association.

Critical Pedagogy and Conceptual Metaphor

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Abstract

Conceptual metaphor theory suggests the metaphors we use for a concept such as learning dictate our practices in teaching and learning. Critical pedagogy theorists have argued that the positivist transfer/acquisition/banking conceptualization of learning is dominant in society and must be rejected. They characterized critical pedagogy learning through construction metaphors. This study used a critical pedagogy lens to understand conceptualizations of learning among educational researchers, and how they relate to beliefs regarding the purpose of education and effective practices in teaching, learning, and social justice.

Keywords: Critical Pedagogy, Conceptual Metaphor, Conceptual Change

Critical Pedagogy and Conceptual Metaphor

This study used a critical pedagogy lens to understand conceptualizations of learning among educational researchers, and how they relate to beliefs regarding the purpose of education and effective practices. Conceptual metaphor theory suggests that most (if not all) human concepts are grounded in metaphors, and that the metaphors we use for a concept such as learning dictate our practices in teaching and learning (Deignan, 2010; Lakoff & Johnson, 1980, 1999). Furthermore, since conceptual metaphors dictate what we can and cannot see and influence what we value, they are intrinsically linked with worldviews (Gibbs, 2014; Goatly, 2007). Conceptual metaphors can be characterized by analyzing clusters of surface metaphors people use when discussing a particular concept (Deignan, 2010; Gibbs, 2014). Critical pedagogy theorists have argued that the positivist transfer/acquisition/banking conceptualization of learning is dominant in society and must be rejected (Freire, 1970/2005; Giroux, 2013; Kincheloe, Steinberg, & Tippins, 1999). They characterized critical pedagogy learning through construction metaphors and constructivist worldviews, arguing that critical pedagogy work requires rejection of positivist beliefs regarding the nature of learning (Apple, 2014; Giroux, 2014; Kincheloe, 2007).

Methods

Conceptual metaphor analysis (Cameron & Maslen, 2010; Deignan & Semino, 2010) was used to characterize conceptualizations of learning, and grounded theory (Charmaz, 2014; Corbin & Strauss, 2015; Thornberg, 2012) to analyze alignments between conceptual metaphors, practices, and worldviews. Three hundred and fifteen academic journal articles from two leading educational research journals from the last five years were analyzed. Surface metaphors related to learning were coded, and analysis of co-occurrence patterns revealed conceptual metaphors.

Beliefs related to practices and worldview were coded and alignments between conceptual metaphors of learning, practices, and worldviews were analyzed.

Findings

Forty-nine percent of articles used the transfer/acquisition conceptualization of learning, and 19% the construction conceptualization. Thirty-three percent assumed that learning is quantifiable, and 39% that test scores measure learning. A minority used situative or sociocultural perspectives (5% distributed learning, 4% sociocultural ways of knowing, and 0.4% contextualized/situated learning). In 27% the purpose of education is for careers, 15% economic growth/workforce demand, and 19% citizenship. Others included empowerment/social justice agency (10%), intellectual skills (5%), personal transformation (5%), and disrupting systems of oppression (1%). Practices endorsed included learning standards (17%), learning objectives (10%), accountability (7%), textbooks (6%), critical consciousness work (4%), agency (4%), praxis (3%), autonomy (1%), ownership (0.8%), community of practice (0.8%), and empathy work (0.4%). There were strong relationships between the transfer/acquisition conceptualization, a set of practices (testing, lecturing, textbooks), and a belief that the purpose of education is for career/workforce demand. There was a strong relationship between the construction conceptualization, a set of practices (discussion, projects, community, agency), and beliefs that the purpose of education is for social change, social justice, empowerment, or community engagement.

Significance

The dominant conceptualization of learning in society today is grounded in a *transfer/acquisition* conceptual metaphor of learning (Bruner, 1996; Donaldson, 2018; Kincheloe & Steinberg, 1998; Papert & Harel, 1991). The *transfer/acquisition* metaphor sees knowledge as

consisting of discrete entities and learning as the transfer of those entities from authoritative sources such as teachers and books into the minds of learners. Learners are then expected to be able to transfer the acquired knowledge to new contexts (Shemwell, Chase, & Schwartz, 2015). Hager and Hodkinson (2009) argued that although this is the dominant metaphor in society today, it is rarely recognized as such: "So fixed are acquisition and transfer in the popular mind that this conceptual lens can be dubbed the 'common-sense account of learning'" (p. 622). The *transfer/acquisition* conceptual metaphor of learning consists of a constellation of interrelated surface metaphors for knowledge (e.g., *give, product, possession, property, competencies, outcomes*, etc.), mind (e.g., *container, receptacle, customer, raw materials, machine*, etc.), learning (e.g., *acquisition, (to be) filled, receiving, storing, taking, absorbing*, etc.), and education (e.g., *transfer, transmit, banking, factory, production, market, business*, etc.). See Figure 1 to see the relationships between metaphors, worldviews, paradigms contribute to the transfer/acquisition conceptualization of learning, and how this conceptualization impacts practices, communication, cognitive filtering, and values.

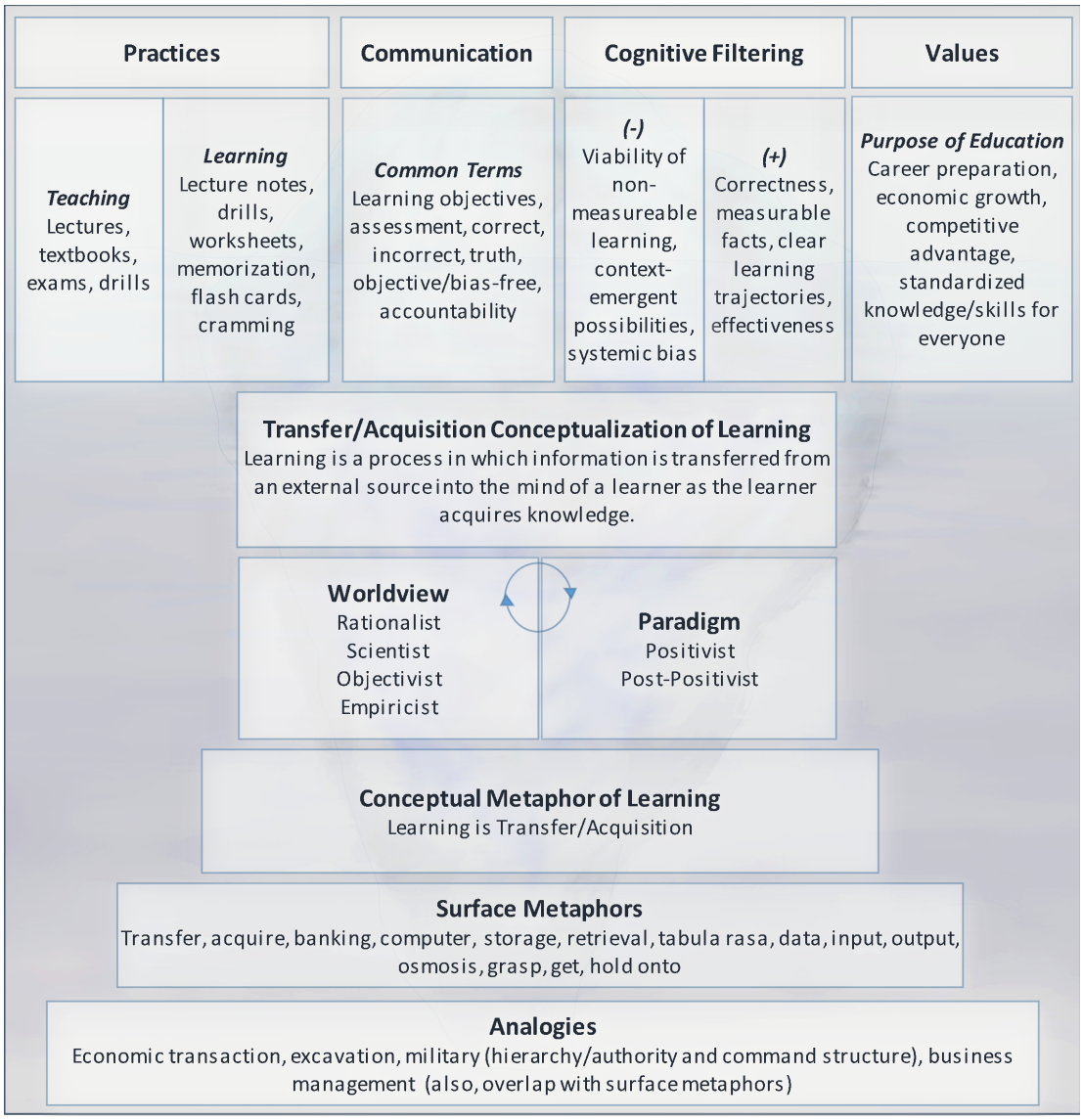

Figure 1: Transfer/Acquisition Conceptualization of Learning

Many educational researchers including Dewey (1897, 1938), Vygotsky (1934/1986), and Bruner (1986, 1996) had conceptualizations of learning grounded in a *construction* conceptual metaphor: meaning is individually, collaboratively, and collectively constructed. The *construction* conceptual metaphor consists of a constellation of surface metaphors for knowledge (e.g., *constructed* (socially or individually), *systems of relations*, *subject/object fusion*, etc.), mind (e.g., *constructor, translator, world transformer, networks of schemata*, etc.), learning

(e.g., *construction, collaboration, transformation, creation, design*, etc.), and education (e.g., *socialization, scaffolding, community of practice, perspective expansion, praxis*, etc.).

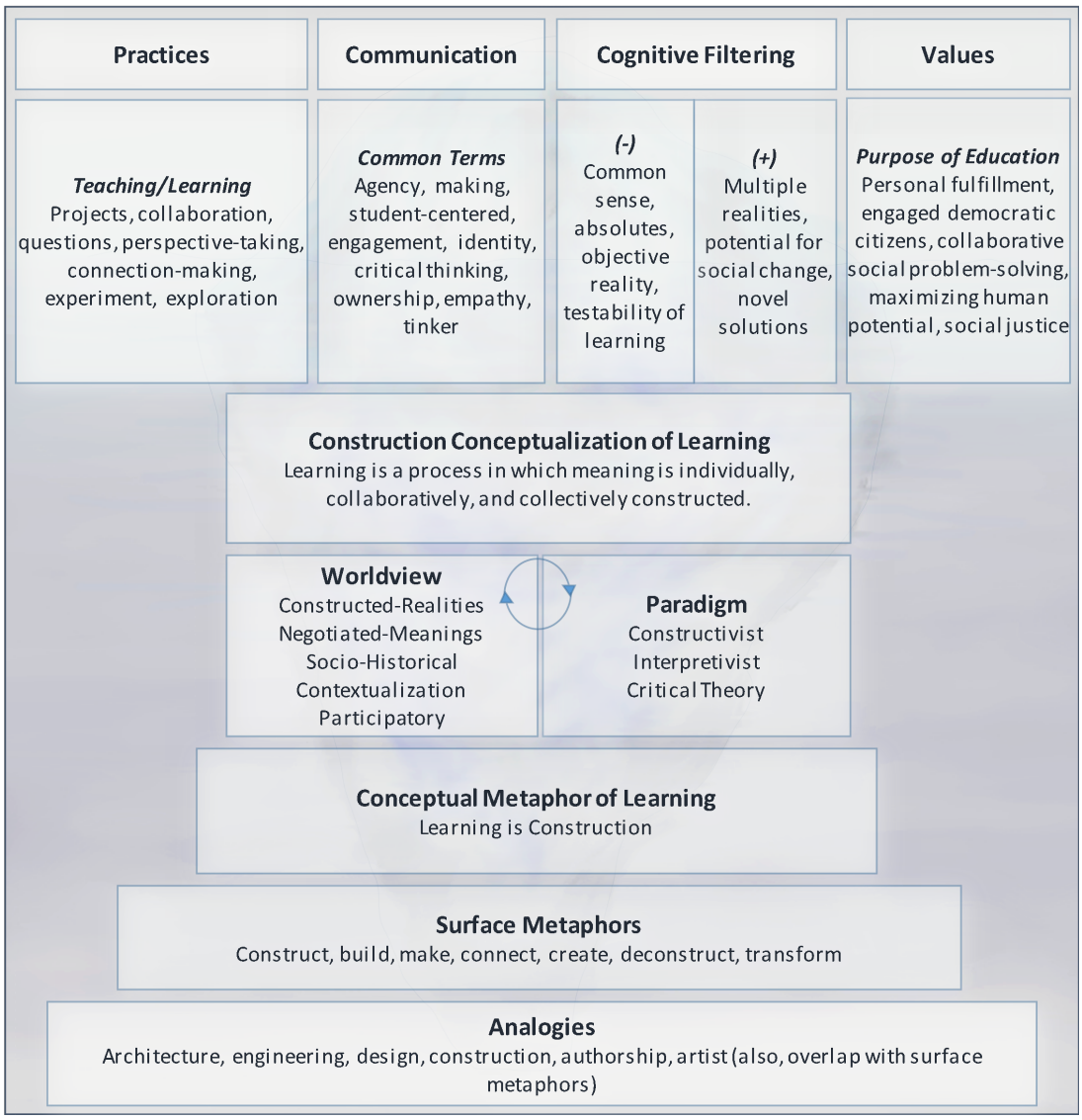

Figure 2: Construction Conceptualization of Learning

Despite the long history of the *construction* conceptualization among educational researchers, the findings in this study indicate that within the domain of educational research the positivist *transfer/acquisition* conceptualization of learning remains dominant, and *construction* conceptualizations compatible with social justice, critical pedagogy, and empowerment work

remain marginalized. Educational research provides the foundation upon which future teachers build their conceptualizations of learning and associated teaching approaches and repertoire of practices. Therefore, a precondition for development of critical pedagogy practices for social justice on a larger scale may involve educational researchers—especially critical educators—being more intentional in explicitly articulating the conceptualizations of learning in which their research is grounded, as well as problematizing conceptualizations of learning in their work with other researchers.

Solutions-based Implications

This research provides strong empirical evidence supporting arguments by critical theorists suggesting that efforts toward changing conceptualizations of learning is not only crucial in our work in K-12 contexts, but also in our work with students in schools of education and in our work with fellow researchers. This conceptual change work for critical pedagogy will involve critical reflection and action regarding the metaphors we use, as well as practices in teaching and learning. Furthermore, this study suggests that the critical work of problematizing and changing worldviews and values may require problematization and rejection of metaphors of learning, knowledge, mind, and education that perpetuate and reproduce oppressive conceptualizations of learning.

References

Apple, M. W. (2014). *Official knowledge: Democratic education in a conservative age* (3rd ed.). NY: Routledge.

Bruner, J. (1996). *The culture of education*. Cambridge, Mass: Harvard University Press.

Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, Mass: Harvard University Press.

Cameron, L., & Maslen, R. (2010). Identifying metaphors in discourse data. In R. Maslen & L. Cameron (Eds.), *Metaphor analysis: Research practice in applied linguistics, social sciences and the humanities* (pp. 97-115). London: Equinox Publishing.

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Los Angeles: Sage.

Corbin, J. M., & Strauss, A. L. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Los Angeles: SAGE.

Deignan, A. (2010). The cognitive view of metaphor: Conceptual metaphor theory. In R. Maslen & L. Cameron (Eds.), *Metaphor analysis: Research practice in applied linguistics, social sciences and the humanities* (pp. 44-56). London: Equinox Publishing.

Deignan, A., & Semino, E. (2010). Corpus techniques for metaphor analysis. In R. Maslen & L. Cameron (Eds.), *Metaphor analysis: Research practice in applied linguistics, social sciences and the humanities* (pp. 161-179). London: Equinox Publishing.

Dewey, J. (1897). *My pedagogic creed*. New York: E. L. Kellogg & Co.

Dewey, J. (1938). *Experience and Education*. New York: The Macmillan Company.

Donaldson, J. P. (2018). *Public education and public perceptions of learning*. Paper presented at the 2018 American Educational Research Association Annual Meeting, New York, NY.

Freire, P. (1970/2005). *Pedagogy of the oppressed* (Thirtieth anniversary ed.). New York:

Continuum.

Gibbs, R. W., Jr. (2014). Conceptual metaphor in thought and social action. In M. Landau, M. D. Robinson, B. P. Meier, M. Landau, M. D. Robinson, & B. P. Meier (Eds.), *The power of metaphor: Examining its influence on social life.* (pp. 17-40). DC: American Psychological Association.

Giroux, H. A. (2014). When schools become dead zones of the imagination: A critical pedagogy manifesto. *Policy Futures in Education, 12*(4), 491-499. doi:doi:10.2304/pfie.2014.12.4.491

Giroux, H. A. (2013). *On critical pedagogy*. New York: Bloomsbury Academic & Professional.

Goatly, A. (2007). *Washing the brain: Metaphor and hidden ideology*. Amsterdam: John Benjamins.

Hager, P., & Hodkinson, P. (2009). Moving beyond the metaphor of transfer of learning. *British Educational Research Journal, 35*(4), 619-638. doi:10.1080/01411920802642371

Kincheloe, J. L. (2007). Critical pedagogy in the twenty-first century. In P. McLaren & J. L. Kincheloe (Eds.), *Critical Pedagogy: Where Are We Now?* (pp. 9-42). New York: Peter Lang Publishing, Inc.

Kincheloe, J. L., & Steinberg, S. R. (1998). Students as researchers: Critical visions, emancipatory insights. In *Students as Researchers : Creating Classrooms That Matter* (pp. 2-19). Independence, KY: Taylor & Francis.

Kincheloe, J. L., Steinberg, S. R., & Tippins, D. J. (1999). *The stigma of genius: Einstein, consciousness, and education*. New York: Peter Lang Publishing.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: The University of Chicago Press.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. NY: Basic Books.

Papert, S., & Harel, I. (1991). Situating constructionism. In S. Papert & I. Harel (Eds.), *Constructionism* (pp. 1-11). NY: Basic Books.

Shemwell, J. T., Chase, C. C., & Schwartz, D. L. (2015). Seeking the general explanation. *Journal of Research in Science Teaching, 52*(1), 58-83.

Thornberg, R. (2012). Informed grounded theory. *Scandinavian Journal of Educational Research, 56*(3), 243-259. doi:10.1080/00313831.2011.581686

Vygotsky, L. S. (1934/1986). *Thought and language*. Cambridge, MA: MIT Press.

Walk It Like I Talk It: Black Leaders' Reflections on Implementing Anti-Racist School Leadership Agendas

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Abstract

This study explores the unique challenges that Black school leaders face in carrying out an anti-racist school agenda. This collective case study explores how Black school and district level administrators identify and define institutional racism and navigate racialized opposition while implementing anti-racist policies and practices within their schools and districts. Findings indicate that Black school leaders can be instrumental in recognizing and disrupting subtle institutionally racist practices. Findings also indicate principals using professional development practices as a means to navigate racialized opposition.

Keywords: anti-racism, administrators, policies

Walk It Like I Talk It: Black Leaders' Reflections on Implementing Anti-Racist School Leadership Agendas

While there is a growing field of literature that shows the promise of anti-racist work to disrupt racist practices and inequitable outcomes in school contexts (Capper, Theoharis & Sebastian, 2006; Leonardo, 2008; Pollock, 2008; Solomon, 2001), it is noted that school leaders may be invested in learning about anti-racist theory and practice (Capper, Theoharis & Sebastian, 2006), yet construct barriers prevent them from converting their knowledge of anti-racism into anti-racist practices (Solomon, 2001). While research supports these conclusions for school leaders as an aggregate group, it is unclear if these results hold true for disaggregated groups. This study sought to ask questions about unique approaches, understandings, and challenges that Black school leaders face in carrying out an anti-racist school leadership agenda. Furthermore, this study aims to explore how Black school- and district-level administrators navigated instituting an anti-racist agenda within racialized education spaces. The research questions that guided this study were

RQ1. How do Black school leaders define institutional racism, and what indicators of institutional racism do they see in their schools/districts?

RQ2. How do Black school leaders interrupt institutional racism/racist practices in their schools through a leadership agenda? What challenges do they face in doing so?

RQ3. How do Black school leaders reflect on their racialized/gendered identity and situate their identities in the context of anti-racist work?

Through this study, we gain a deeper understanding of how Black school leaders define institutional racism and anti-racist school practices. Initial findings indicate that Black school leaders have a nuanced understanding of schools as a racialized space and can be key agents in

defining institutional racism and setting anti-racist agendas, even as they are targets of racialized opposition.

Anti-racist leadership models

Due to the sensitive topic of racism, many school leaders delicately navigate the implementation anti-racist models in schools. One of the ways that school leaders may implement models of anti-racism is through professional development programs, often conducted by external stakeholders, to address the issue of racism in their school systems (Aveling, 2007). Aveling's (2007) research demonstrated that teachers and administrators often engaged in programs that addresses cultural and linguistic diversity. Participants of these programs found that outcomes were sufficient enough to "combat racism" (p. 77). In the programs that Aveling (2007) researched, many of the participants in the programs deemed the content sufficient, but it did not deal with issues associated with whiteness. Fine (1997) justifies the need for whiteness to be explored because anti-racist models cannot work with addressing the issues associated with the social constructs of whiteness and blackness. Before any exploration of whiteness as property occurs, there has to be an acknowledgment of the occurrences of racism (Fine, 1997; McMahon & Armstrong, 2003).

According to McMahon and Armstrong, "anti-racism is often criticized as being a term that is too harsh...because there is a reluctance to acknowledge structural and individual forms of racism, which contradict our image as fair people" (2003, p. 256). Discourse of anti-racism in schools can't occur without approach the need to identify and acknowledge racism. Furthermore, there has to be an acknowledgement that some benefit and some are disadvantaged due to racialized structures.

Participants and Methodology

We used a collective case study approach (Au & Blake, 2003; Baxter & Jack, 2008), which allowed us to explore similar phenomena through the lived experiences of each of the study's participants. The study's findings are helpful in explicating theoretical assumptions about the way that race, gender, school leadership, and anti-racism interact with one another. We used semi-structured interviews to understand the participants' school contexts, and to ask about institutional racism and systemic anti-racist change. After the interviews, each researcher individually reviewed notes and transcripts, and then coded the interviews thematically. After a round of individual coding and analysis, the reviewers used peer debriefing to discuss initial findings, and collaborated on the final data analysis (Creswell & Miller, 2000; Morse et al, 2002).

Our sample was comprised of two Black male educational leaders. Each leader served as a case in this collective case study research design. The first participant is an administrator at a school located in a large metropolitan city in the southern United States. He has been in the position as a school level assistant principal for two years. In this position, aside from the principal, he is the only other person in an administrative role. Our second participant is a district level leader that served in positions of school level administration before his district level position. She is responsible for equity initiatives and how equity is embedded in the district's strategic plans.

Findings

The findings revealed similarities in where Black leaders decided to target strategic anti-racist approaches for maximum impact. These patterns revealed that Black school leaders felt like they were able to recognize and articulate subtle patterns of racism within schools that other school leaders did not. Furthermore, Black school leaders were able to convert their knowledge

of anti-racist approaches into anti-racist policy and practice within their schools/districts, representing a departure from the patterns of aggregated school leaders.

Participants recognized the limitations of the current school curricula around issues of race, and discussed the need of making important changes around having culturally relevant pedagogical content reflected in the schools' curricula. Participants also recognized that Black students regularly bear the impact of having teachers and administrators who carry out racist practices in the classroom, and cited staff/professional development as one way to interrupt these practices. Furthermore, participants talked about two important results from their work: student empowerment/student relationships and Black representation in the school/district. Furthermore, participants highlighted the results of their strong interpersonal relationships with Black students, and indicated that students' sense of safety and levels of comfortability in sharing sensitive feelings about perceived racialized interactions at school were a direct result of the student-administrator relationship they had.

While other types of systemic change may have distinct beginnings, middles and endpoints, anti-racist leadership work requires a constant adjusting to the shifts in how racism appears, requiring different strategies and responses along the way. This study revealed that working to undermine systemic racism in schools is arduous work that is not always linear.

Several themes for discussion emerged from the findings, including Black Participants indicated a "calling" to address patterns, even if it was indirectly related to their job duties. Additionally, participants indicated clear patterns of white opposition to their anti-racist and equity work within the schools, indicating that racialized patterns of resistance are operationalized against students as well as against Black leadership.

Solution Based Approaches

School Leaders should utilize their social capital to provide access to staff and community stakeholders to have the physical space for students to engage in racially consciousness conversations. School leaders should have immersive professional development strategies for teachers as a way to support Black students who regularly bear the impact of racist practices in schools. School administrators are encouraged to have scheduled times with students as an opportunity for students to express their experiences as it relates to racism in schools. Administrators should strive to ensure that school curricula reflect the themes of culturally relevant pedagogy.

Implications and Conclusion

Implementing an anti-racist school agenda is as important domestically as it is globally. While initial findings that show Black leaders', anti-racist practices deviate from aggregate school leaders' practices are encouraging, this research encourages additional research into the strategies Black leaders use in navigating white resistance. Further studies are also needed to explore leadership practices in supporting Black leaders in their anti-racist work, particularly in supporting Black leaders as they navigate the psychological stressors of anti-racist work in schools.

References

Au, K. H., & Blake, K. M. (2003). Cultural identity and learning to teach in a diverse community: Findings from a collective case study. *Journal of Teacher Education*, *54*(3), 192-205.

Aveling, N. (2007). Anti-racism in Schools: A question of leadership?. *Discourse: Studies in the Cultural Politics of Education*, *28*(1), 69-85.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, *13*(4), 544-559.

Capper, C. A., Theoharis, G., & Sebastian, J. (2006). Toward a framework for preparing leaders for social justice. *Journal of Educational Administration*, *44*(3), 209-224.

Creswell, J. W., & Miller, D. L. (2000). Getting good qualitative data to improve educational practice. *Theory into Practice*, *39*(3), 124-130.

Fine, M. (1997). Witnessing whiteness. In M. Fine, L. Weiss, L. Powell, Weiss, L., Powell, L., & L. Mun Wong (Eds.), *Off White: Readings on race, power, and society* (pp. 57-65). Routledge, New York, NY.

Leonardo, Z. (Ed.). (2009). *Critical pedagogy and race*. John Wiley & Sons.

McMahon, B., & Armstrong, D. (2003). The 3 R's of educating students of Caribbean origin in Canadian schools. In T. Bastick & A. Ezenne (Eds.), *Teaching Caribbean students: Research on social issues in the Caribbean and abroad* (pp. 249-284).

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *1*(2), 13-22.

Pollock, M. (Ed.). (2008). *Everyday antiracism: Getting real about race in school*. The New Press.

Solomon, R. P. (2001). School leaders and anti-racism: Overcoming pedagogical and political obstacles. *Journal of School Leadership*, *12*, 174-197.

Theoharis, G., & Haddix, M. (2011). Undermining racism and a Whiteness ideology: White principals living a commitment to equitable and excellent schools. *Urban Education*, *46*(6), 1332-1351.

The Struggle to Succeed and Maintain Black Identity in Predominantly White High Education Institutions

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Abstract

Few studies have explored the range of responses problematic to Blacks in predominantly White institutions (PWIs), whether as American Blacks, descendants of slaves (DoS) or Africans who have immigrated to the U.S. Sixteen in-depth interviews were conducted with full-time faculty and professional staff at 10 PWIs between October 2014 and June 2015. Three finds are key: 1) Race shapes the inter-collegial existence between Black and White faculty and staff; 2) White colleagues do not understand the scope of what it means to co-exist with Blacks; 3) Respondents were evenly divided between those who intended to leave or remain.

Keywords: PWI, Black identity, coping

The Struggle to Succeed and Maintain Black Identity in Predominantly White High Education Institutions

We sought to improve understandings of how race shapes the relationships Black faculty and professional staff have with their colleagues at Predominantly White colleges and Universities in the United States. Prior evidence indicates many U.S. higher education settings continue to present unique challenges for Black professionals, particularly as they face institutional and personal racism, invisibility and thus endure struggles to maintain a sense of self (Griffin, Pifer, Humphrey, & Hazelwood, 2011; Grumbach & Mendoza, 2008; Harlow, 2003; Johnsrud & Sadao, 1998; Johnsrud & Des Jarlais, 1994; Journal of Blacks in Higher Education, 2013). While these experiences have been often linked to attrition, few studies have explored the larger range of responses as problematic in professional settings. None appear to explore whether positive race-conscious communications by Black faculty are seen as useful or otherwise considered appropriate as an interaction style with their White counterparts. Instead, appearing are negative construction strategies (e.g. "reluctance to claim that race matters", "lack of race consciousness", "purposeful distancing oneself from the structural impact of race," or maintaining an "internal focus" while learning "how to suppress anger"). It was our intent to derive implications for strategic solutions of organizational development and change issues for PWI contexts overall, and for education and health professionals in particular. We conceptualized that the study results would achieve relevant overarching goals towards improving professional relations and outcome disparities in mental and emotional health between Whites and colleagues of African descent.

First is that inquiries could be expected to increase knowledge of the innovatively adaptive, as well as unexpectedly maladaptive, behavioral and psychological coping strategies

used among Blacks in PWIs. Collectivistically, it can be assumed that the experiences as Black peoples of African descent, particularly within the diaspora, are not *simply* about melanin. Inter-racial engagement patterns, and thus mental and emotional wellness, reflects multiple contextualization formed through the history of colonization, slavery, and resistance, as our Black experiences intersect global inequities between the "West and the Rest".

Second is an enhanced knowledge-base on the specific communication strategies employed by Black professionals in PWI settings. Organizations can target strategies for systems' change efforts, especially discipline specific programs. The implications being that cultural disconnects among educators, practitioners, researchers and policymakers give birth to the different interpretations of reality impacting academic engagement patterns as well as mental health and emotional wellness stressors.

Finally, is a clearly observed need to identify successful communication patterns employed by Black professionals, differentially, in their desire to maintain their ethnic and racial identities. Increasing knowledge and sensitivity within PWIs could contribute to further broadened understandings of psychological stress, negative biological responses, and the importance of maintaining one's ethnic identity.

Framework

The driving idea of the study was to pose the question, "What does it mean to be perceived as Black?" in the predominantly White institution (PWI). As an interpretive case study, the hope was to go beyond describing the data and encourage collection and coding of data in ways that might support, challenge, or develop theories about events and experiences (Merriam, 1998), and enhance external validity of findings (Bogdan & Biklen 1998; Merriam, 1998). Two underlying assumptions supported this approach. First, race is considered central to

the experiences of Black faculty (Griffin et al., 2011). Race shapes Black faculty campus experience (rather than their race simply playing a role). Second is that a semi-structured interview protocol (see below) would be appropriate when designed to keep the questions as race-neutral as possible. Thus, any race-related responses directed toward the overall idea are expected to be generated by the respondents themselves (Harlow, 2003).

Methodology

Procedures

Rater Selection. Raters (n=3) were recruited from the professional ranks at a major regional Midwestern university based on their instructional experiences related to subject matters in social and behavioral sciences, and recent time served at PWIs. Thus, with great intentionality, recruitment was based in race, gender, and substantive familiarity with the subject matter (e.g., having a strong background in or related to social and behavioral sciences, and topics related to race and ethnicity in the United States). Rater characteristics are as follows:

- Two were male (M), one White American (WAM; assistant professor in social and behavioral sciences and business, University of Minnesota Crookston) and the other African American (AAM; tenured associate professor in social and behavioral sciences and behavioral medicine, University of Minnesota Crookston).
- One was African American female (AAF, teaching faculty in liberal arts and education, University of Minnesota Crookston).
- Each of the authors was a current employee of a PWI with a five-plus year history of professional employment in PWIs.

Participant Recruitment and Selection. Participants were selected and recruited using a purposeful rather than random sampling process (Bogdan & Biklen, 1998; Maxwell, 2005),

enabling access to information-rich cases given the limited resources. This was considered to be an effective strategy by selecting individuals most likely knowledgeable about the experiences of interest. Participants who self-identified as Black/African American were the target demographic. Only full-time faculty or full-time professional executive or administrative appointments were reasoned to have had comparable professional acculturation experiences in the United States, as well as comparable understandings of race and racial societal dynamics. Forty potential research participants were contacted from a national pool of full-time faculty and professional staff of African descent employed at predominantly White college and university institutions who self-identify as Black or African American. Eighteen agreed to participate through four rounds of scheduled interviews. Sixteen of the 18 potential study participants ultimately completed the interview.

Theory

The theoretical framework guiding the project is critical race theory (CRT). This theory puts forth the notion that race, and thus racism, is ordinary; not aberrational to people of color, but endemic and deeply engrained in American society, including its institutional learning settings (Gordon, 1999; Harris, 2012; Solorzano, Ceja, and Yosso, 2000). The worlds of social constructions are driven, unarguably, by dominant racialized interpretations in meanings. Three assumptions are conceptualized to undergird the research design: 1) Race is considered central to the experiences of Black faculty, 2) Race shapes Black faculty campus experiences (rather than their race simply playing a role), and 3) The semi-structured interview protocol could be used to keep interview questions as race-neutral as possible to allow participants to organically generate racialized context without being compelled by the interviewer.

Data Collection

In-depth interviews were conducted with male and female full time staff and faculty employed at 10 predominately white institutions across the East coast, Midwest and West Coast regions of the United States between October 2014 and June 2015.

Interview Protocol

Participants were interviewed via telephone. Interviews lasted 45 to 60 minutes in a location of their choosing, either at home or in the office, to the extent the setting could enable privacy, convenience without distractions or disturbances, and suitability to maintaining a telephone connection. Each of the interviews was audio recorded and transcribed to Word documents for later use in thematic identification and analysis (see below). The interviews were conducted using a semi-structured protocol based on the eight questions below and were sent to the participants in advance. The order of interview questions was designed with the idea that patterns of responses might reveal whether the impact of race on interracial relations was additive:

1. Tell me about your academic path. How did you end up here at this institution as faculty/professional staff?
2. I'd like to focus a bit more on some of the relationships that you've had as you developed as a scholar/professional staff. Could you please share a story or specific experience about someone you've worked with closely who has influenced your development as an academic/professional staff (either positively or negatively)?
3. Turning to experiences on your current campus—generally, what have your experiences as a professor/professional staff here been like?
4. How would you describe your philosophy in working with and interacting with your colleagues and staff?

5. If you can think about a relationship you've formed with a specific colleague, tell me about that colleague and the nature of that relationship.

6. Let's broaden our focus a bit to talk about relationships you've formed with colleagues and staff and how they've influenced you. How has race shaped the ways in which you are seen and engaged by your colleagues, your sense of belonging in the campus community, and experience in the tenure and promotion process?

7. Still thinking about relationships with colleagues broadly, what kind of influence do you think having relationships with colleagues has had on you personally?

8. Are you thinking about leaving or staying?

The interview ended with, "Thank you very much, as this concludes the interview."

Findings, Scholarly Significance, and Solutions

Among the several findings, given the text constraints for this publication, we present the results of question 6 only (table 1) in illustration of the study overall, and three subsequent key findings derived from the overall set of results. The raters determined the prevalence of each category based on participant responses.

Themes and Selected Interviewee Comments – Question 6

1) Race Exists (75-93.75%): N=15 AAM, 15 AAF, 12 WAM

"I am somewhat of an enigma; different rules for blacks and whites, evident in promotion".

2) Noticed the Absence of Diversity (personnel, philosophy, thought, etc..) (43.75-68.75%): 11 AAM, 11 AAF, 7 WAM.

"Hands off approach to whites"

"But I am a Black woman in the office and it seems to be what I am supposed to do."

3) Felt Minimalized (diminished) (62.5-75%): N= 10 AAM, 12 AAF, 10 WAM.

"So, in other words we might end up talking about something and "by-the-way", that's how that would be brought in. It wouldn't be like; can you help me understand? No, it wouldn't be like that at all. No, they wouldn't seek me out in that way."

4) Felt Marginalized (disregarded) (56.25-68.75%): N= 11 AAM, 9 AAF, 9 WAM.

"I really sensed a distrust and a reluctance to collaborate. I've encountered a lot of territorialism from some colleagues and I got the feeling that a big factor was race."

5) Perceived Lack of Support (37.5-50%): N= 6 AAM, 8 AAF, 8 WAM.

"…[They] don't seek me out."

"not comfortable taking orders from a nigga."

"colleagues and staff could care less."

6) Hostile Environment (37.5-43.75%): N= 7 AAM, 7 AAF, and 6 WAM.

"I see people become very sick and depressed from the environment and the lack of support."

7) Interest Convergence (18.75-31.25%): N= 5 AAM, 5 AAF, and 3 WAM.

"..only in terms of "projecting"- fronting issues of race, but not about white"

"Many faculty of color believe that they should be treated like any other faculty. That faculty should not have this extra burden placed on them to deal with issues of race and to be a mentor of students of color."

Table 1. Themes and Selected Interviewee Comments.

As described in table 1, we identified seven themes from interview responses to question 6. Moreover, we also observed minimal variation among raters, and a noticeable difference by race of rater in terms of their interpreting that a) "race" exists and b) "absence of diversity". In

our opinion, the noticeable differences are considered as substantive, and thus not without implications.

In addition, among the several findings, we highlight three: 1) Race is not experienced as a unitary construct, and further shapes the inter-collegial existence as multi-leveled clashes of encounters to influence academic and professional development of African American / Black faculty and staff, 2) White colleagues do not understand the scope of what it means for African Americans / Blacks to co-exist with Whites within the PWI context and the larger experiential social-racial-cultural context, 3) Respondents were evenly divided between those who intend to leave and those who intend to remain.

In scholarly significance, the current research identifies institutional levels of structural inequity for Black professionals that are psychologically deleterious, socially isolating, and very likely institutionally undergirded, irrespective of whether one identified as African American or of an African country nationality.

In solutions, the results of this study suggest three specific approaches that speak organizationally to strategic solutions and to organizational development and change issues for PWI contexts, particularly in a rapidly emerging global era of Black ethnic diversity. *1) Influences on Recruitment*. In many academic environments, isolation, minimalization, and marginalization have been experienced. This results in lack of success or an arduous professional life. Three strategies could help address them: (a) training for non-Black educators and staff to connect rather than alienate or stay neutral, (b) employing strategies in professional organizations and certification groups that speak to cultural differences (as differences rather than deficits). Programs should also invite senior accomplished faculty, from culturally diverse backgrounds, especially across Black-identified groups, to share their stories about development

and success in academic life, writing and research, their challenges, and the approaches they used to succeed. *2) Institutional Climate of Support.* It is important to breed an organizational climate that acknowledges the historical and contemporary similarities and differences, along with the psycho-socio-behavioral implications among those within the African diaspora. For example, disaggregating the experiences of descendants of slaves (DoS) and recent immigrants who may have little psychological and ancestral investments in the civil and educational rights struggle in the U.S.--*this requires programming*. University representatives with the inclusion of Africans of the diaspora and Black Americans DoS must talk about the challenges and work toward strategies to succeed, including: a) partnerships with professors and fellow students in research and writing, b) developing networks of former graduates and faculty colleagues inside and outside the institution (nationally) as Co-PI's, co-writers and reviewers, c) teaching teachers how to teach with an emphasis on challenges of non-white faculty among white and other students, d) opportunities to discuss these issues among such colleagues, e) directed growth for these students to be mentors as they succeed, f) for Universities and departments to match the aforementioned recommendation for new faculty as well, *3) Influence on Faculty Recruitment and Sustainability/Retention*. For universities, schools, and departments that take on these issues and develop programming, more productive faculty with more fruitful careers could be the result. Building deliberate, positive mentorships for Black junior faculty among colleagues and senior faculty could not only encourage professional development but also break the isolation and minimization in such environments. Giving attention and voice to the reality Blacks experience in PWIs should not be overlooked or minimized.

References

Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative research in education. An introduction to theory and methods.* Boston: Allyn & Bacon.

Gordon, L. (1999). A short history of the 'critical' in critical race theory. *American Philosophy Association Newsletter*, *(98)*2.

Griffin, K. A., Pifer, M. J., Humphrey, J. R., & Hazelwood, A. M. (2011). (Re)defining departure: Exploring Black professors' experiences with and responses to racism and racial climate. *American Journal of Education, 117*(4), 495-526.

Grumbach, K., & Mendoza, R. (2008). Disparities in human resources: addressing the lack of diversity in the health professions. *Health Affairs, 27*(2), 413-422.

Harlow, R. (2003). " Race doesn't matter, but...": The effect of race on professors' experiences and emotion management in the undergraduate college classroom. *Social Psychology Quarterly, 66*(4), 348-363.

Harris, Angela (2012). "Critical race theory." International Encyclopedia of the Social and Behavioral Sciences. http://works.bepress.com/angela_harris/17/. Accessed 25 January 2017.

Johnsrud, L. K., & Des Jarlais, C. D. (1994). Barriers to tenure for women and minorities. *The Review of Higher Education, 17*(4), 335-353.

Johnsrud, L. K., & Sadao, K. C. (1998). The common experience of" otherness": Ethnic and racial minority faculty. *The Review of Higher Education, 21*(4), 315-342.

Journal of Blacks in Higher Education. (2013). News and Views: The snail-like progress of Blacks in faculty ranks of higher education. Journal of Blacks in Higher Education. Retrieved from http://www.jbhe.com/news_views/62_blackfaculty.html.

Maxwell J. A. (2005). *Qualitative research design: An interactive approach.* Thousand Oaks, CA: Sage.

Merriam, S. B. (1998). *Qualitative research and case study applications in education.* San Francisco: Jossey-Bass Publishers.

Solorzano, D. M. C., & Yosso, T. (2000). Critical race theory, racial microaggressions, and campus racial climate: The experiences of African American college students. *Journal of Negro Education, (69)*2, 60-73.

The Instructional Value of Educational Leadership Preparation Programs in Globally Marginalized Communities

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Abstract

This conceptual research study explores the moral imperative of educational leadership preparation programs (ELPPs) to design an instructional framework that is value-added to marginalized communities by preparing aspiring school principals to be social justice leaders. The researcher examines the trends and gaps in the literature on the instructional framework of ELPPs. From an examination of the literature, the researcher posits a need for institutions of higher education to evaluate their ELPPs to determine their instructional value in producing globally and culturally competent instructional leaders who have the capacity to lead schools that meet the academic needs of students in marginalized communities.

Keywords: Educational leadership preparation, Marginalized communities, Social justice

The Instructional Value of Educational Leadership Preparation Programs in Globally Marginalized Communities

The globalization of our society has led to dynamic, complex, and diverse American school environments (Guthrie & Dieguez, 2017), which require educational leaders to understand what it means to be a school leader in a 21st century global society (Barakat, Reames, & Kensler, 2012). For the context of this conceptual research study, students in marginalized communities refer to those students who live in socio-economic oppressed communities where inequitable economic, occupation, and academic opportunities prevent their upward social mobility. These students need globally and culturally competent and responsive school leaders who possess the critical consciousness to lead from a social justice stance, the knowledge on best practices to create equitable school cultures, and the skills to make it happen (Capper, Theoharis, & Sebastian, 2006). Thus, educational leadership preparation programs must possess a disposition towards social justice that includes curricula, pedagogy, and assessments that prepare graduates to take on school leadership roles with the tools necessary to create and sustain a socially just global learning community (East, Stokes & Walker, 2014). The researcher presents this study by describing the connection between social justice and global education and analyzing the theoretical framework for social justice-oriented educational leadership programs.

Significance of Study

A significant achievement gap persists between marginalized students and non-marginalized students, as evidenced by the 2017 National Assessment of Educational Progress (NAEP) Nation's Report Card. In reading, twenty-two percent of fourth graders who are eligible for the National School Lunch Program (NSLP) were proficient as compared to the fifty-two percent proficiency rate of their non-NSLP eligible peers. Twenty-one percent of NSLP eligible

eighth grade students were proficient in reading compared to forty-eight percent of their non-NSLP peers. Similarly, the achievement gap between NSLP and non-NSLP students exist in math where twenty-five percent of fourth grade NSLP students were proficient compared to fifty-seven percent of non-NLSP students, and eighteen percent of eighth grade NSLP students were proficient compared to forty-eight percent of non-NSLP students. Students' home and community experiences influence their achievement in school. Duncan and Murmane, in agreement with Parcel and Hendrix (Putnam, 2015) point out that marginalized schools have greater rates of delinquency, truancy, disorder, and transience and lower rates of English language proficiency than non-marginalized schools. Neither pair of researchers suggest that all students in marginalized schools experience these issues; however, the factors impact the learning experience of all students in marginalized schools (Duncan & Murmane; Parcel & Hendrix, Putnam, 2015). Students who live in marginalized communities still need social justice-oriented school leaders who take an inclusive approach to making decisions through the lenses of their students, not from the deficit thinking the school leader may hold that suggests these students' genetics, culture, and experiences disadvantages them from being academically successful (Nieto & Bode, 2018).

Purpose of Study

The purpose of this conceptual research study is to explore the moral imperative of educational leadership preparation programs to design an instructional framework that prepares aspiring school principals to be social-justice oriented leaders who create equitable learning communities that are designed to meet the academic needs of students in marginalized communities. The central research question is: *In what ways are educational leadership preparation programs preparing school leaders to create socially just, globally and culturally*

relevant and responsive learning environments? In this study, a culturally relevant learning environment is inclusive of all students' cultures in its instructional approach towards students' academic achievement (Ladson-Billings, 1995) and, as a result of such approach, a culturally responsive learning environment addresses the cultural and social needs of all students in a manner that inspires them to be civic-minded and empowers them to confront inequities in their school and community (Bassey, 2016).

Method

This conceptual study uses a qualitative content analysis to examine the trends and the gaps in the literature on the instructional framework of educational leadership preparation programs (ELPPs) and social justice to establish a central argument for the study. The study proposes solutions-based practices identified in the literature to transform ELPPs into social justice oriented programs.

Literature Review

The literature review serves to conceptualize social justice educational leadership and global education, to identify the trends and gaps in the literature on the design of educational leadership preparation programs, and to present a tripartite theoretical framework to guide the study. The nation's increasingly ethnically diverse school populations present a moral urgency for educational leadership preparation programs to evaluate its relevance and value to marginalized school communities. While the need for social justice leadership is evident in the literature, its coverage in Educational Leadership Preparation Programs (ELPPs) is inadequate (Miller & Martin, 2014).

Social Justice Educational Leadership and Global Education

Theoharis (2007) defines social justice leadership in education as the capacity of the school leader to prioritize addressing marginalizing conditions in their school, such as race, class, gender, disability, and sexual orientation that contribute to inequitable learning experiences and opportunities. Social justice serves to break down the various ways school leaders increase marginalizing and inequitable treatment of students simply because they do not belong to the dominant culture that sets the norm for society (Miller & Martin, 2014). Global education, which was constructed during the era of the Civil Rights movement, focuses on the study of human beliefs and issues from a global perspective with the intent of advancing social justice and equity through transformative leadership across national boundaries (Landorf, 2013; Landorf & Nevin, 2007). Its intent is to create globally competent, social justice-oriented citizens (Merryfield & Kasai, 2004).

Moral Urgency

Researchers of social justice leadership suggest that social justice-oriented leaders have a moral responsibility to confront the oppression of historically marginalized groups (Rivera-McCutchen, 2014). Social justice leadership refers to one's moral capacity to make sound ethical decisions that provide equitable and accessible learning to marginalized students (Blackmore, 2002). Educational leadership preparation programs have a moral and social responsibility to prepare aspiring school principals to be social justice-oriented and inclusive leaders that meet the academic needs of students from marginalized communities (Kowalski as cited in Normore & Blanco, 2006).

Social Justice Leadership Capacity

Twenty-first century school principals must meet the academic needs of each student by creating school cultures that provide all students with educational opportunities based on equity

and culturally responsive practices (National Policy Board for Educational Administration [NPBEA], 2015). The traditional educational leadership preparation program (ELPP) prepares aspiring principals on an accountability model aimed at closing the achievement gap by managing schools through data driven practices; however, there is a disconnect between learning how to manage for achievement accountability and learning how to lead for social justice (Miller & Martin, 2014). Rivera-McCutchen (2014) suggests that the instructional framework of ELPPs should be designed to emphasize structural inequities and support participants in acknowledging their biases and assumptions to avoid the equity traps (McKenzie & Scheurich, 2004) that perpetuate institutionalized inequities for students of color. In their study on educational leadership preparation programs' capacity building of social justice school leaders, Miller and Martin (2014) found that it is essential for principals to be prepared to confront culture, equity, and social justice issues in their schools and to possess strategies and tools to "identify, challenge, and counteract discrimination and prejudice" (p. 148). A key capacity to develop in a social justice-oriented principal is the ability to engage faculty and staff in honest and open dialogue that deepens their understanding of personal biases and assumptions, questions inequitable policies and practices within their schools, and shifts their perceptions and practices towards students in marginalized communities (Diem & Carpenter, 2012; Rivera-McCutchen, 2014; Sommers, 2014). School leaders must be able to raise student achievement, improve school structures, build and strengthen staff capacity, and buttress school culture and community to improve learning experiences and opportunities for students in marginalized communities (McKenzie et al., 2008; Theoharis, 2007).

Design of Educational Leadership Programs

A key trend in the literature on social justice-oriented educational leadership preparation programs (ELPPs) focuses on the need to raise aspiring leaders' critical consciousness on issues related to race and racism that result in inequitable policies and practices in their schools. It is imperative for school leaders to possess values of social justice and to develop an understanding of social constructs and the influences of power and privilege on their leadership practices (Capper et al., 2006; Furman, 2012; McKenzie et al., 2008; Miller & Martin, 2014). The ability to do such is fostered through a social justice-oriented instructional framework in ELPPs (Capper et al., 2006) that leverages them to become culturally competent school leaders (Miller & Martin, 2014) who lead with social justice mindset.

It is not as easy to locate literature associated with a conceptual understanding of the need to embed inclusive leadership in the instructional framework of ELPPs, as suggested by Barakat, Reames, and Kensler (2012). This gap provides an area in which educational leadership researchers can inform the improvement of educational leadership preparation programs.

Theoretical Framework

Researchers of educational leadership preparation programs suggest that a curriculum framework grounded in critical theory, transformative learning, and inclusive leadership (Berkovich, 2017; Gooden & Dantley, 2012; Jean-Marie, Normore & Brooks, 2009) will best prepare school leaders to teach the whole child and to understand that "learning is a mutual and relational process [that] requires a greater vision and a wider view" (Jenkins, 2017, p. 276) beyond closing the achievement gap. Principals must be committed to creating equitable learning spaces that seek to close the opportunity gaps that exist between affluent and marginalized students. It is the opportunity gap that creates an achievement gap between these two groups of students.

Critical Theories

Critical theorists suggest that social structures are unjust, and that social justice leaders' work should serve to enhance the lives of people in marginalized groups (Theoharis, 2007). When educational leadership preparation programs incorporate critical theories in its instructional framework, it expands the participants' knowledge on the complexity of issues that impact historically marginalized groups and how they impact the education policies and practices associated with students from marginalized communities (Jean-Marie et al., 2009; Theoharis, 2007).

Inclusive Leadership Approach.

"Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote each student's academic success and well-being" (NPBEA, 2015). School principals must know how to adopt an inclusive leadership mindset, recognizing that inclusion is about justice and equity. Kowalski (as cited in Normore & Blanco, 2006) argued that school principals should establish a respectful, facilitative, and proactive relationship among school, learners, and community that is responsive to the concerns of the community and that leads to the development of equitable policies and practices. Since schools exist within communities, educational leadership preparation programs have a responsibility to prepare leaders to center their leadership on the social context of their schools and advocate for the needs of the greater school community, inclusive of the students, faculty, parents, and community members (Barakat et al., 2012).

Transformative Leadership Theory

The school principal must engage in self-reflection to examine one's beliefs and practices regarding the moral obligation to social justice leadership, engage faculty in discussions

regarding beliefs, assumptions, and biases of and moral obligations toward students in marginalized communities, and facilitate an action plan to dismantle inequitable and unjust policies and practices. According to Shields (2011) the intended outcome of transformative leadership is equity, inclusion, and social justice. While the need for social justice leadership is evident, its coverage in educational leadership preparation programs (ELPPs) is inadequate. A major disconnect exists between a principal knowing that one must promote high expectations and data driven instruction to close the achievement gap and the school principal's lack of awareness of the biases, assumptions and inequities that exist within the school community that sustain the achievement gap (Miller & Martin, 2014).

Findings

The central argument in the literature on educational leadership preparation programs (ELPPs) is that they should develop aspiring school leaders' capacity to meet the academic needs of students in marginalized communities. From an examination of the literature, the researcher suggests a need for institutions of higher education to evaluate their ELPPs to determine their instructional value in producing globally and culturally competent and responsive instructional leaders who have the capacity to lead schools that meet the academic needs of students in marginalized communities.

Solution-based Practice

The nature of developing aspiring school leaders' capacity to meet the academic needs of students in marginalized communities requires a paradigm shift in educational leadership preparation programs from a traditional school leadership preparation model to a social justice-oriented school leadership preparation model. It is increasingly essential for school principals to know how to respond to and incorporate diversity issues within their school improvement plans

(Barakat et al., 2012). Scholars suggested constructing a pragmatic focus to the instructional design of ELPPs that focused on strengthening social justice values and that provided an action-plan to address social justice issues (Berkovich, 2017; Rodriguez, Chambers, Gonzalez, & Scheurich, 2010). McKenzie et al. (2008) suggested the inclusion of an induction period where ongoing support, development, and learning is provided to principals once they enter the field. The focus would be on the actual social justice work they are doing in their schools.

Conclusion

The review of the literature on educational leadership preparation programs revealed the need for more empirical studies to inform the improvement of educational leadership preparation programs. For example, experiential research that examines the effectiveness of a pragmatic approach to instruction in comparison to a traditional approach to instruction would better inform ELPPs' faculty's decision on whether the best approach would be to shift to an instructional framework that blends field experience with curriculum. An empirical study by Barakat et al. (2012) suggested that a collaborative partnership among educational leadership programs, local educational agencies, and public policy makers would enhance the instructional program of ELPPs by better preparing aspiring principals to transfer their knowledge into social justice-oriented practice; however, further studies are needed to quantify and qualify the scholars' findings. Marginalized students need social justice-oriented school leaders who make decisions through an equity lens.

References

Barakat, M., Reames, E., & Kensler, L. (2012). Preparing culturally competent instructional leaders. In Gertsl-Pepin, C. & Aiken, J.A. (Eds.), *Social justice leadership for a global world* (pp. 59-169). Charlotte: Information Age Publishing.

Bassey, M.O. (2016). Culturally responsive teaching: Implications for educational justice. *Education Sciences, 6*(35). Retrieved from https://files.eric.ed.gov/fulltext/EJ1135596.pdf

Berkovich, I. (2017). Reflections on leadership preparation programs and social justice. *Journal of Educational Administration, 55*(3), 261-279. doi:10.1108/jea-02-2016-0018

Blackmore, J. (2002). Leadership for socially just schooling: more substance and less style in high-risk, low-trust times? *Journal of School Leadership, 12*, 198-222. Retrieved from http://dro.deakin.edu.au/eserv/DU:30001448/blackmore-leadership-2002.pdf

Capper, C. A., Theoharis, G., & Sebastian, J. (2006). Toward a framework for preparing leaders for social justice. *Journal of Educational Administration, 44*(3), 209-224. doi:10.1108/09578230610664814

Diem, S. & Carpenter, B.W. (2012). Social justice & leadership preparation: Developing a transformative curriculum. *Planning and Changing*, *43*(½), 96-112. Retrieved from http://ncat.idm.oclc.org/

East, L.E., Stokes, R., & Walker, M. (2014). Universities, the public good and professional education in the UK. *Studies in Higher Education, 39*(9), 1617-1633. doi: 10.1080/03075079.2013.801421

Furman, G. (2012). Social justice leadership as praxis: Developing capacities through preparation programs. *Education Administration Quarterly, 48*(2), 191-229. doi: 10.1177/0013161X11427394

Gooden, M.A. & Dantley, M. (2012). Centering race in a framework for leadership preparation. *Journal of Research on Leadership Education*, *7*(2), 237-253. doi: 10.1177/1942775112455266

Guthrie, K. L. & Dieguez, T. A. (2017). Creating emotionally intelligent global leaders. In Gause, C.P. (Ed.), *Leadership, equity, and social justice in American higher education: a reader* (pp. 57-67). New York: Peter Lang

Jean-Marie, G., Normore, A. H., & Brooks, J. S. (2009). Leadership for Social Justice: Preparing 21st Century School Leaders for a New Social Order. *Journal of Research on Leadership education, 4*(1), 1-31. doi:10.1177/194277510900400102

Jenkins, T. (2017). Follow the yellow brick road: Uncovering the significant learning experience in Southern colored schools. In Gause (Ed.) *Leadership, equity, and social justice in American higher education* (pp. 270-286). New York: Peter Lang

Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*. 32(3), 465-491. doi: 10.2307/1163320

Landorf, H. (2013). Using the dialectic of social justice to enliven the dialogue between global education and multicultural education: Social justice perspectives. *Journal of International Social Studies, 3*(2), 99-105. Retrieved from https://files.eric.ed.gov/fulltext/EJ1149710.pdf

Landorf, H. & Nevin, A. (2007). Inclusive global education: implications for social justice. *Journal of Educational Administration*, *45*(6), 711-723. doi: 10.1108/09578230710829892

McKenzie, K. B., Christman, D. E., Hernandez, F., Fierro, E., Capper, C. A., Dantley, M., . . . Scheurich, J. J. (2008). From the Field: A Proposal for Educating Leaders for Social Justice. *Educational Administration Quarterly, 44*(1), 111-138. doi:10.1177/0013161x07309470

Mckenzie, K.B. & Scheurich, J.J. (2004). Equity traps: A useful construct for preparing principals to lead schools that are successful with racially diverse students. *Educational Administration Quarterly, 40*(5), 601-632. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.844.483&rep=rep1&type=pdf

Merryfield, M.M. and Kasai, M. (2004). How are teachers responding to globalization?, *Social Education*, *68*(5), 354-359.

Miller, C. M., & Martin, B. N. (2014). Principal preparedness for leading in demographically changing schools. *Educational Management Administration & Leadership, 43*(1), 129-151. doi:10.1177/1741143213513185

NAEP Nations Report Card - National Assessment of Educational Progress - NAEP. (2017). Retrieved from https://nces.ed.gov/nationsreportcard/

National Policy Board for Educational Administration (2015). Professional Standards for Educational Leaders 2015. Reston, VA: Author.

Nieto, S., & Bode, P. (2018). *Affirming diversity: The sociopolitical context of multicultural education* (7th ed.). New York, NY: Pearson.

Normore, A., & Blanco, R. (2006). Leadership for social justice and morality: Collaborative partnerships, school-linked services and the plight of the oor, 10(27). *International Electronic Journal for Leadership in Learning, 10*(27), 1017. Retrieved from http://iejll.journalhosting.ucalgary.ca/iejll/index.php/ijll/article/view/627

Putnam, R.D. (2015). *Our kids: The American dream in Crisis.* New York: Simon & Schuster

Rivera-McCutchen, R. L. (2014). The moral imperative of social justice leadership: A critical component of effective practice. *The Urban Review, 46*(4), 747-763. doi:10.1007/s11256-014-0297-2

Rodriguez, M.A., Chambers, T.V., Gonzalez, M.L, & Scheurich, J.J. (2010). A cross-case analysis of three social justice-oriented education programs. *Journal of Research on Leadership Education*, *5*, 138-153. doi: 10.1177/194277511000500305

Shields, C. (2011). Transformative leadership: An introduction. *Counterpoints, 409*, 1-17. Retrieved from http://www.jstor.org/stable/42981292

Sommers, S. (2014). What is social justice education? *Narratives of Social Justice Educators.* doi: 10.1007/978-3-319-08431-2_2.

Theoharis, G. (2007). Social justice educational leaders and resistance: Toward a theory of social justice leadership. *Educational Administration Quarterly, 43*(2), 221-258. doi:10.1177/0013161x06293717

Black Lives Matter in Teaching Mathematics for Social Justice

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Abstract

Prior to becoming a mathematics educator, I was a teacher in Prince George's County, Maryland. Because of the success I experienced with culturally relevant pedagogy (CRP), it became part of my research agenda along with teaching mathematics for social justice (TMfSJ). Databases like 23andme and Ancestry can be used as a context for CRP and TMfSJ. Data related to education, occupation, military service, and voting records can be accessed online. Our ancestors' experiences can shape our identity and serve as powerful tools for contextualizing mathematics. The stories and counterstories of African Americans can be problematized to show Black lives matter.

Black Lives Matter in Teaching Mathematics for Social Justice

When Alex Haley (1976) wrote his poignant novel, *Roots,* it was not only ground-breaking for Black America but an opportunity for America to come to grips with its historical past. The subject of slavery tends to draw angst from broad sectors of the U.S. population, both Black and White alike. Yet, Haley's story, while painful, was a powerful story of survival and resilience. At the time of the production of the mini-series, I wondered how Haley conducted the research to find his ancestors. Sheltered in a close-knit family that welcomed few relatives, I had no idea how to find my own roots.

Then in 1996, as a mathematics teacher in Prince George's County, Maryland, I chose to use genetics and genealogy as a way to engage my students in culturally relevant mathematics. I used the base two pattern to help students understand exponentiation. Beginning with themselves (2^0), their parents (2^1), and grandparents (2^2), students could easily see how they had 32 (2^5) third great-grandparents. Giving them a simple family tree, some students went to the National Archives in Washington, D.C., to learn more about their family history. Four students' projects exceeded my expectations. One African-American female reported on six generations in her family, ending with a woman who was born into slavery and simply known as Lizzy. A White female engraved a tree into a wooden countertop. Her father brought the artifact to class where she reported on her ancestry. Another White female brought a dot matrix printout to class that revealed relatives born in the 15th century. She also discovered that she was related to Benjamin Franklin, one of the nation's founders. The fourth student, a White male, learned that his grandparents married at the age of fourteen. He was twelve at the time and clearly rejected the idea. Their enthusiasm encouraged me to go the National Archives as well. There I found Census records showing my grandmother at the age of two in 1920 and twelve in 1930. Her grandfather,

who was 70 years old, was living in the same household according to the 1930 Census. It was surreal as I imaged what their lives as sharecroppers were like in Oktibbeha County, Mississippi. At the archives, I was able to trace the maternal side of the family back to my fourth great-grandfather, who was born in South Carolina about 1801.

Purpose

Some teacher educators and K-12 teachers realize the importance of the sociopolitical context in schooling but often ponder how to engage students in discourse that is meaningfully connected to mathematics content. The purpose of the paper is to show mathematics teacher educators and teachers of mathematics how to problematize issues of significance to the community, teach mathematics for social justice (TMfSJ), and advocate for equality in education and society more generally. One issue that has emerged in the Black community in recent years is racial profiling and state violence. After the death of Trayvon Martin in Florida, #BlackLivesMatter (#BLM) became a national cry when three women—Patrisse Cullors, Opal Tometi, and Alicia Garza—created the hashtag (Taylor, 2016).

#BLM uses decentralized leadership and local chapter organizing methods similar to the Occupy movement in 2011 to speak to all issues related to human dignity while asserting the value of Black life (Taylor, 2016). Quality education (Ladson-Billings, 2017), equal protection under the law (Hill, 2016), equal housing (Rothstein, 2017), and health and wellness (Akom, 2011) are topics that can be mathematicised to teach mathematics for cultural relevance and social justice. Some justice-oriented lessons have already been produced and can be used to link mathematics to #BLM. Himmelstein (2013) used *Stop-and-Frisk* as the basis for learning about central tendency. Similarly, Gustein (2013) investigated *Driving While Black or Brown*, with his students in Chicago, Illinois. In these lessons, students used probability to compare the actual

number and percentage of traffic stops by race. Using data as evidence, students may engage in letter writing, public service announcements (PSAs), and other forms of civic engagement to advocate for justice and equality. Yet, even more powerful, as my experience teaching in Prince George's County revealed, is using such lessons to help students to develop personal and social identity.

The Case for Student Identity

The advent of the Internet and DNA testing has changed genealogy research. While my research at the National Archives more than 20 years ago ended with discoveries on the maternal side of the family tree, DNA testing provided matches on the paternal side of my family that were historical and eye-opening. Moreover, these discoveries changed how I viewed myself as an American citizen (i.e., personal identity) and my relationship to others (i.e., social identity). Furthermore, the intersection of race, nationality, gender, and class (i.e., intersectionality) had an impact on my self-efficacy and career goals. The results of my DNA tests as reported by 23andme and Ancestry are shown in Table 1 below:

Ancestry Reports

Countries of Origin	23andme	Ancestry
West African	75.6%	76%
Ghana/Ivory Coast	-	31%
Cameroon	-	27%
Nigeria	-	7%
Benin/Togo	-	4%
Senegal	-	4%
Bantu	-	3%
European	21.8%	22%
Great Britain, Ireland, Scotland, & Wales	8.6%	10.5%
Scandinavian i.e., Norway, Sweden, & Denmark)	1.3%	6%
Other European (i.e., France, Finland)	11.9%	5.5%
South & Southeast Asia	1.6%	2%

Data like these can be used to create pie charts for students to study and compare their

ancestry. A pie chart of my ancestry based on Ancestry.com is shown in Figure 1 below.

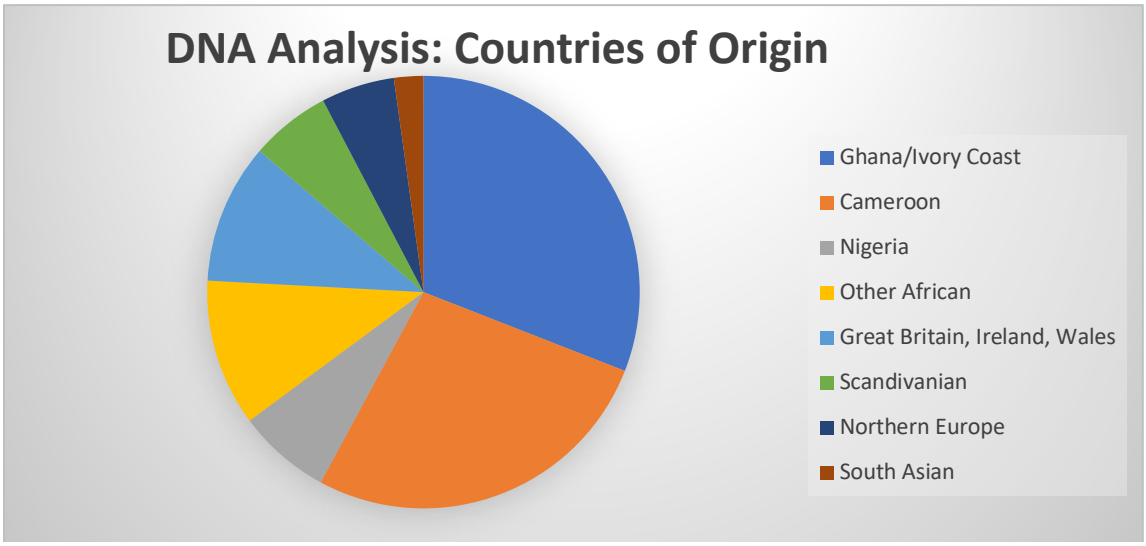

Figure 1: Percentage of DNA from Different Countries of Origin

Through DNA matches, evaluation of family trees, and Census records, I learned that I am related to notable figures in American history. Some of these figures are pre-Civil War presidents of the United States, famous statesmen, and patriots who fought in the Revolutionary War. Furthermore, U.S. Census records revealed powerful information about my Black ancestors. On the 1870 Census (the first Census listing former slaves and newly freed Blacks), the racial category for some of my ancestors was Mulatto, which is a derogatory term used to indicate mixed African and European ancestry. My 2nd great-grandfather was a Harrison slave was born in Sumter, Alabama. Yet, the former Harrison slave, once freed, registered to vote in Sumter, Alabama, in 1867 (See Figure 2, data obtained from Ancestry.com).

Name:	John Harrison
Race:	African-American (Black)
County:	Sumter
Election District:	21
Precinct:	16

Figure 2: 1867 Voting Record

While Black men had the right to vote after 1865, exercising the right to vote in the South was usurped through poll taxes and literacy tests. The poll tax in Birmingham, Alabama (see Figure 2), which was $2.50 in 1895 can be used as a mathematics problem (Leonard, in press). Wages for farm labor in Alabama were approximately $11.76 per month in 1895. Thus, the poll tax was roughly equivalent to an entire week's work. Few sharecroppers could afford to pay the tax, and consequently, the number of Black voters in Alabama decreased substantially. Engaging in this type of problematizing connects issues of voting rights to the current sociopolitical context where voter suppression laws are in place (Leonard, in press).

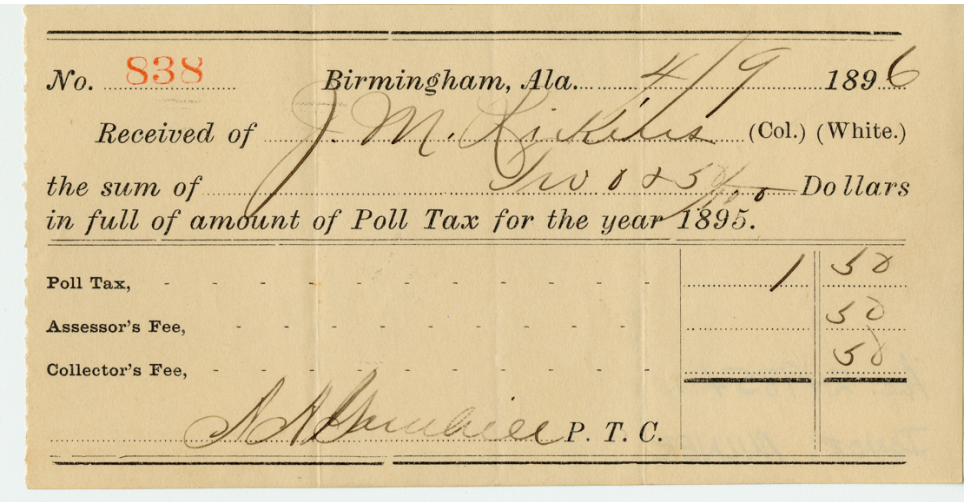
No. 838 Birmingham, Ala. 4/9 1896
Received of J. M. Kirkes (Col.) (White.)
the sum of Two & 50/100 Dollars
in full of amount of Poll Tax for the year 1895.
Poll Tax, 1 50
Assessor's Fee, 50
Collector's Fee, 50
P. T. C.

Figure 2: 1985 Poll Tax Receipt (publication granted by the Smithsonian Institute)

The knowledge that this ancestor voted so early after the Civil War is awe-inspiring, considering the hardships and the violence that he must have endured. As a result, the stories of my ancestors became deeply personal. *Roots* was no longer a story about someone else's family. It signified my story and the stories of my slave and slaveholding ancestors, who fought in the Revolutionary War, signed the Constitution, served as president of the United States, and served in political office. Shortly after the Civil War, one the presidents in my family tree proposed federal education funding and voting rights enforcement for African Americans but was

unsuccessful. How does one reconcile the right to life, liberty, and the pursuit of happiness while also refusing to grant those same rights to others? This is the American dilemma. Nevertheless, knowing my background has reshaped my identity and encouraged me to continue breaking down racial and gender barriers as a professor, researcher, and scholar. As the first African American to receive the Fulbright Canada Research Chair Award in STEM Education at the University of Calgary in Alberta in 2018, I engage in CRP by encouraging Indigenous, African-American, and Latinx students in North America to tell their stories.

Solutions

In this era of anti-blackness and white nationalism, it is more important than ever to discover one's roots and to learn how people of every race and background are interdependent and interconnected. Teachers of mathematics should use students' culture and history to mathematize problems to show that Black lives matter. Perhaps, the common ancestry shared among descendants of former slaves and slaveholders will help us to recognize our humanity. Lessons related to #BlackLivesMatter have already been developed on racial profiling and equal housing. Additional lessons may be developed around voting rights and wages as illustrated above. The stories and counterstories of generations who lived before us provide the backdrop for culturally relevant and social justice-oriented mathematics lessons. The data for these lessons are only a click away.

References

Akom, A. (2011). Eco-apartheid: Linking environmental health to educational outcomes. *Teachers College Record, 113*, 831-859. doi: 10.1080/10999940802523968

Gutstein, E. (2013). Understanding the mathematics of neighborhood replacement. In E. Gutstein & B. Peterson (Eds.), *Rethinking mathematics: Teaching mathematics by the numbers* (2nd ed.) (pp. 101-109). Milwaukee, WI: Rethinking Schools.

Haley, A. (1976). *Roots: The saga of an American family.* New York, NY: Doubleday.

Hill, M. L. (2016). *Nobody: Casualties of America's war on the vulnerable from Ferguson to Flint and beyond.* New York, NY: Atria Books.

Himmelstein, K. (2013). Racism and *Stop-and-Frisk*. In E. Gutstein & B. Peterson (Eds.), *Rethinking mathematics: Teaching mathematics by the numbers* (2nd ed.) (pp. 122-128). Milwaukee, WI: Rethinking Schools.

Ladson-Billings, G. (2017). "Makes me wanna holler": Refuting the "culture of poverty" discourse in urban schooling. *The Annals of the American Academy of Political*

Leonard, J. (in press). *Culturally specific pedagogy in the mathematics classroom: Strategies for teachers and students* (2nd edition). New York, NY: Routledge.

Rothstein, R. (2017). No blacks allowed. *The Crisis Magazine, 124*(3), 12-17.

Taylor, K-Y. (2016). *From #BlackLivesMatter to black liberation.* Chicago, IL: Haymarket Books.

Now You See Them, Now You Don't: Exploring Teacher Attrition in Bahamian Public Schools

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Abstract

Escalating attrition among special educators in Bahamian public schools impacts learning outcomes of special needs students. The purpose of this qualitative study, which consisted of 12 participants, was to ascertain why Bahamian special educators voluntarily separate from the field of special education. This purpose was achieved by addressing the following research questions (a) What are the influencing factors inciting Bahamian public special educators to resign or request premature retirement from the teaching profession? (b) How does job satisfaction influence teacher retention within The Bahamas' public education system? Job Satisfaction, combined with Social Cognitive and Social Cognitive Career Theories, grounded this study, emphasizing the influence of experiences upon decisions. Data were collected using semi-structured interviews and focus groups and analyzed through open coding. Findings revealed that Bahamian educators voluntarily separate from the field of special education because of the major factors (a) lack of administrative support, (b) inadequate training, and (c) teacher burnout.

Keywords: teacher attrition, premature retirement, social cognitive theories

Now You See Them, Now You Don't: Exploring Teacher Attrition in Bahamian Public Schools

Introduction

Attrition among special educators poses a threat to the achievement of special needs students globally (Brunner, 2014; Grant & Tyler, 2017). According to The Commonwealth of The Bahamas' National Census of Special Education (National Development Plan Secretariat, 2016), an increasingly significant number of special educators have been prematurely resigning from The Bahamas' public education system. Hence, resulting in massive teacher shortages in public schools across The Bahamas (Department of Education, 2013). Placing general educators in special education classrooms negatively impacts the education process of students with special education needs, as they struggle to grasp concepts that are delivered in ways contrary to their learning styles or beyond their abilities. Bahamian public schools are comprised of diverse cultures, ethnicities, and learning disabilities; however, the execution of an inclusive education curriculum has yet to be effectively pursued due to a lack of resources and infrastructure (Hunter-Johnson, Newton, & Cambridge-Johnson, 2014). The purpose of this qualitative study was to explore the influencing factors that have prompted Bahamian public special educators to voluntarily separate from the teaching profession; and explore the influence of job satisfaction upon attrition and retention of special educators. The study was guided by two research questions (a) What are the influencing factors inciting Bahamian public special educators to resign or request premature retirement from the teaching profession? (b) How does job satisfaction influence teacher retention within The Bahamas' public education system? This study is significant to The Bahamas' Department of Education as it provides theoretical and practical foundational platforms for policy makers regarding attrition rates within The Bahamas. Study

findings also contribute to the limited research base of Bahamian public education; and provides insight into special education reform strategies required for effective pre-service training.

Theoretical Framework

Literature has identified job satisfaction as a compelling indicator of teachers' levels of commitment to their jobs (Cancio et al., 2013). Locke's (1969) concept of job satisfaction is the conceptual framework upon which this study is founded. Locke posited that an individual's perceptions motivate a certain behavior or response (Collie et al., 2012; Erdem, Illgan, & Ucar, 2014). Lofgren and Karlsson (2016) found job satisfaction to be a strong mediator in workplace factors, thereby impacting teachers' decision to either leave the profession. Developing an understanding of the effects of job satisfaction of educators, also provides insight into the magnitude at which student performance and achievement are consequently affected. Application of Locke's (1969) concept offers guidance on ways in which to facilitate teacher retention. Additionally, the social cognitive theory (Bandura, 1986), and social cognitive career theory (Lent, Brown, & Hackett, 1994) were used as the lens through which to focus the attention of the study on how educators arrive at the decision to pursue teaching. Through his social cognitive theory, Bandura posited that individuals' behaviors result from the interactions within their environment. The social cognitive career theory was designed to explain and predict a person's development of academic interests and intentions (Zhang et al., 2014). It was proposed that individuals' occupational interests reflect their self-efficacy beliefs and are influenced by their abilities.

Methodology

Study Design and Setting

This study adopted a qualitative study design, which allowed for a more in-depth examination of the issues surrounding attrition and retention of special educators. A qualitative study is the most appropriate research design as it facilitates an in-depth understanding of the issue at hand by examining the experiences of special educators within their work place (Creswell, 2013). This study was conducted in capital city of The Bahamas, an archipelago of over 700 islands and cays. The Ministry of Education, Science and Technology is the institution responsible for governing education within the country. This governing body has responsibility for more than 50,000 K-12 students in approximately 170 public educational institutions within The Commonwealth of The Bahamas, which are dispersed over 14 districts in the major islands (Department of Education, 2013).

Participants

A sample of 12 public educators (eight former special educators, three current reading specialists, and one current resource teacher) from a major city in The Bahamas were included in the study. As a criterion for inclusion, all participants taught for three or more years in The Bahamas' public education system and possessed a bachelor's degree. Primary and secondary educators were included in the study. All participants were females, due to the limited number of male special educators available for participation in the study. Convenience sampling was employed due to the feasibility of accessing the participants (Creswell, 2013).

Data Collection and Analysis

Data was collected within a period of one month using semi structured interviews of 12 participants and one focus group session. The focus group was added to the individual interviews because it provided an opportunity to elicit multiple perspectives on the topic at hand (Bernard, 2012). Both interviews and focus group session were audio recorded and transcribed

immediately. Participants were informed of their rights with regards to the Institutional Review Board and were provided with an informed consent form. Thematic analysis (Braun & Clarke, 2006), which incorporated the process of open coding (Strauss & Corbin, 2010), was conducted to establish themes and major concepts. NVivo9 software was used for storing and organizing interview data. To enhance validity and reliability, an independent peer reviewer assisted by reading through the data and confirmed themes and categories corresponded with the research questions.

Study Limitations

Generalizability posed as a limitation because the sample was limited to only one island, out of approximately 17 populated islands within The Bahamas. Poor replicability is another limitation of this study; qualitative studies like this study are not easily replicated as data are derived from specific individuals' personal experiences (Creswell, 2013). More substantial data would have been generated had data been collected from teachers across the country. Another limitation was the inclusion of only female participants.

Findings

In support of the existing research, findings confirmed that the concept of job satisfaction plays a significant role in determining educators' future career decisions (Conley & You, 2016). Findings validated the assumptions of the job satisfaction concept, as it was revealed that the special educators with poor job satisfaction were less likely to commit to the education profession (Lent, Brown, & Hackett, 1994). Burnout, stress, and exhaustion are common among educators, according to existing research (Fresko & Alhija, 2015; Loughry & Normore, 2013), which were also echoed by this study's results. The major themes that emerged from this research were (a) lack of administrative support, (b) inadequate training, and (c) teacher burnout.

These issues, according to participants, contributed to poor levels of job satisfaction among special educators. Less influential factors prompting attrition included educators' salaries, lack of resources, and the diversity of learning disabilities within classrooms. Bahamian special educators were influenced to leave the profession, due to the various challenges (i.e. behavioral challenges, severe learning disabilities, lack of assistance from paraprofessionals) experienced within their working environment for which they were not prepared to effectively manage. Those who remained in special education, did so because they felt a sense of comradery among their colleagues. Contrary to literature supporting the effectiveness of mentoring programs (Callahan, 2016; Loughry & Normore, 2013), study participants did not perceive such programs as a successful strategy for promoting teacher retention. One issue added to the existing literature by this study was that of disrespectful treatment of special educators by school administrators.

Solutions-Based Section

Sixty-three percent of this study's participants revealed that teaching a special education class can be frustrating, even if trained. This frustration sparked by a feeling of failure or inefficacy in the classroom can influence educators' future career decisions. It is imperative that special educators are provided with consistent and meaningful opportunities for professional and social support through networking, collaboration, and professional development and training (Hunter-Johnson, Newton, & Cambridge, 2014). Contrary to existing literature, this study's findings revealed that mentoring and induction programs are ineffective strategies for teacher retention. Teacher attrition research findings revealed that early career teachers leave the education profession within five years of teaching (Collie et al., 2012) primarily because of their inability to maximize students' learning outcomes. This implies that pre-service teaching curricula need to include exposure to both theory and practice as it relates to special education

best practices, diversity and inclusion, and engagement within a more stringent practicum designed to effectively address the special education needs of students with disabilities. Institutions of higher learning, in association with The Bahamas' Ministry of Education, should also provide special education internship specifically for pre-service special educators to better prepare them for the public education system and inclusive classrooms. It is equally important to promote a culture that supports, values, and enforces special education, diversity, teacher support programs, training workshops, policies, and incentives for special educators. Research on principal leadership supports the importance of the principal in guiding school reform and improving student achievement. There also needs to be "buy in" from the Ministry of Education regarding special education, special educators as they are not only responsible for designing policies and procedures but implanting and enforcing such policies and procedures hence promoting a culture of inclusive education from a leadership/strategic perspective. Shared leadership, professional development and training, effective organization development, and consistent evaluation of schools' educational services and program are all vital to the future resilience of Bahamian special educators and the future success of special education in The Bahamas.

References

Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Conley, S., & You, S. (2016). Key influences on special education teachers' intentions to leave The effects of administrative support and teacher team efficacy in a mediational model. *Educational Management Administration & Leadership*, *45*(3), 521-540. doi: 1741143215608859.

Dukes, C., Darling, S. M., & Doan, K. (2013). Selection pressures on special education teacher preparation: Issues shaping our future. *The Journal of the Teacher Education Division of the Council for Exceptional Children*, *37*(1), 9-20.

Hunter-Johnson, Y., Newton, N. G., & Cambridge-Johnson, J. (2014). What does teachers' perception have to do with inclusive education: A Bahamian context. *International Journal of Special Education*, *29*(1), 143-157.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*(1), 79-122.

Locke, E. (1969). What is job satisfaction? *Organizational Behavior and Human Performance, 4*, 309-336.

Shapiro, J. P., & Stefkovich, J. A. (2016). *Ethical leadership and decision making in education: Applying theoretical perspectives to complex dilemmas*. New York, NY: Routledge.

Tyler, T. A., & Brunner, C. C. (2014). The case for increasing workplace decision-making: Proposing a model for special educator attrition research. *Teacher Education and Special Education*, *37*(4), 283-308

Investigating an Urban School's Strategies for Addressing Student Mental Health

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Abstract

Broader research has examined how schools are a bridge for identifying and addressing student mental health symptoms (Demissie & Brenner, 2017). However, limited research examines individualized approaches urban schools utilize for addressing student mental health issues. This qualitative case study examined individualized school-based strategies at a K-12 urban charter school for addressing student mental health symptoms. Findings reveal several themes for identifying and addressing student mental health within an urban environment. Larger implications for this study suggest the development of specific guidelines for establishing a coordinated system to identify and address student mental health in urban schools that meets student individualized and holistic needs.

Keywords: urban, mental health, K-12 students

Investigating an Urban School's Strategies for Addressing Student Mental Health

At least 1 in 5 children, ages 13-18, are currently or will experience at least one treatable and diagnosable mental health illness (Merikangas et al., 2010), but approximately 80% will never receive the mental health services needed (Kataoka, Zhang, & Wells, 2002). Additionally, the risk for mental health symptoms increases for children living within urban settings due to environmental stressors including ongoing trauma, conflict, violence, poverty, family member incarceration, neglect, and family stressors (Capella, Frazier, Atkins, Schoenwald, & Gilsson, 2008; Kiser, 2007; Reiss & Price, 1996; Spinazzola, Blaustein, & van der Kolk, 2005). For urban school students, school response and intervention for mental health symptoms is a major public health concern due to the increased risk associated within these environments.

Positioned as a bridge between home and community, the school is a key site for identification and intervention with children experiencing mental health distress. Typically, school districts or local education agencies (LEA), are responsible for setting district wide policies and procedures for response to student mental health symptoms (Demissie & Brenner, 2017). However, implementation of these strategies varies across individual schools. Limited research has investigated these individualized, custom-tailored strategies that exist specifically within urban schools.

Purpose

The purpose of this study is to understand school-based strategies utilized by an urban school to address student mental health symptoms. Researchers explored student support services administrators' perceptions regarding current school-based strategies for addressing student mental health within an urban setting. This research seeks to understand individualized

strategies tailored to meet the needs of students with mental health symptoms within these environments.

Methods

This study was designed as a qualitative, exploratory case study design conducted at an urban K-12 charter school. Five K-12 student support staff participated in semi-structured interviews and content was recorded and transcribed. Specific research questions for this study include:

1) How do stakeholders within an urban school address student mental illness symptoms?

2) What internal/external policies guide mental health intervention or referral in the schools?

3) Who is involved with addressing student mental health and what are your perceptions of their involvement?

Results from the transcribed interviews was coded by the researchers to identify themes. Data was coded and categorized in order to construct meaning.

Findings/Solutions

The key themes from this research included the following findings and potential solutions for urban schools:

1) Student support services staff are critical stakeholders in providing or referring students for mental health services, but teachers were vital for identification of symptoms. While student support services staff oversee mental health service delivery in the schools, teachers are the primary source for identification of symptoms. It's important that teachers are trained on mental health identification and that it is not mistaken for disciplinary concerns.

2) Trusting relationship between teachers and student support services staff was an important factor in ensuring student mental health symptoms were identified. Based on the findings, when

teachers and student support services staff had a solid, trusting relationship developed, teachers were more apt to refer students for necessary services when symptoms were identified. When this relationship was not developed or sustained, students were less likely to get referred for necessary services.

2) Student support staff were spending the majority of time with students in grades K-5 and addressing potential mental health concerns than older students. Most of the prevention-based strategies and initial identification of symptoms were occurring at the elementary school level.

4) Parent follow through was critical in ensuring that students were connected with more intensive mental health services. Within the charter school, there was more flexibility with ensuring that mental health needs were addressed, and children received necessary inpatient or outpatient services prior to returning to school.

References

Cappella, E., Frazier, S. L., Atkins, M. S., Schoenwald, S. K., & Glisson, C. (2008). Enhancing schools' capacity to support children in poverty: An ecological model of school-based mental health services. *Administration and Policy in Mental Health*, *35*(5), 395–409. doi: 10.1007/s10488-008-0182-y

Dermissie, A., & Brenner, N. (2017). Mental health and social services in schools: Variations by school characteristics – Unites States, 2014. *Mental Health and Prevention, 5*, 5-11. doi: 10.1016/j.2016.11.002

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry, 159*(9), 1548-1555. doi: 10.1176/appi.ajp.159.9.1548

Kiser, L. J. (2007). Protecting children from the dangers of urban poverty. *Clinical Psychology Review, 27*(2), 211-225. doi: 10.1016/j.cpr.2006.07.004

Merikangas, K. R, He, J., Burstein, M., Swanson, S. A, Avenevoli, S., Cui L., Benjet, C., Georgiades, K., & Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Study Adolescent Supplement. *American Journal of Psychiatry, 49*(10), 980-989. doi: 10.1176/appi.ajp.159.9.1548

Reiss, D., & Price, R. H. (1996). National research agenda for prevention research: The National Institute of Mental Health Report. *American Psychologist, 51*(11), 1109-1115. doi: 0.1037//0003-066X.51.11.1109

Spinazzola, J., Blaustein, M., & van der Kolk, B. A. (2005). Posttraumatic stress disorder treatment outcome research: The study of unrepresentative samples? *Journal of Traumatic Stress, 18*(5), 425–436. doi: 10.1002/jts.2005

Working With, Not Against: Examining Black-White Allyship in an Urban-Multicultural Teacher Education Program

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Abstract

This study examines the mentoring relationship between two Black women professors and two White men working as graduate assistants (GAs) in an Urban Teacher Program (UTP). This work presents an example of mentoring, collaboration, and allyship in anti-racist teacher education within a licensure program. Narrative inquiry methodology, informed by Critical Whiteness Theory and tenets of CRT, is used to analyze the relationship carefully crafted within this UTP by Black women professors mentoring White men GAs. Findings hold significance for future research on allyship, teacher education program design, and real-world education contexts P-16+, particularly within an urban education context.

Keywords: mentoring, Critical Whiteness Theory, allyship

Working With, Not Against: Examining Black-White Allyship in an Urban-Multicultural Teacher Education Program

The purpose of this paper is to explore the ways in which White men learn from Black women faculty who embody critical race pedagogies as teacher educators. This paper explores the tensions and possibilities inherent in the relationship between two Black women professors and two White men working as graduate assistants (GAs) in an Urban Multicultural Teacher Education Program (UMTEP). We examine how race, class, and gender play out in course sessions and in work with teacher interns (TIs) in field placements in urban-characteristic schools. This work presents an example of collaboration and allyship in anti-racist teacher education. The UMTEP is led by two Black women faculty, and as GAs, the White men are tasked with the responsibility of evaluating majority-White TIs as they implement anti-racist theory in a real-world context. Two research questions guided this project:

1. What kinds of experience do White men GAs bring to their work in the UMTEP? How do these experiences facilitate or hinder relationships with both the Black women faculty and White TIs?
2. What are the experiences of two White men GAs working within a UMTEP, and how have these experiences reshaped their views of race and equity in education?

Methods

The principal method of investigation was narrative inquiry into both White males' self-described racial, class, and gender positionalities as recorded in a racial narrative assignment (Pinnegar & Daynes, 2007). Racial narratives, constructed as course requirements, formed the primary data sources. The methodology follows the work of Bamberg and Georgakopoulou (2008) in using 'small stories. The small stories for the study were vignettes of racial awareness

and interaction across each GAs life and symbolic of larger events. Data from both interns' Implicit Associations Test indicated moderate preferences for African Americans. Performance evaluations document the professors' evaluation of the GAs and a continued desire to employ them on the team. These results triangulated the narrative data used for analysis.

Theoretical Framework

While not Critical Race Theory as a methodology, CRT informed this inquiry focusing on ways to combat the centering of Whiteness in UMTEPs as exemplified by Matias, Montoya, and Nishi (2016):

> Teacher education must make explicit commitments to antiracist education, especially if the program has an urban focus…if teacher education commits to breaking free from Whiteness, then race cannot be studied without a thorough understanding of White supremacy and how Whiteness supports it. (p. 15)

Critical Whiteness also serves the theoretical framework. Critical Whiteness is informed by themes within CRT especially that of intersectionality (Brah & Phoenix, 2004; Crenshaw, 1991). In this sense, Critical Whiteness provides not only a racializing element, but it instructs White allies on their duty to name and combat White supremacy (Leonardo, 2004). This unique theoretical framework supported the narrative inquiry and continued working and collegial relationship between the professors and GAs.

Analysis

Self-constructed racial narratives formed the primary data sources, and analysis began first as in-vivo coding followed by process coding (Saldana, 2016). Finally, emergent themes in both narratives formed from through thematic construction. Emergent themes included:

- ‘Experiencing Whiteness’ (a developmental process first experienced via family and most recently supported via critical coursework)
- ‘Black Mentoring’ (a lifelong stream of influential relationships and mentorships with Black individuals)
- ‘Reflecting on White Supremacy’ (an unnamed lifelong phenomenon identifying racial injustice later supported by critical frameworks and ideas)
- ‘Naming Personal Identities and Practices’ (the process of identifying White privilege and ways to support allyship).

Findings

RQ1-Lived experiences of both White men include relationships with Black mentors during formative ages. Histories of the White men supported mentor relationships with the Black women professors. Beginning at a young age, both GAs developed strong bonds that aided them in resisting some of the effects of their racist environments and White supremacy. These histories offered a positionality that supported their work within the UMTEP.

RQ2-Experiences in the UMTEP facilitated an opportunity for the White men to expand their understanding of ways to engage school communities informed by the intersectional dynamics of gender, race, and class. These experiences included professional and social events, weekend writing retreats, weekend research retreats, inclusion on large-scale grant activities providing professional development, weekly research team meetings, and monthly team check-in meetings. Candid conversations over current events (in person and via social media) provided opportunities to hone anti-racist skills in allyship. Finally, direct and open conversations of microaggressions the professors experienced in professional and personal environments underscored the reality and importance of the work.

Significance

In consideration of the conference theme, *Building and Sustaining Global Partnerships for Learning and Development*, it is important to understand how race, class, and gender identities guide critical, anti-racist work surrounding UMTEPs in higher education. School communities provide context for UMTEPs to interact with families from around the globe, informed by an understanding of identity and promoting "a lifelong process of building relationships based on trust, consistency, and accountability with marginalized individuals and/or groups of people" (The Anti-Oppression Networks).

Solutions and Implications

In thinking about hiring, developing, and incorporating graduate assistants into teacher education programs, it is important that universities, research teams, and faculty consider not only the experiences and backgrounds of potential candidates but that they also provide outlets and opportunities for these graduate assistants to nurture authentic relationships with staff. This cultivation and interaction become increasingly significant within an urban multicultural context, where a predominately White teaching workforce necessitates promoting and sustaining relationships with faculty of color and faculty of difference. Through these authentic relationships and collaboration, White graduate assistants and teacher interns can be informed and made aware of the contextual realities they will face in the field. Significant mentoring relationships with faculty of color and staff of difference can begin to erode this ignorance and lack of awareness harnessed by White graduate assistants, as they are given access to new perspectives, insights, and lived experiences.

This process is not straightforward, simple, or linear, but by embracing a disposition of cultural humility, openly accepting and naming one's privilege and positionality, and by

formulating meaningful relationships with faculty of color, White graduate assistants can become allies in this endeavor and contribute to the efforts of social justice and CRT. If White graduate assistants can participate in diverse research teams, collaborative work, and maintain a disposition of humility and empathy when interacting with faculty of color and students of color, then the chances of successfully developing efficacious, culturally informed, and critical educators increase substantially. Again, this allyship is not linear or outlined by neat, orderly steps, but it entails establishing authentic, honest, and open relationships with faculty of color, negotiating and naming one's privilege and positionality, continually reflecting on one's experiences and awareness to race, and recognizing the pervasive effects of racism within all aspects of American identity, culture, and society. When introspection, collaboration, discussion, and interaction can mirror this conglomerate model, then White researchers, graduate assistants, and scholars can participate in allyship to the causes of social justice.

References

Bamberg, M., & Georgakopoulou, A. (2008). Small stories as a new perspective in narrative and identity analysis. *Text & Talk - An Interdisciplinary Journal of Language, Discourse Communication Studies, 28*(3), 377-396. doi:10.1515/TEXT.2008.018.

Brah, A., & Phoenix, A. (2004). Ain't I a woman? Revisiting intersectionality. *Journal of International Women's Studies*, *5*(3), 75-86.

Crenshaw, K. W. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43*(6), 1241-1299.

Leonardo, Z. (2004). The color of supremacy: Beyond the discourse of 'White privilege'. *Educational Philosophy and Theory, 36*(2), 137-152. doi:10.1111/j.1469-5812.2004.00057.x

Matias, C. E., Montoya, R., & Nishi, N. W. M. (2016). Blocking CRT: How the emotionality of Whiteness blocks CRT in urban teacher education. *Educational Studies: Journal of the American Educational Studies Association, 52*(1), 1-19. doi:10.1080/00131946.2015.1120205.

Pinnegar, S., & Daynes, J. G. (2007). Locating narrative inquiry historically: Thematics in the turn to narrative. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology*. Thousand Oaks, CA: SAGE Publications, Inc.

Saldana, J. (2016) *The coding manual for qualitative researchers* (3rd Edition). London, UK: Sage.

Promoting Equity Through Networked Improvement Communities: Early Elementary Urban and Rural Students' Perceptions of Scientists

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Abstract

This quasi-experimental pretest/posttest study examined the change in students' perceptions of scientists after the implementation of a networked improvement community in science education. A modified DAST rubric was used to analyze 460 drawings from K-2 students situated in one urban and one rural elementary school. The research findings show significant differences between the pre- and posttest data: students in classrooms in which teachers are part on an ongoing improvement project develop more progressive perceptions of scientists. Differences between urban and rural settings were minimal. Implications for science education support structures that work across diverse settings are discussed.

Keywords: science education, elementary, networked improvement community,

Promoting Equity Through Networked Improvement Communities: Early Elementary Urban and Rural Students' Perceptions of Scientists.

Society's stereotypical perception of scientists as old wild-haired white males wearing lab coats and working indoors in laboratories limits students' abilities to identify with science and has led to marginalization of diverse students entering into scientific fields (Brickhouse & Potter 2001; Finson 2002). Implementation of inquiry-based programs has the potential to change students' perceptions about science, who does it, and how and where it is done (Taconis & Kessels, 2009). This study examined the impact of a Networked Improvement Community (NIC), between a university and multiple local K-12 school districts, on primary grade students' perceptions of scientists in urban and rural settings. An NIC is a long-term mutualistic partnership that uses improvement science to understand and inform practices across a variety of settings (Lewis, 2015). Primary grade students' perception of scientists is defined as the perceived image one has of a scientist and the perceived lifestyle that a scientist leads (Chambers, 1983).

Marginalized students in culturally diverse classrooms show poor attitudes and self-efficacy toward science in elementary school and beyond (Ainley & Ainley, 2011; Buck, Cook, Quigley, & Lucas, 2014; Edmin, 2011). Students of color or of marginalized groups do not see or hear themselves in science because their communities are not often represented in traditional science textbooks and teaching practices are not extending beyond the classroom walls (Bang & Medin, 2010; Buck, Cook, Quigley, & Lucas, 2014; Edmin, 2011; Gay, 2013). Unfortunately, urban schools often continue to use traditional textbook learning, and time on science can be limited or even nonexistent in the elementary years (Ferrini-Mundy, 2013). Therefore, it can be argued that the environment in classrooms that use traditional pedagogy is producing negative

attitudes toward science for culturally diverse populations (Edmin, 2011). Dismissing cultural diversity, as it relates to science, impedes science identity development and will limit advances in science worldwide (Carlone & Johnson, 2007; Wood, Erichsen, & Anicha, 2013). Social identity theory can be used to describe students' change in perceptions of science and scientists. Gee (2000) defines identity as ''being recognized as a certain kind of person in a given context'' (p. 99). Students' science identities are constructed through recognition of themselves and others as scientists and are dependent on their ability to know and to do science (Carlone and Johnson, 2007). Carlone and Johnson (2007) and Perrault (2017) hypothesized that science identity, in students, career women, and underserved populations, is composed of at least three core constructs: (a) competence, which is described as a person's knowledge base, (b) performance, which is based on social observation of how a person engages in science activities and how they act and speak like a scientist, and (c) recognition, defined as being seen as a that "type of person" by others. We posit that through engaging in cooperative science and engineering activities using culturally responsive curriculum materials, students re-categorize themselves as 'in-group' scientists and build a science self-identity that defies typical science stereotypes (Beasley & Fischer, 2012; Carlone, Scott & Lowder, 2014).

Supporting teachers in inquiry-based, hands-on science instruction has proven to be an avenue that engages more students and culturally diverse populations of students in science (Buck, Cook, Quigley, & Lucas, 2014; Edmin, 2011; Ferrini- Mundy, 2013). Hands-on science empowers students to have a role in their classroom and gives them a sense of responsibility in their learning (Edmin, 2011). Additionally, collaborative science gives students a voice around science phenomena. From early elementary through college, authentic learning experiences are a

strong predictor in building identity with and retaining interest in science (Ainley & Ainley, 2011; Carlone, Scott & Lowder, 2014; Ferrini-Mundy, 2013).

Method

Networked Improvement Community

The intervention in this study, a networked improvement community (NIC), Guiding Education in Math and Science Network (GEMS-Net), engages educators in research and provides them with professional development in science education. In the implementation year, teachers were provided with all resources and materials necessary to implement hands-on, inquiry-based science as part of their daily core curriculum. The culturally responsive materials reflected a diverse population of people engaging in science and engineering practices. In addition, the professional development supported teachers to facilitate student agency through student-led investigations and sense-making discussions.

Sample

This quasi-experimental pre-post survey design study used the Draw-A-Scientist Test (DAST) to evaluate kindergarten through grade 2 students' perceptions of scientists. The students attended two public schools in Rhode Island. Pretest data (N = 246) were collected in spring of 2015 prior to participation in the NIC. GEMS-Net began supporting both schools in the summer of 2015 and continued throughout the 2015-16 school year. Posttest data (N = 214) were collected in the spring of 2016.

The two schools were similar in size, although different in socioeconomic status, ethnic diversity and locale (one urban setting and one rural setting). The urban school was comprised of 297 students, 64% Hispanic, 21% African American, 8% white, 4% Asian, 2% multi-racial and 1% Native American, and 68% of students qualified for free and reduced lunch, whereas the

school from the rural setting had a population of 265 students, 97% white and 3% Hispanic, with 18% of students receiving free and reduced lunch (Rhode Island Department of Education, 2015).

Measure

Perception of scientists. Farland-Smith (2012) designed and validated a DAST rubric to assess perceptions of scientists in three constructs: appearance of scientist, location where science takes place, and the activity of the scientist. Each construct has four levels: can't categorize, sensationalized, traditional, and outside of traditional (progressive). In the current study, classroom teachers administered the DAST during the school day by instructing students to "draw a scientist" on a blank paper. The researchers used a modified version of the DAST rubric to assess the dependent variable, perceptions of scientists (see Appendix A).

Analytic Procedures

Interpretation of the illustrations by young children was addressed using rigorous inter-rater reliability: 37% of the drawings were coded by two researchers. Cohen's kappa was computed to evaluate the consistency between the two researchers, and showed substantial agreement ($k = .780$, $p < .001$). The remainder of the analysis was completed by one researcher. Chi square analysis was employed to evaluate the impact of the NIC support on the difference in early elementary students' perceptions of scientists. Additionally, two-way contingency analysis was executed to evaluate the difference in the age and gender of the scientists from pretest to posttest.

Findings

Perceptions' of Scientists appearance

The construct of appearance showed statistically significant differences between the pretest and the posttest for both urban, Pearson χ^2 (2, N = 208) = 20.61, $p < .001$ and rural, Pearson χ^2 (2, N = 221) = 16.69, $p < .001$ settings. The overall Chi Square test results showed that students held more progressive views of perceptions of scientists after participation in the NIC, Pearson χ^2 (2, N = 429) = 36.29, $p < .001$. The GEMS-Net NIC had similar effects on students from both urban and rural settings, sensationalized and traditional depictions of scientists decreased whereas the proportions of progressive views of scientists nearly doubled. Table 1 shows the proportions and frequencies within the construct of appearance.

The depiction of children as scientists showed a statistically significant increase from pretest to posttest, Pearson χ^2 (2, N = 460) = 86.68, $p < .001$. Before the schools were a part of the NIC, only 22 child scientists were drawn compared to 101 child scientists after participation in the GEMS-Net project. Additionally, representations of female scientists significantly increased from 67 to 92, Pearson χ^2 (2, N = 460) = 31.91, $p < .001$. After the implementation of GEMS-Net, 87% of girls drew female scientists and 89% of boys drew male scientists implying that students began to view themselves as scientists and were developing a positive science identity.

Perceptions' of Scientists location.

Students from both settings showed a statistically significant difference in the construct of location between pretest and posttest, urban: Pearson χ^2 (2, N = 193) = 14.670, $p = .001$ and rural: Pearson χ^2 (2, N = 208) = 20.45, $p < .001$ settings. After schools participated in the NIC, students drew science being done outside of the traditional laboratory. Table 2 displays the proportions and frequencies of the location of science differentiated by setting.

Perceptions' of Scientists activity.

Again, students from both rural and urban setting showed a significant difference in the activity of a scientist after participating in the GEMS-Net NIC. Students from the urban setting drew statistically significantly more scientists engaging in true scientific practices at the time of the posttest, Pearson χ^2 (2, N = 203) = 13.99, p = .001, as did the students from the rural school setting, Pearson χ^2 (2, N = 206) = 31.53, p < .001. Interestingly, students attending the urban school had a more progressive view of the activity of scientists at pretest than did the students from the rural school. Table 3 shows the proportions and frequencies of the activity of scientists from pretest to posttest.

Significance

To build a more diverse STEM workforce, we need to understand how children are perceive science and identify (or not) with scientists. If students perceive scientists to be old white men or magical monsters they are not likely to identify with the role. While slightly more urban students held progressive views of science prior to the intervention, the number of urban and rural students with progressive views of science significantly and similarly increased a year after both schools joined a NIC.

Appearance

Urban and rural students similarly increased the number of depictions of progressive appearance of a scientist. Children were significantly more likely to draw child-age scientists in the posttest (pretest-8: posttest-50, p<.001). Some students even labeled their drawing "me." This indicates the development of self-as-scientist and shows a strong science self-concept. A positive science self-concept indicates that children are more likely to be engaged in school science and pursue science as a career choice (Hannover & Kessels, 2004; Osborne, Simon, & Collins, 2003). If students do not develop a positive science self-concept in the early elementary

years, they are likely to eliminate it as a career choice, especially if they identify the role of scientists as a male role and they are female (Gottfredson,1981). In the posttest, the number of females increased whereas the number of males decreased, more accurately reflecting the population. The significant increase in female drawings was encouraging. While there is evidence that females in science are becoming more accepted, there is still a significant disparity in the number of males and females in the science field (Baker, 2016; Miller, Nolla, Eagly, & Uttal, 2018).

Location

Both urban and rural students increased the depiction of progressive locations of the scientists after their schools joined the NIC. The increase of drawings showing that science occurs outdoors and in the classroom rather than only in a chemistry lab mirrored the values of the NIC. Teachers received professional development to utilize their local school yard for active science investigations. The results of students' depicting science happening in local outdoor areas may indicate that students are relating the work of scientists to their local community and applying school science to life. Further investigation into students change in thinking from 'science in a lab' to 'science outdoors' is needed.

Activity

We saw evidence of science and engineering practices described in the NGSS. Students drew scientists in action, planning an investigation, asking questions, and using tools appropriate to the investigation. Additionally, more students included literacy and technology tools in their drawings. A small number of students in the posttest drew science as a collaborative process. We are interested in further research to identify how participation in the NIC over time influences students' perceptions of science practices described in the NGSS. Interestingly, urban students

had a more progressive understanding of scientists' activities prior to joining the NIC, and only showed a slight increase (pre n= 38, post n=41), whereas rural students significantly increased (pre n=20, post n=44). Urban students may be more prone to drawing scientists engaging in authentic scientific practices because of exposure to a wider variety of museums and industry than rural students. Also, the urban school project based activities prior to joining the NIC might help explain the increased depiction of progressive activity.

Designated Solutions-Based Discussion

Our education system has the opportunity to support interests and cultivate positive science identity in students potentially broadening participation in STEM fields to a larger, more diverse population. Daily inquiry-based, hands-on science programs beginning at the start of schooling are likely to shift students' ideas of science and scientists as sensational (monsters, magic, exploding potions) or traditional (old white male doing chemistry) toward a more progressive view (inclusive of women, all ages and ethnicities, engaging in a variety of scientific practices, and a variety of locations). There are many barriers to implementation of such programs, including teachers' lack of background knowledge, low self-efficacy in teaching science, and school prioritization of ELA and math (Bevan & Dillon, 2010; Blank, 2013; Cartwright, Smith, & Hallar, 2014; Nie, Tan, Liau, Lau & Chua, 2013). Network improvement communities (NICs) that utilize the resources of local universities and schools can build support systems to overcome these barriers (LeMahieu, Grunow, Baker, Nordstrum, & Gomez, 2017). Also, NICs embrace differences and value the diverse expertise and experiences of their communities. This research showed that when a school participated in an NIC, students developed a more progressive perception of science, in both the urban and rural schools. We hypothesize that as teachers become part of a social network that focuses on the improvement of

science education and are supported through professional development and culturally responsive materials, the teachers themselves change their science teacher identity and in turn their students' perceptions of the nature of science. More research is needed to better understand how teachers' perceptions and identities affect student outcomes in the context of an NIC.

References

Ainley, M., & Ainley, J. (2011). A cultural perspective on the structure of student interest in science. *International Journal of Science Education*, *33*(1), 51-71.

Baker, D. R. (2016). The influence of role-specific self-concept and sex-role conflict on career choices in science. In *Understanding Girls* (pp. 23-49). SensePublishers, Rotterdam.

Bang, M., & Medin, D. (2010). Cultural processes in science education: Supporting the navigation of multiple epistemologies. *Science Education*, *94*(6), 1008-1026.

Bevan, B., & Dillon, J. (2010). Broadening views of learning: Developing educators for the 21st century through an international research partnership at the exploratorium and king's college London. *The New Educator, 6*(3-4), 167-180. doi:10.1080/1547688X.2010.10399599

Blank, R. K. (2013). Science instructional time is declining in elementary schools: What are the implications for student achievement and closing the gap? *Science Education*, *97*(6), 830-847.

Beasley, M. A., & Fischer, M. J. (2012). Why they leave: The impact of stereotype threat on the attrition of women and minorities from science, math and engineering majors. *Social Psychology of Education*, *15*(4), 427-448.

Brickhouse, N. W., & Potter, J. T. (2001). Young women's scientific identity formation in an urban context. *Journal of Research in Science Teaching 38*(8), 965-980.

Buck, G. A., Cook, K. L., Quigley, C. F., Prince, P., & Lucas, Y. (2014). Seeking to improve african american girls' attitudes toward science: A participatory action research project. *The Elementary School Journal*, *114*(3), 431-453.

Carlone, H. B., & Johnson, A. (2007). Understanding the science experiences of successful

women of color: Science identity as an analytic lens. *Journal of research in science teaching*, *44*(8), 1187-1218.

Carlone, H. B., Scott, C. M., & Lowder, C. (2014). Becoming (less) scientific: A longitudinal study of students' identity work from elementary to middle school science. *Journal of Research in Science Teaching, 51*(7), 836-869. doi:10.1002/tea.21150

Cartwright, T., Smith, S., & Hallar, B. (2014). Confronting barriers to teaching elementary science: After-school science teaching experiences for preservice teachers. *Teacher Education and Practice*, *27*, 464-487.

Chambers, D. W. (1983). Stereotypic images of the scientist: The Draw-a-Scientist Test. *Science Education*, *67*(2), 255-265.

Emdin, C. (2011). Moving beyond the boat without a paddle: Reality pedagogy, Black youth, and urban science education. *The Journal of Negro Education*, *80*(3), 284-295.

Farland-Smith, D. (2012). Development and field test of the modified Draw-a-Scientist Test and the Draw-a-Scientist Rubric. *School Science and Mathematics*, *112*(2), 109-116.

Ferrini-Mundy, J. (2013). Driven by diversity. *Science*, *340*(6130), 278-278.

Finson, K. D. (2002). Drawing a scientist: What we do and do not know after fifty years of drawings. *School science and mathematics*, *102*(7), 335-345.

Hannover, B., & Kessels, U. (2004). Self-to-prototype matching as a strategy for making academic choices. Why high school students do not like math and science. *Learning and instruction*, *14*(1), 51-67.

Gay, G. (2013). Teaching to and through cultural diversity. *Curriculum Inquiry*, *43*(1), 48-70.

Gee, J. P. (2000). Chapter 3: Identity as an analytic lens for research in education. *Review of Research in Education*, *25*(1), 99-125.

Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology*, *28*(6), 545.

LeMahieu, P. G., Grunow, A., Baker, L., Nordstrum, L. E., & Gomez, L. M. (2017). Networked improvement communities: The discipline of improvement science meets the power of networks. *Quality Assurance in Education*, *25*(1), 5-25.

Lewis, C. (2015). What is improvement science? Do we need it in education? *Educational Researcher*, *44*(1), 54-61.

Miller, D. I., Nolla, K. M., Eagly, A. H., & Uttal, D. H. (2018). The development of children's gender-science stereotypes: A meta-analysis of 5 decades of US Draw-A-Scientist Studies. *Child development*. doi:10.1111/cdev.13039.

Nie, Y., Tan, G. H., Liau, A. K., Lau, S., & Chua, B. L. (2013). The roles of teacher efficacy in instructional innovation: Its predictive relations to constructivist and didactic instruction. *Educational Research for Policy and Practice*, *12*(1), 67-77.

Osborne, J., Simon, S., & Collins, S. (2003). Attitudes towards science: A review of the literature and its implications. *International Journal of Science Education*, *25*(9), 1049-1079.

Perrault, L. D. (2017). Exploring Science Identity: The Lived Experiences of Underserved Students in a University Supplemental Science Program. University of New Orleans Thesis and Dissertations. 2428.

Rhode Island Department of Education (2015). *InfoWorks! Rhode Island Education Data Reporting*. Retrieved from http://infoworks.ride.ri.gov/

Taconis, R., & Kessels, U. (2009). How choosing science depends on students' individual fit to science culture. *International Journal of Science Education, 31*(8), 1115-1132. doi:10.1080/09500690802050876

Wood, N. B., Erichsen, E. A., & Anicha, C. L. (2013). Cultural emergence: Theorizing culture in and from the margins of science education. *Journal of Research in Science Teaching*, *50*(1), 122-136.

Table 1.

Difference in Perception of Scientists from Pretest to Posttest in the Construct of Appearance

Variable	Pretest %(N)	Posttest %(N)	Pearson χ^2	*p*
Appearance			36.29	.000
Urban			20.67	.000
Sensationalized	15.9(18)	8.4(8)		
Traditional	41.6(47)	17.9(17)		
Progressive	42.5(48)	73.7(70)	16.69	
Rural				.000
Sensationalized	31.3(36)	19.8(21)		
Traditional	35.7(41)	19.8(21)		
Progressive	33.0(38)	60.4(64)		

Note. Drawings that were indiscernible were coded as missing systems.

Table 2.

Difference in Perception of Scientists from Pretest to Posttest in the Construct of Location

Variable	Pretest %(N)	Posttest %(N)	Pearson χ^2	*p*
Location			30.23	.000
Urban			14.67	.001
Sensationalized	19.2(20)	9.0(8)		
Traditional	45.2(47)	28.1(25)		
Progressive	35.6(37)	62.9(56)		
Rural			20.45	.000
Sensationalized	59.0(62)	30.1(31)		
Traditional	21.0(22)	24.3(25)		
Progressive	20.0(21)	45.6(47)		

Note. Drawings that were indiscernible were coded as missing systems.

Table 3.

Difference in Perception of the Activity of Scientists from Pretest to Posttest

Variable	Pretest %(N)	Posttest %(N)	Pearson χ^2	*p*
Activity			36.54	.000
Urban			13.99	.001
Sensationalized	23.0(26)	4.4(4)		
Traditional	43.4(49)	50.0(45)		
Progressive	33.6(38)	45.6(41)	31.53	
Rural				.000
Sensationalized	62.7(64)	24.0(25)		
Traditional	17.6(18)	33.7(35)		
Progressive	19.6(20)	42.4(44)		

Note. Drawings that were indiscernible were coded as missing systems.

APPENDIX A

Modified DAST Rubric

Attribute	Can't be Categorized	Sensationalized	Traditional	*Progressive
APPEARANCE	Examples -No Scientist -Historical Figure *~~-reflects teacher or student~~ Difficult to discern	Male or female who resembles a monster, or who has clearly geeky appearance (example: crazy hair, odd appearance, cape).	Standard-looking white male or standard-looking scientist unable to determine gender. This scientist clearly lacks any references that are bizarre (Example: humpback).	Female, person of different ethnicity, child, or two or more scientists.
Score	0	1	2	3
LOCATION	Difficult to discern	Resembles a basement, cave, or setting of secrecy and/or horror. Often elaborate, with equipment not normally found in a laboratory (example:bubbling beakers).	Traditional lab setting- a table with equipment in a normal-looking room (Example: beakers without bubbles)	Anywhere other than a traditional lab setting.
Score	0	1	2	3
ACTIVITY (with support or *without support from caption)	Difficult to discern	The scientist's work is either magical or destructive, or embellishes the drawing with a storyline that is about spying, stealing, killing,or scaring. Often science done unrealistically under hazardous conditions (example: destructive, toxic potions, or explosives).	"The scientist is studying or is trying to…" but caption *or drawing does not show HOW the scientist is studying or researching. Student sees the scientist involved in work miraculous in nature (naive on the part of the student), not destructive.	"The scientist is studying…"and the caption or drawing shows HOW the scientist is doing this. Indicates that the student is portraying the type of work that a scientist might actually do with the tools needed. *tools may include literacy component for example science notebook or books
Score	0	1	2	3

*modified from Farland-Smith DAST rubric (2012)

Building a Global Perspective of Family Engagement: Preparing Educators to Engage Families

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Abstract

This paper addresses a relevant issue in urban education, the preparation of teachers to engage with diverse families. Specifically, this paper discusses a study designed to explore how to be better prepare teacher candidates to engage with and work with diverse families in urban schools. Supported by previous research findings, the paper highlights a study conducted through a two-stage approach. Results of the study are presented and implications for supporting quality urban education through family engagement are discussed.

Keywords: teacher education, family engagement, diversity, urban education

One of the greatest challenges new teachers face is working with families in support of children's learning (Metlife Survey of the American Teacher, 2013; Wiseman & Fox, 2010). This factor is often the case in urban schools. Unlike suburban and rural school districts, urban school districts serve significantly more students. Furthermore, urban school districts are often marked by higher concentrations of poverty, greater racial and ethnic diversity, larger concentrations of immigrant and refugee populations, and linguistic diversity. Therefore, teachers in urban schools need adequate preparation in the area of family engagement, especially as it relates to diverse families.

Even though it is imperative for teachers to engage with diverse families, research has found that there are challenges to preparing teachers to work with families (Metlife Survey of the American Teacher, 2013). The challenges facing the preparedness of teachers to engage with families in urban schools have both structural and cultural components. Structural challenges are specific to teacher preparation programs whose curriculums are at capacity with courses required by accreditation agencies and certification standards. Alternatively, cultural challenges are those sets of beliefs that contribute to teacher candidates' perceptions of how they believe they should engage with students and families. Often, teachers default to their personal experiences and beliefs. Implicit in the ability to engage with diverse families, one must have awareness of their own cultural biases particularly of what researchers describe as a deficit perspective toward poor, culturally and linguistically diverse children and their families (Wiseman & Fox, 2010). Having a deficit perspective considers the family as a failing system lacking skills needed to assist their children in school. If teacher candidates possess deficit views of students and families, they may

ultimately generalize about particular cultural groups when it comes to norms, achievements, and even failings.

Aims of the Study

The purpose of this research study was to explore ways in which teacher candidates may be prepared to work with diverse families in urban schools. Specifically, the aim of this study was to explore a means for providing authentic and effective instruction in family engagement (focusing on urban schools) to teacher candidates.

Methods

The study utilized a two-stage approach to collect data from parent participants and teacher candidates. First, the researcher collected and analyzed survey data from ethnically diverse parent participants (n = 38) who had children enrolled in urban, Title 1 elementary schools. Parents completed a survey related to their beliefs about partnerships between home and school. Their responses informed the development of a family engagement instructional model for teacher candidates. In the second stage, the teacher candidate participants (n=10) were surveyed about their beliefs about school-family partnerships. Thereafter, they completed the family engagement instructional module in one of their certification courses. Lastly, the teacher candidate survey was conducted again, after receiving instruction using the family engagement module. Differences in survey responses for the teacher candidates were analyzed and were discussed. The teacher candidate's responses were formulated into themes, that will be described in the next section.

Solutions-Based Approach

This study recognizes that teacher candidates may have an implicit deficit perspective of diverse families in schools. Simultaneously, it also promotes family engagement through an

ecological framework. Meaning, various contexts, the home, school, and community must be considered when conceptualizing family engagement and how to build relationship with diverse families. The following themes may serve as potential solutions and guide preparation and professional development of teachers in the area of family engagement.

- Lesson 1: If there is a goal of student achievement, teachers should use that to inform their thinking about how they need parents to be involved.
- Lesson 2: Parents have heard and even know that they are their child's most important teacher, however sometimes there is a lack of understanding about how they can be fully engaged, in order to make a difference.
- Lesson 3: School engagement may look different by family; therefore, teachers have to get to know their families. This may or may not be accomplished with just a survey at the beginning of the year.
- Lesson 4: Teachers cannot assume that their beliefs about engagement translate to parent's beliefs about engagement.
- Lesson 5: It is helpful for parents to understand what a teacher means by "involvement" because it may look different based on school culture, academic subject, and grade level.

The results of the aforementioned research may help to inform our understanding and actions related to the preparation of teachers to engage families in urban schools. Furthermore, the results allow us to highlight thematic approaches that may be used in urban educational environments with current practitioners. This study explored a different perspective of family engagement, by gaining knowledge through parent voices, to inform teacher candidates' learning experiences. An overarching goal of this study was to promote discourse on ways in which we

may support quality urban education. A major focus is necessary, on the prominent roles of both the parents and the teachers. Teachers need new and different knowledge and skills to meet the needs of diverse families and support children's learning in urban schools. In addition, teachers are key in facilitating learning in addition to the socialization and acculturation process for diverse students. Therefore, they must do so with an awareness of family backgrounds and needs (Nichols & Soe, 2013). Through the implementation of programming in educator preparation programs and professional development for in-service teachers, these experiences may serve as a necessary guide to work in classrooms that are no longer homogenous but more representative of changing demographics in society.

References

Metlife Survey of the American Teacher. (2013). Challenges for school leadership. Retrieved from http://www.metlife.com/assets/cao/foundation/MetLife-Teacher-Survey-2012.pdf

Nichols, J. D., & Soe, K. (2013). An analysis of preservice teacher responses to participation in a literacy program for new immigrant children. *Multicultural Perspectives, 15*(4), 220-226.

Wiseman, A., & Fox, R. K. (2010). Supporting teacher's development of cultural competence through teacher research. *Action in Teacher Education, 32*(4), 26-37.

Assessing the Diversity Related Professional Development Needs of Pre-Service Teachers

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Abstract

Students of color are expected to make up 56 percent of the student population by 2024, the educator workforce is still overwhelmingly white, 82% of K-12 teachers identify as white. It's critical that higher education institutions prepare pre-service teachers to demonstrate understanding of issues of race, class, gender, privilege, etc. This survey study assessed the professional development needs of students in the college of education and professional studies at a predominantly white university in the Midwest. Results indicated that students desired and faculty/staff felt more training on how to talk about issues of race, discrimination, and poverty in the classroom setting, cultural competence training and disability/mental health awareness was needed.

Keywords: pre-service, diversity, training

Assessing the Diversity Related Professional Development Needs of Pre-Service Teachers

With the current political and racial climate hate and bias incidents are occurring on K-12 and Higher Education campuses across the country. These are discussions pre-service teachers will need to be equipped to have in a competent manner. Cultural competence is having an awareness of one's own cultural identity and views about difference, and the ability to learn and build on the varying cultural and community norms of students and their families. It is the ability to understand the within-group differences that make each student unique, while celebrating the between-group variations that make our country a tapestry. This understanding informs and expands teaching practices in the culturally competent educator's classroom (Munoz, 2015).

The mere presence of diverse communities on college campuses is not sufficient in promoting positive educational outcomes related to diversity (Museus, 2008). Institutions have to be committed to creating structured opportunities to achieve success in student learning. Garmon (2004) conducted a case study with a white female who grow up in a rural Midwest area where 99% of the residents were white. The results from the interviews conducted with the participant identified six major factors that appeared to be most critical in facilitating the changes that occurred in her beliefs about and attitudes toward diversity. Three of the factors were dispositional, relating to her character traits or personal dispositions, whereas the other three were based on the experiences (e.g., support group, intercultural and educational) she had. The urgency for diversity training isn't a new concept. Barry and Lechner (1995), examined preservice teachers' attitudes and awareness of aspects of multicultural teaching and learning with. Seventy-three pre-service teachers, who were currently enrolled in an elementary education program completed a questionnaire. Results showed most respondents were cognizant of many issues related to multicultural education and anticipate teaching culturally diverse students in

their classrooms. Although aware of the need to be able to work with students from diverse cultures, preservice teachers are undecided on how well their pre-service education program developed their abilities to teach students from culturally diverse backgrounds that differ from their own, or to communicate with the families from diverse backgrounds. The purpose of the study was to assess the diversity related professional development needs of pre-service teachers in the college of education and professional studies.

Methodology

Qualitative survey research was used to assess diversity related professional developments needs of pre-service teachers. Students, faculty and staff were asked an open-ended question: "Please list topics of diversity training that should be offered to students in the college" After the question a text box was provided to allow respondents to provide a unique answer. This approach, as opposed to providing a list of predetermined responses to select from gave respondents the freedom to say exactly what they felt should be offered.

Data Collection & Analysis

Data were collected via Qualtrics. Qualtrics is a subscription software for collecting and analyzing quantitative and qualitative survey data. The survey was sent out once a week for 4 weeks. Data were analyzed using inductive coding (Strauss & Corbin, 1990). With is method, the coding process was based on the data. The primary researcher had a PhD in a diversity related field and the director for diversity and inclusion initiatives for the college. The second researcher was a doctoral candidate also in a diversity related field. Both had course work and experience with qualitative research methods and served as coders. Through careful review of open ended questions, emerging themes were developed. A number was assigned to each theme which were used for manual coding. The coders analyzed responses independently and made notes regarding

how the statements fit within the established themes and compared coding results. Using this coding method, six themes emerged.

Findings

After analyzing the open-ended reposes provided by 829 respondents (faculty, staff and students) six themes emerged. The themes were having diversity related training in the areas of: a) disability/mental illness, b) cultural competence/awareness, c) LGBTQAI+/gender, d) facilitating conversations about diversity, e) discrimination and f) race/ethnicity.

1. Disability/Mental Illness. Several respondents mentioned the need for more training in the areas of physical, mental and/or learning disabilities. Individuals with mental illness and those who have experienced trauma were also inclusive of this theme.
2. Cultural Competence/Awareness. This theme emerged from statements about needing to learn about cultures that were not a part of their identity and learning strategies for teaching students from different cultures.
3. LGBTQAI+/Gender. Many of these statements referred to learning about various genders differences/identities and sexual orientations.
4. Conversations of Diversity. These statements focused on training that would provide the skills needed to facilitate conversations about diversity in the classroom setting or how to communicate appropriately with individuals from diverse backgrounds (e.g., not saying anything offensive or committing microaggressions).
5. Discrimination. This theme referred to knowledge about inequalities, discrimination/harassment (e.g., bias, microaggressions)
6. Race/Ethnicity. This theme emerged from statements referring to knowledge of individuals from different racial and ethnic backgrounds.

Designated Solutions

The majority of classroom teachers in the U.S. identify as white, female. This translates to a high percentage of white teachers teaching in our urban communities. The strategies listed below can be utilized by teacher preparation programs and by districts to provide diversity related professional development. These best practices for diversity training are provided by the Arlington Public Schools (Handover Research, 2017)

- Provide numerous opportunities for skill-based training, with specific focus on effective communication skills and cultural considerations within the classroom and outside the classroom.
- Ensure that the training addresses the needs of the constituency base in [the district] and ensure that the training exercises are relevant and specific to the community being trained.
- Explore the intersections between ethnicity, socio-economic status, culture and race as dimensions of diversity.
- Explore managing unconscious bias and assumptions harbored by [district] community members.
- Provide training on communication styles and the delivery of effective feedback when responding to prejudicial or culturally incompetent remarks.
- Strategize ways for [the district] to cultivate diversity allies, forging partnerships and building relationships across cultures internally and externally.
- Explore issues of 'unearned privilege' in the workplace and its effect upon the strength of workplace relationships.
- Provide training on 'cultural cues' and issues of respect in the workplace.

- ❖ Provide management training for administrators and supervisors to assist with managing the attitudes of employees.

Multicultural teacher education courses and field experiences play a vital role in developing students' awareness and sensitivity to diversity. Wiggins, Follo and Eberly (2007) examined the impact of a field immersion program on preservice teachers' attitudes towards teaching in culturally diverse classrooms. The study involved 63 preservice teachers enrolled in urban education course while participating in a field placement at a culturally diverse elementary school. A questionnaire was given to the participants. Results indicated that appropriate field placement, support from peers and teachers, and meaningful coursework facilitates the preparation of culturally responsive teachers.

Discussion

The significance of this study relates to the conference theme in two ways. Over 80 % of the teachers coming out of teacher preparation programs are white and are teaching in urban settings. It is imperative they are prepared to work in an ever-growing diverse society. Teacher preparation programs are tasked with this duty. Second, a study by Barry and Lechner (1995) found, students expressed they needed more training in multicultural education. The study also suggested multicultural education must be long term and complete with appropriate information, training and experiences. The students, faculty and staff in the current study had similar responses.

References

Barry, N. H., & Lechner, J. V. (1995). Preservice teachers' attitudes about and awareness of multicultural teaching and learning. *Teaching and Teacher Education, 11*(2) 149-161.

Garmon, M. R. (2004). Changing preservice teachers' attitudes/beliefs about diversity. *Journal of Teacher Education, 55*, 201-213.

Handover Research (2017). Closing the gap: Creating equity in the classroom. Retrieved from https://www.hanoverresearch.com/wp-content/uploads/2017/06/Equity-in-Education_Research-Brief_FINAL.pdf

Muñoz, Brenda Liz & Graybill, Emily (2015). Cultural competence in education. Georgia Association for Positive Behavior Support Conference. Retrieved from http://digitalcommons.georgiasouthern.edu/gapbs/2015/2015/28

Museus, S. D. (2008). The model minority and the inferior minority myths: Understanding stereotypes and their implications for student learning. *About Campus, 13*(3), 2-8.

Snyder, T. D., & Dillow, S. (2013). Digest of education statistics 2012. Retrieved from https://nces.ed.gov/pubs2014/2014015.pdf

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* Newbury Park, CA: Sage.

Wiggins, R. A., Follo, E. J., & Eberly, M. B. (2007). The impact of a field immersion program on pre-service teachers' attitudes toward teaching in culturally diverse classrooms. *Teaching and Teacher Education, 23*, 653–663. http://dx.doi.org/10.1016/j.tate.2007.02.007