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RESEARCH BRIEFS

VOLUME 6



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► RESEARCH BRIEF NO. 1

Understanding Risk Factors for Plagiarism Among MBA Students at a Northeastern US Research University

WRITTEN BY: **DR. BRIAN WILLIAMS**, EdD Alumni

SUPERVISING PROFESSOR: **DR. JOSÉ LUIS CHÁVEZ**

October 2021

ABSTRACT

The purpose of this mixed methods study was to examine 58 MBA students' perceptions and motivations for plagiarism to identify risk factors at a northeastern US research university (NERU). NERU MBA students engaged in plagiarism at rates which threatened program completion. Analyses revealed: (a) no difference in male and female plagiarism rates, (b) students viewed plagiarism as a bad practice and (c) grades, time and money were primary motivators. Twenty-one open codes were produced and grouped to depict students' progression through the program. Dualism, research and practical implications for the future were discussed.

AIM

The purpose of this explanatory sequential, mixed methods study was to examine MBA students' perceptions and motivations for plagiarism, as well as to determine if a significant difference between male and female plagiarism rates existed to identify plagiarism risk factors.

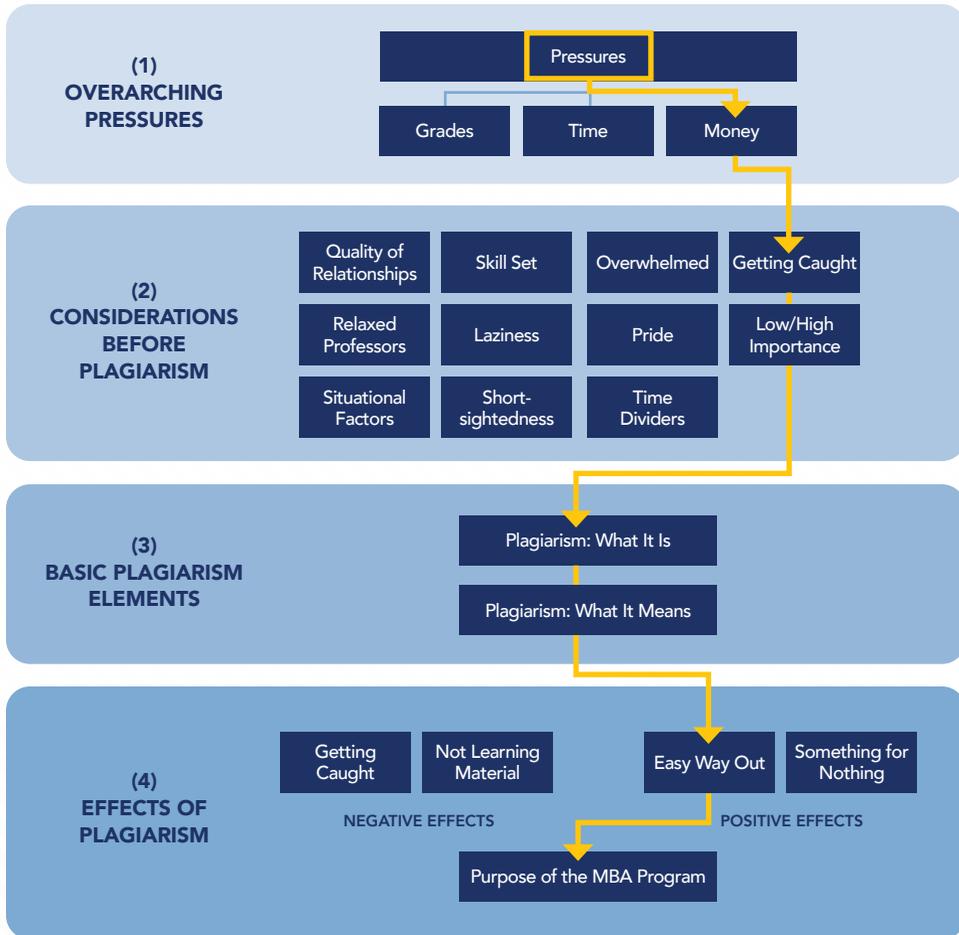
PROBLEM

Over the past 20 years, academic dishonesty has grown with advances in technology (Zrnec & Lavbi, 2017) and in spite of traditional, administrative responses, like expulsion from school (Amua-Sekyi & Mensah, 2016). Literature on the topic of academic dishonesty informed that men engaged in such practices more than women (Jereb, Urh, Jerebic, & Šprajc, 2018). Plagiarism, which is a specific act of academic dishonesty (Solomon, 2018), negatively affected the graduation rates of NERU MBA students. In an attempt to gain an alternate perspective on plagiarism, this study sought insight from Yan and Harrington (2020) to apply risk factors, commonly understood within healthcare, to this academic problem.

RESEARCH FINDINGS

The research questions were, (a) How do MBA students at NERU describe their perceptions of plagiarism?, (b) Is there a significant difference in the frequency of plagiarism cases between males and females at NERU?, and (c) How do MBA students at NERU describe their motivations for engaging in plagiarism? Universally, students regarded plagiarism as a bad practice that should be avoided. They recognized negative effects in addition to administrative responses, such as becoming an outcast among one's peers and the possible need to explain academic shortcomings to one's employer. Students additionally cited certain "benefits" to plagiarism, such as the ability to recapture one's time and reducing stress. Despite the negative administrative and additional consequences, students were willing to risk committing plagiarism. Furthermore, quantitative analyses revealed that no significant difference existed between men's and women's plagiarism scores.

Twenty-one open codes were produced and categorically grouped into an organizational chart. The arrows within the following figure represent one possible path through the MBA program.



DISCUSSION

Students generally agreed that plagiarism involved acquiring a work, using that work within one's own work, but without proper citation of the acquired work's source. Such acts included copying and pasting information from a website or another student's paper. They were also concerned about failed grades, possible expulsion from school, and facing possible sanctions from their employers. Students risked these negative outcomes to alleviate stress and to recapture time for more desirable activities. Students spoke of simultaneous yet opposing ideas related to plagiarism. This sense of dualism was present when talking about an easier progression through the program versus expulsion from the program (The Double-Edged Sword) or quick rewards versus suffering the aftermath (The Present and the Future). Being male was not considered a risk factor for plagiarism because a significant difference was not found between the male and female groups, a finding inconsistent with the literature.

The 13 risk factors for plagiarism among MBA students at NERU were:

- (1) *A deficiency of time*
- (2) *A high-grade orientation*
- (3) *A fear of losing money*
- (4) *Deficiencies in one's skill set*
- (5) *Laziness*
- (6) *Shortsightedness*
- (7) *High quality relationships*
- (8) *A desire to appear competent in front of one's peers*
- (9) *A perception of too much schoolwork*
- (10) *Relaxed professors*
- (11) *A desire for something for nothing*
- (12) *Ascribing low importance to schoolwork*
- (13) *A low concern of getting caught*

RESEARCH IMPLICATIONS

The area of academic dishonesty is growing and will likely be ever-present within academia. Future research that investigates plagiarism, or academic dishonesty in general would benefit from adhering to the following directions:

- (1) *Ensure equal representation of full- and part-time students because the factor of time could be viewed differently between the groups. Full-time NERU MBA students dedicate 100% of their time to school, are usually younger and more likely to be childless, whereas part-time students generally work full-time, are usually older and are more likely to have families.*
- (2) *Include finer levels of measurement to capture nuances reported in data collection. Such nuances could make any difference between male and female plagiarism scores more apparent and perhaps reveal a true difference.*
- (3) *Focus more on why students entered the program which would reveal the weight of the risk of plagiarizing.*

These plagiarism risk factors have practical implications for the NERU MBA program:

- (1) *Explanations to students about how coursework will help them in the future addresses risk factors 4, 6, and 12.*
- (2) *Removing irrelevant schoolwork addresses risk factors 9 and 12.*
- (3) *Providing citation examples to students addresses factors 4 and 10.*
- (4) *Encouragement towards academic integrity addresses factors 4, 6, 10 and 11.*
- (5) *Ensuring academic integrity education happens during orientation addresses factors 4 and 13.*
- (6) *University administrators who support professors when plagiarism is suspected addresses factor 13.*

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► RESEARCH BRIEF NO. 2

Where's the Reciprocity? Advocating for Marshallese COFA Migrants in Hawaii

WRITTEN BY: **KARENA ESCALANTE**, PhD Student

SUPERVISING PROFESSOR: **DR. AYANA ALLEN-HANDY**

November 2021

BACKGROUND

Pacific Islanders have become a rising population in the United States (Hagiwara, 2016). The projected amount of Pacific Islanders living in the states will reach two million by the year 2030 (McElfish et al., 2019, p. 1302). One example of this increase can be seen in the Hawaii Department of Education community. Currently, the state of Hawaii serves a large portion of multicultural students, with 9% of the entire student body classified as English Learners. Of those 9%, nearly 6,000 students identify as Marshallese. The history of how Marshallese students have migrated to the United States over the last several decades is unique through a series of treaties called the Compacts of Free Association (COFA), where citizens of the Marshall Islands, Micronesia, and Palau are granted a unique status as legal nonimmigrants who may work and live in the United States indefinitely without a visa.

Background continued on the following page.

BACKGROUND *(continued)*

This “gray area” of immigration status had led to complex systemic and educational experiences for the Marshallese community living in the United States. While the COFA policy has facilitated tens of thousands of these nations’ citizens migrating to the United States, this migrant population has been repeatedly affected by policy decisions overlooking or excluding their experiences. This roundtable examines strengths and weaknesses in the existing COFA policy toward students migrating to the United States from climate-affected areas such as the Republic of the Marshall Islands. Lastly, this roundtable highlights possible models to pursue in response for more equitable educational experiences in the larger multilingual, multicultural educational arena.

Education is presented as an area of focus in the COFA. This roundtable seeks to initiate a dialogue of the different factors of Marshallese education constructed in the COFA treaty using a critical race theory discourse analysis technique. This research will interpret the policy as a treaty bound by the United States constitution in order to implement an evocative and immersive educational and political analysis that will engage educational and political stakeholders and allow readers to interact with the COFA policy in innovative and meaningful ways to advance multicultural education both in the United States and abroad. The roundtable includes both educational and political goals that will be driven by principles of critical race theory to lead the analysis of qualitative data. Analyzing the policymaking discourse of the COFA can inform pedagogical practices for educators of students from nations belonging to the COFA and demonstrate how laws may work to foster collaborative communities or perpetuate inequality within educational institutions.

RESEARCH QUESTIONS

- (1) *What is the relationship between the United States and the Republic of the Marshall Islands represented to be in the COFA?*
- (2) *Which primary critical race theory tenets, if any, appear in the COFA law and to what extent?*
- (3) *How is Marshallese education represented to be in the COFA policy?*

METHODS

Critical discourse analysis (Machin & Mayr, 2012; Winkle-Wagner et al., 2019) will be a key methodological in this qualitative study, aiding in the problem identification, solution formulation, and implementation of the policy discourse. To answer these research questions, we chose a narrative inquiry qualitative case study because it can help organize and interpret embedded case data regarding the impact of the COFA policy agreement using a critical discourse analytical technique. Narrative inquiry uses various methodological approaches to analyze how stories are constructed including a linguistic approach to policy called discourse analysis (Yin, 1994; Gee, 2014). Language, and thus critical discourse analysis, is largely implicit but no language is benign.

SIGNIFICANCE

Conducting a policy discourse analysis of the COFA using a CRT framework positions researchers in a collaborative study to investigate this policy in hopes of understanding how policymakers and educational stakeholders can assist in supporting the learner's multicultural identity in America's classrooms. The significance of this proposal is to indicate whether the policy should be continued, and what course corrections might improve the experience of English learners in the education system. This work raises concerns around equity and access in the educational landscape, and how stakeholders should take next steps to account for the growing cultural and linguistic diversity within our schools.

Investigating the political discourse, specifically on the disposition of education within the COFA treaty, can push the multicultural agenda for English learners and validate multilingualism as an asset for learning and a competitive advantage in future careers. If the United States is committed to ensuring access to equitable education for all multicultural students including those from nations belonging to the COFA, then educational stakeholders must have a more inclusive dialogue of the Marshallese and other nations belonging to the COFA treaty in order to create learning environments responsive to students and families' cultural and linguistic strengths and needs (Yosso, 2005; Darling-Hammond, 2010; Allen-Handy et al., 2020).

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Karena Alane Escalante is a Philadelphia-based doctoral student at Drexel University's School of Education. Originally from Pomona, California, she earned her B.A. in psychology from Grinnell College and her M.S. from Johns Hopkins University. As a graduate assistant in the Justice Oriented Youth (JoY) lab, her research entails community-based urban and youth studies to advocate for collective leadership practices. After teaching in Hawai'i for several years, she found her passion in emancipating indigenous perspectives through education, specifically for English learners. She seeks to produce research that is ethically moral, celebrating diversity and illuminating cultural relevance within the education system. As a woman of color and first generation Ph.D. candidate, Karena also serves on the Diversity Advisory Council at Drexel. She describes herself as a passionate, de-colonial ethicist committed to advancing sustainable equity through dismantling systems of oppression within academia.

► RESEARCH BRIEF NO. 3

Effects of Adaptive Leadership on Faculty Engagement in Online Learning in Higher Education: A Mixed Methods Study

WRITTEN BY: **DR. MELISSA JEAN KAUFMAN**, EdD Alumna

SUPERVISING PROFESSOR: **DR. KRISTEN BETTS**

November 2021

ABSTRACT

The higher education environment was already changing when the COVID-19 pandemic swept through the world disrupting almost every industry. Higher education was facing stressors on the system including rising costs, decreasing enrollments, and the looming enrollment cliff of 2025. Institutions of Higher Education (IHEs) were turning to online learning in the hopes it would increase enrollment. The student population was becoming more diverse and non-traditional; demanding flexible programs that can fit into the lives of busy working adults. As IHEs turned to online or remote learning to keep their doors open during the COVID-19 pandemic and beyond, research was needed into how to engage faculty in online learning. The purpose of this mixed methods explanatory sequential study was to investigate the influence of adaptive leadership on faculty engagement in online education in higher education.

AIM

The aim of this explanatory sequential mixed-methods study was to investigate the influence of adaptive leadership on faculty engagement in online education in higher education. This study sought to explore faculty's perceptions of online learning as a modality within higher education; and then to explore what would affect faculty's willingness to participate in online learning. Data collected and analyzed from this study may provide guidance to IHE's administrative and faculty leadership on how best to support faculty if the institution decides to develop or increase online programs.

PROBLEM

Research shows that higher education was changing even before the COVID-19 pandemic (McKenzie, 2019). This research is significant because IHE's that were already adapting to the new realities brought on by rising cost and declining enrollment, had to instantly respond to the national business closures in response to the COVID-19 pandemic (Kaufman & Stimpson, 2021). Pre-COVID-19, IHEs were in crisis with many institutions being forced to close their doors due to financial exigency (Lederman, 2018).

RESEARCH QUESTIONS

The following research questions guided this study:

- (1) *What are faculty's perceptions of online learning?*
- (2) *What factors influence faculty's willingness to participate in online learning?*
- (3) *How does adaptive leadership affect faculty perception and participation in online learning?*

RESEARCH FINDINGS

Framework

This research was done using a pragmatic constructivist frame (Creswell & Poth, 2018). Pragmatism looks for the best way to address a challenge, and constructivism uses reality of a situation to shape one's approach (Creswell & Poth, 2018). There is no one magical answer to the challenges facing higher education. This study explored the feasibility of one solution. IHE's ability to be adaptive is critical to success in a post-industrial age (Heifetz et al., 2009).

Method

This study was done using a mixed-methods explanatory sequential study design which allowed for quantitative data to be collected first and then to inform the qualitative data collection (Creswell & Poth, 2018). A mixed-methods design was chosen so the researcher could triangulate the data between the quantitative and qualitative findings and so the results could be reported both using statistical significance found in quantitative data, and the rich descriptions found in qualitative data. Quantitative data were collected by a survey distributed to faculty from four schools/colleges at a large research university in the northeast: College of Nursing and Health Professions, Education, Law School, Public

Health. Qualitative data were collected through semi-structured interviews with faculty from the four schools/colleges. The quantitative data were analyzed using SPSS One-way ANOVA and Independent sample t-Tests. The Qualitative data were analyzed using NVivo with open and axial coding. The data were then triangulated to increase the validity of the study (Creswell & Poth, 2018).

CONCLUSIONS/DISCUSSION

This study had five results emerge: (a) the climate of a school/college affects perception of and participation in online learning, (b) faculty want to be acknowledged and rewarded for participation in online learning, (c) Institutions of Higher Education looking to move online need to secure faculty buy-in and provide faculty support, (d) faculty's perception of online learning has shifted over time. Exposure to online and remote learning during the COVID-19 pandemic shifted perceptions in a positive way, (e) instructional design support was highly valued.

IMPLICATIONS AND RECOMMENDATIONS

Five recommendations emerged from this research. They are based on data that was triangulated through the qualitative and quantitative data analysis as well as the literature review. While this was a relatively small study at four schools/colleges at a large university in the northeast the recommendations are generalizable to other settings.

- (1) *Institutional leadership should let faculty decide to opt-in to online teaching*
- (2) *Institutions of higher education need to develop policies to protect faculty time for developing online courses*
- (3) *Institutional leadership should recognize faculty contributions*
- (4) *Institutional leadership should provide support for online course development*
- (5) *Institutional leadership should invest in instructional designers for all course modalities*

The study found that leadership is critical to both perception and participation. Because of the unique organizational structure of most IHEs, the option to employ an authoritative leadership model where faculty are simply told what to do is fortunately not an option. Participants in this study made it clear that for faculty to have a positive perception of online learning and be willing to participate in online learning, they need to be able to opt-in to online teaching, be recognized and acknowledged, and have protected time. To be successful they need support, but not just traditional professional development. They need instructional design support as well as just-in-time training, coaching, and job aids. Should an institution of higher education wish to create an online program, following these recommendations will create a smoother and effective process for faculty adoption of teaching in the online modality.

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National Conference and the 2020 ASPPH Conference. She has also published articles in the *Journal of Health Administration Education* and the *Journal of Educators Online*.

► RESEARCH BRIEF NO. 4

Creating Mirrors: Expanding Frameworks to Explore Immigrant Students' Agentive Authoring of Identity

WRITTEN BY: **NEISHA YOUNG**, PhD Student

SUPERVISING PROFESSOR: **DR. CHRISTOPHER WRIGHT**

December 2021

ABSTRACT

Immigration contributes to the increasing diversity represented in US classrooms. The need to support immigrant students' identities has generated much research, leading to the call for students to be provided with texts that mirror their cultural identities. However, the reality is that we cannot provide mirrors for all the intersecting identities present in our classrooms. I, therefore, aim to build on the established frameworks by exploring how the use of a conceptual tool, the Critical Cultural Identity Tool (CCIT), can provide pedagogical strategies to equip students to craft their own mirrors.

AIM

This research brief provides an overview of my current research agenda, where I am aiming to explore how the use of a developing conceptual framework can contribute to the development of pedagogical strategies to support immigrant students' authoring of their own mirrors, when texts negate or (mis)represent them.

PROBLEM

The United States of America (US) has more than 44.9 million immigrants from over 200 countries, who speak hundreds of languages, and have a robust mix of cultures (Immigration Data and Statistics, 2021). In light of this, much discussion has centered on the nature of the student diversity represented in US classrooms. Integral to this discussion has been the argument that classrooms need to recognize, reflect, and celebrate immigrant students' multifaceted cultural identities by providing them with texts to which they can relate (Caraballo, 2017; Bishop, 1990; Ladson-Billings, 1995; Lopez-Robertson, 2017). This need is supported by research that suggests that cultural representation is important (Caraballo, 2017; Paris & Alim, 2014; Umana-Taylor et al., 2018), and our culturally diverse students need to see themselves and their cultures in the texts that they read. In her influential essay *Mirrors, Windows, and Sliding Glass Doors* Bishop (1990) argued that,

When children cannot find themselves in the books they read, or when the images they see are distorted...they learn a powerful lesson about how they are devalued in society, [therefore] our classrooms need to be places where all the children from all the cultures that make up the salad bowl of American society can find their mirrors. (Bishop, 1990, p. 1).

Ladson-Billings (1995) further impacted this conversation, by asserting the need for teachers to practice culturally relevant pedagogy by improving their cultural competence when engaging with diverse students.

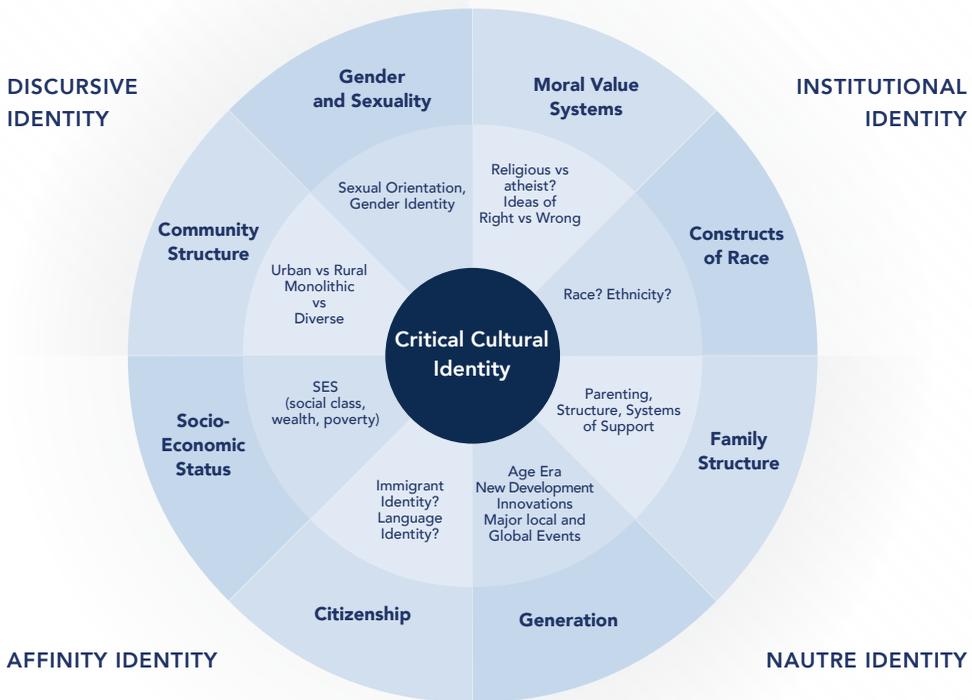
The corpus of research articulated by Bishop and Ladson-Billings is nothing short of ground-breaking, as their work has led to crucial developments in policy and praxis and has positively influenced the educational experiences of culturally diverse students both here in the US and globally. Many districts now curate workshops and professional development seminars geared at fostering cultural competence within their teachers, and more and more classrooms now feature books written by authors of color with multicultural characters. However, while some books may offer mirrors to some children, those mirrors may be warped for others, may reinforce stereotypes, or may exclude other children entirely (Esteban-Guitart et al., 2019; Umana-Taylor et al., 2018). Also, the multiplicity of identities represented in classrooms are in a constant state of 'becoming,' as students grow, explore, and change. Consequently, instead of creating spaces of empowerment, what often results when educators offer texts with mirrors, is the creation of essentialized spaces where students with multicultural identities are unintentionally stereotyped, and the subtle nuances and intersections of their evolving cultural identities are negated (Gee, 2000; Gillborn, 2015). There is therefore a need for a continued expansion of ways to support students' unique and diverse multifaceted identities (Esteban-Guitart et al., 2019; Umana-Taylor et al., 2018). My research responds to this call by building upon the

foundations established by Bishop and Ladson-Billings to explore pedagogical strategies that can contribute to the transformation of classrooms from spaces that seek mainly to mirror and support identity, into spaces that provide agentic opportunities for identities to be explored, problematized, countered, and authored in authentic ways.

RESEARCH EXPLORATION: THE CRITICAL CULTURAL IDENTITY TOOL (CCIT)

In assessing this need for continued expansion of the ways in which we support student identity in our culturally diverse classrooms, I pose the following overarching questions: since we cannot provide mirrors for all the various intersecting identities in our classrooms, how do we find pedagogical ways to support students' development of their own mirrors? How can these new pedagogical strategies deepen our theoretical understanding of the identity processes in which immigrant students engage? These questions have led to the conceptualization of the Critical Cultural Identity Tool (CCIT). The CCIT, pictured below, is a pedagogical tool that I am in the process of exploring and refining, and it is predicated upon the framework of intersectionality (Crenshaw, 1989, 2017; Gillborn, 2015; Hill-Collins & Bilge, 2016) and Gee's four types of identities (Gee, 2000). As a critical pedagogical tool, the CCIT is geared at focusing the conversation on the different facets of students' identities and how they interact in broader societal contexts. The CCIT is in its initial phase of development, and the goal is to continue to develop and refine it through an iterative multi-year research agenda.

► **FIGURE 1**
Critical Cultural Identity Tool



LOOKING AHEAD

The application of intersectionality as a framework for understanding the cultural diversity present in US classrooms highlights the need for critical pedagogical strategies that can accommodate explorations and affirmation of immigrant students' evolving narratives of self. The CCIT has the potential to be positioned as one such critical pedagogical strategy that can equip culturally diverse students to use their intersectional identities to create their own mirrors, while deepening our theoretical understanding of what the identity-authoring process is like for immigrant students. As I continue to develop and refine the CCIT, my aim is to explore various elements of the tool, to assess how each element might prove instrumental in achieving the overarching goals. To that end, I plan to spend the next three years focusing first on the intersection of discursive identity and immigrant status. Some of the questions I am currently grappling with include: In what ways does the CCIT as a pedagogical tool influence immigrant students' discursive agency in countering identity narratives that (mis)represent and/or negate them? What prevailing identity facets do immigrant students draw upon as they use the CCIT to author authentic narratives of self in response to texts that do not mirror their identities?

IMPLICATIONS

The CCIT holds rich potential to add to the conversation surrounding critical pedagogy for culturally diverse students. It offers the possibility of advancing theoretical understanding concerning immigrant students and the processes that they employ as they navigate their shifting identities within the context of educational spaces. It also holds the promise of expanding upon Bishop's and Ladson-Billings' scholarship by articulating a research-based framework that makes room for greater student agency in interpreting and crafting representation. As it relates to practice, the CCIT bears the possibility of providing educators, especially those in ELA classrooms, with a critical culturally-focused strategy that can complement their efforts to provide students with mirrors. I am excited about these potential contributions as I continue to research and refine my conceptual framework, and I look forward to the insights and conversations that my work will generate in the coming years.

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► RESEARCH BRIEF NO. 5

School Community Perceptions of an Equity Team in a Suburban School: An Instrumental Case Study

WRITTEN BY: **DR. ILANA SHIPE**, EdD Alumna

SUPERVISING PROFESSOR: **DR. KRISTINE LEWIS-GRANT**

December 2021

ABSTRACT

Equity reform is a pressing issue in education, particularly because historically marginalized racial and ethnic groups comprise the majority of the student population in U.S. public schools. Equity teams are a recent reform effort, yet evidence of their effectiveness is emergent. The purpose of this instrumental case study was to understand an equity team's actions to address disparate educational outcomes for students of color, and how the work of the equity team was perceived by the larger school community. This study sought to answer the following questions:

1. What actions do equity teams take to establish equitable school environments in high-performing, suburban, public schools?
2. How does the school community perceive the work of equity teams in high-performing, suburban, public schools?
3. How do teachers, staff, and parents perceive the work of equity teams?

This instrumental case study is based on data collected from a school-wide survey and semi-structured individual and group interviews with members of the school community. Findings resulting from data analysis included: (a) the Watts Equity Team is still in its infancy; (b) the school community is largely unsure of the team's existence or efforts; (c) based on MAEC's components of an equitable school, Watts High School exhibits moderate evidence of an equitable learning environment.

AIM

The purpose of this instrumental case study was to understand a suburban high school equity teams' actions to address disparate educational outcomes for students of color and how the work of the team was perceived by the larger school community.

PROBLEM

As the population of students of color grows, educators are working with an ever-diversifying student body. For K-12 schools, this means that marginalized students, though still minoritized, will no longer be in the minority of the population. It also means that the types of learners are continuing to diversify; students of color will soon outnumber dominant culture students. If the students are changing, schools will need to adjust in order to establish and sustain equitable learning environments. They will need to confront inequities, a task perfectly suited for an equity team. Substantial research exists for urban school environments and there is a recent study on equity teams in an urban environment (Morton, 2018), but more research is needed on suburban schools and their efforts to utilize culturally sustaining pedagogy and create equitable learning environments. In order to identify and implement the necessary steps and training, schools need assistance. With the recent advent of equity teams, little is known about how they address educational disparities for students of color in suburban public schools, and how their work is perceived by members of the school community (Cramer, Little, & McHatton, 2017).

RESEARCH FINDINGS

Three findings emerged from the study: (a) the Watts Equity Team is still in its infancy; (b) the school community is largely unsure of the team's existence or efforts; (c) based on MAEC's components of an equitable school, Watts High School exhibits moderate evidence of an equitable learning environment.

In the two years since its inception, the Watts Equity Team hosted a book study event and is still working out plans for a second event. The team experienced a pandemic and multiple changes to its membership and is still in the process of identifying which equity-related data would be appropriate for them to use.

The second finding is that more than half of the participants were either unsure of the team's efforts or believed that there was no team. The majority of respondents who had indicated clear awareness of the team's existence were either unsure of the team's activities or believed that the team's efforts had not made yet a positive impact on the school environment.

The third finding is that Watts has evidence of the indicators of an equitable learning environment, but is not yet equitable. The MAEC (2020a) components of an equitable school include: equity-focused mission, inclusive climate and visual environment, collaboration of all groups within the school community, and partnership with all stakeholders to support students. Watts High School has not yet met all the characteristics to be considered equitable. The mission is not Watts-specific, rather the school team adopted the district's mission statement. The environment is not yet inclusive for all students; adults in the school community have observed students at Watts feeling

comfortable and included if their differences were in appearance or intellect while students whose differences were related to race or ethnicity have been observed feeling alienated and unsupported. In addition, data indicate that some students of color feel a need to assimilate and also feel marginalized. Collaboration and partnerships to ensure that all groups within the school community are represented and supported are still in development.

CONCLUSION

Given the diversity of the student body and the predominately White staff, everyone in the school community needs equity training so that all students can be served. Training is a critical component of any equity efforts. The findings of this study also support the assertion that the work of an equity team is extensive (Hanover Research, 2019). In the two years that the team has existed, the Watts Equity Team has begun building a more inclusive culture but the data indicates that it is not yet inclusive for all and that there is much work ahead. In addition to focusing on the culture, they still need to analyze data; examine policies, practices, and procedures; identify inequities; and facilitate relevant trainings.

Equity teams should relentlessly pursue equity by persisting in the face of adversity, whatever form it takes. They need to craft an equity vision, investigate inequities, lead equity reforms, and monitor the progress of those reforms (Khalifa, 2020). The principal should lead the equity team as the position of authority to both model and make change. Equity teams should include team members from all school community groups and reflect the diversity of the school. Equity teams need to ensure that the school climate is positive. The work of the team must be promoted and celebrated. In order for the school community at large to be aware of and involved in equity efforts, an equity team needs to clearly and intentionally share what it does with the larger school community. The equity team should partner with parents, community groups, local colleges/universities, and/or feeder schools. Finally, an equity team needs to use data to inform its activities.

District-level leaders need to support equity teams by providing them with training, encouragement, and funding. All employees, including new hires need equity training, specifically on how equity is operationalized in the district, what is expected by the district, what students need, and also how to ensure educational equity for all learners.

Schools/Colleges of Education must prepare school leaders to effectively engage in equity work as part of their school leadership training programs (principals, superintendents, etc.). School leaders need to know what equity work is and they need a deep understanding of equity-focused theories. In addition, school leaders need to understand how to lead equity work within a school context. They must also support a national dialogue on educational equity. There is not yet a national definition of equity as it relates to educating students. There is also not yet an agreed upon definition or characteristics of an equitable learning environment. Educational scholars and researchers should partner with school leaders to engage in a conversation to help craft such a definition and national standard for equity.

RESEARCH IMPLICATIONS

Future studies should be expanded to include students and staff. This may allow for increased generalizability of results. They should devote more time to the study to get a longer range view; extended time would offer additional opportunities for observation and data collection, thus increasing the amount of data for the study. A multi-site and/or wider study could increase the generalizability of the results; future research should be expanded into a multiple site study within a district to offer insights that can only be gained through a comparative analysis and also include community and community partnerships. This addition could offer a more complete picture of the perceptions of the equity team's efforts.

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Ilana Shipe received her EdD in Educational Leadership and Management with a concentration in Creativity from Drexel University. She has worked in K-12 education in various capacities for 20 years, serving a variety of student populations. Currently, she serves as the proud principal of an elementary school. Ilana was a co-presenter at the 2019 Pennsylvania Principal's "LEAD19" Conference on the topic of How Cultural Equity Can Be Infused Into Your Organization. Her research focus is on educational equity and equity teams.

► RESEARCH BRIEF NO. 6

“Ubuntu - I Am Because We Are”: A Grounded Theory Study of Community (Un)Belonging

WRITTEN BY: **TUREA M. HUTSON**, PhD Student

SUPERVISING PROFESSOR: **DR. AYANA ALLEN-HANDY**

January 2022

ABSTRACT

An expanding body of research focuses on racialized stress and its influence on the experiences of BIPOC populations. Less research addresses the influence of interracial rejection on the overall perceived sense of belonging of BIPOC individuals experience. Even less research centers on the combined influence of interracial and intraracial rejection. This grounded theory (GT) study explores the compounded experiential influence of these phenomena on the experiences of an intergenerational group of BIPOC individuals—specifically Black Americans-- as they conduct Participatory Action Research (PAR) within their community. This research brief concludes by offering solutions to address this phenomenon in different sectors.

PURPOSE

The purpose of this qualitative study is to provide an initial exploration into the effects of interracial rejection, stress, and trauma on a small, diverse, intergenerational group of Black American community stakeholders and community researchers conducting PAR. Using constructivist grounded theory, (Charmaz & Thornberg, 2020), this study seeks to establish a new conceptual lens through which to view this compounded influence of interracial and intraracial rejection on lived experiences.

DISCUSSION

The *presence of a collective mindset* was an ongoing theme and speaks to the concept of belonging as an ongoing human need (Baumeister & Leary, 1995). Collectivism is relevant within the context of the theory of belonging and the way it contributes to the overall experience of intergroup and intragroup rejection. All participants discussed a sense of shared responsibility. The interrelatedness could explain why intragroup discrimination was so impactful. Participants believed those who engaged in intergroup discrimination did not comprehend this concept. However, it was notable that those who engaged in intragroup discrimination were not described as not comprehending the concept of collectivism. This could warrant further exploration.

That participants revealed experiences of *intergroup and intragroup discrimination*, and the political and social implications of these phenomena. Participants discussed how the phenomenon operates from a macro-level and a micro-level. This is consistent with the concept of Critical Race Theory (CRT) as developed by Crenshaw (1990) and Bell (1995). This finding was highlighted the expertise held by community members, despite the fact the academy at times does not recognize the knowledge derived from lived experience (Yosso, 2005).

CONCLUSION

There are interdisciplinary implications that can be gleaned from this research. Researchers can seek out projects that center the experiences and voices of communities, particularly those who are minoritized. Participatory Action Research is a tool that can aid in this process. Policymakers can engage residents in the legislation process by holding town hall meetings and engaging in collaborative practices like participatory budgeting.

Educational entities can ensure that their culturally relevant teaching practices include an awareness of belonging and collectivism. Communities can engage residents through the formation of civic associations and community gatherings. Further research must be done to gain insight into the ways these practices work in different communities. Building from these and similar studies can provide such insight.

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equity were a primary focus of Hutson's undergraduate and graduate studies, and she spent much of her time researching ways to make schools a more equitable space for marginalized students to learn. Hutson's interest in education policy led her to run for the school board in her hometown. She served for seven years. She served as president of the board for three years. Hutson's research interests include equity, education policy, race, racism, racial trauma, intersectionality, autism spectrum disorder in diverse communities, and student identity.

► RESEARCH BRIEF NO. 7

Exploring Entrepreneurial Students' Perceptions of Online Mindful Creativity Training: A Mixed Methods Case Study

WRITTEN BY: **DR. MELISSA M. SCHMITZ**, EdD Alumna
SUPERVISING PROFESSOR: **DR. LARRY KEISER**

January 2022

ABSTRACT

Postsecondary education requires research on effective elements and best implementation practices for creativity training at all levels. Mindful Creativity (MC) is a three-module, asynchronous, online creativity training program delivering mindfulness, creativity, and applied neuroscience instruction to support creative awareness and development throughout all postsecondary disciplines. Each 90-minute, MC training module, "Mindfulness, Creativity, and Mindful Creativity for Education and Work," was designed for institutions of higher education (IHE) to support dispositional mindfulness and creativity by conceptualizing both in neuroscience. Utilizing a convergent, mixed-methods case study design, this study examined how postsecondary entrepreneurial students perceived and experienced the impact of an MC training program. Quantitative data was collected from the Mindful Attention Awareness Scale (MAAS) and Reisman Diagnostic Creativity Assessment (RDCA). Qualitative data was collected from course assignments, artifacts, and semi-structured interviews.

Abstract continued on the following page.

ABSTRACT *(continued)*

The analyses' results demonstrated the effectiveness of utilizing MC training, a combination of *mindfulness, creativity, and applied neuroscience*, as elements of creativity training in IHE. Participants reported the MC training program provided a transformational learning experience that supported creativity in three ways: 1) enhanced self-confidence of creative attributes and the ability to articulate creative strengths, 2) supported a creative mindset by assisting participants with the mindful awareness needed to realize opportunities to improve critical and creative thinking, and 3) provided a path for sustainable creative growth.

AIM

To produce innovative solutions to complicated problems, postsecondary graduates entering the complex and rapidly changing world require 21st-century skills, including creativity and mental flexibility (Rios et al., 2020). While research supports the need for postsecondary creativity education, it also suggests institutes of higher education (IHE) struggle to promote and maintain conducive learning environments (Amabile & Pratt, 2016; Nerantzi et al., 2018) or inadvertently diminish creativity by offering little attention or understanding of the topic to students (Tanggaard, 2018). The purpose of this study was to examine the impact of a mindful creativity (MC) training utilizing *mindfulness, creativity, and applied neuroscience* as elements of creativity training for postsecondary students.

PROBLEM

Creativity is a necessary 21st-century skill, yet IHE struggle to develop, promote, and support creativity training programs.

RESEARCH FINDINGS

Six themes emerged from the data directly related to the research questions and further revealed the impact of the MC training. Those themes include awareness, confidence and motivation, acknowledgement, balance, behavioral change, and control. *Change in awareness.* Following the MC training, participants reported increased awareness in the "ability to observe" and described the experience as "eye opening." *Confidence and motivation.* Participant noticed increased confidence and motivation through statements such as "being mindful is not weird," and [mindfulness is] "scientifically proven to be beneficial." *Acknowledgement.* Prior to the MC training, participants described creativity as "subjective," "abstract," and "really hard to conceptualize" Following the MC training, participants acknowledged a new awareness of creative strengths and weakness. *Balance.* All participants suggested the MC training supported mental balance related to creativity. Statements included "positivity can help trigger creativity," "first accept the risk of failure," "the effort will equal a result," and "welcoming the results." *Change and growth.* Conceptualizing MC through neuroscience provided participants with tools for change and growth. One participant confirmed the impact of growth by stating conceptualizing mindfulness and creativity in neuroscience helped to "realize how much it is changing me and doing assessments and looking at course materials is reinforcing that." *Control.* The final theme that emerged explaining the impact of the MC training was control. Participants described feeling more control over their creativity stating, "the one thing that you can control is who you are going to be for you and where your energy goes."

CONCLUSION

Three results, written as over-arching themes, are articulated, synthesized, and compared with key research from the literature.

Result One: A Mindful Creativity training program can impact mindful awareness of creative strengths and weaknesses enhancing well-being but also the clarity, confidence, and motivation of creativity.

Result Two: A Mindful Creativity training program can impact the acknowledgment of a creative mindset supporting a feeling of balance and growth.

Result Three: A Mindful Creativity training program can provide a foundation of mindful and creative skills and strategies that impact an individual's plan for controlled personal change.

RESEARCH IMPLICATIONS

Recommendation one: IHE should offer creativity training that provides not only instruction in creative thinking but also in mindfulness and the application of current advances and insights from neuroscience. Results and findings from this research suggest the three elements: mindfulness, creativity, and applied neuroscience positively impacted student mindfulness and creativity. Participants reported that the information, tools, skills, and strategies presented in the MC training supported their learning about creativity and mindfulness. Together, the three elements of the training supported the development of mindful awareness, leading to enhanced creative capacity, motivation, and a feeling of control. By incorporating aspects of what Larrison (2013) defined as mind, brain, and education science (MBE), the MC training program offered participants with opportunities to consider “high-level cognitive capacities, such as critical thinking and creativity and address the connection between motivation, emotions, sleep, stress, circadian rhythms, and development in learning processes” (xxiv).

Recommendation two: IHE should offer creativity training experiences that facilitate the application of mindful and creative skills learned through experiences that provide access to valid and reliable diagnostic mindfulness and creativity self-assessment tools. IHE should consider providing students with access to creativity training opportunities like the MAAS and the RDCA. Although generalizations beyond this small population cannot be made, the strong results, all 11 participants (100%), experienced a transformational learning experience. The entrepreneurial participants interviewed felt that the MC training provided them with an “eye-opening” self-reflective experience of their mindfulness and creativity. All five interviewees expressed a desire to share information from the MC training program with friends, family, and colleagues. The information most shared by participants related to the neuroscience of neuroplasticity, understanding how what we practice grows stronger in the brain, (Shapiro and Carlson, 2017) and how awareness of self-assessment tools, like the MAAS and RDCA, supported their plans for personal development. As a result, participants described a sense of controlled creative growth that felt sustainable. Therefore, it is recommended that IHE offer postsecondary students access to learning experiences like that of the MC training program.

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► RESEARCH BRIEF NO. 8

Engineering Professional Development for the Elementary Educator: A Review of the Literature

WRITTEN BY: **SINEAD MEEHAN**, PhD Student

SUPERVISING PROFESSOR: **DR. CHRISTOPHER WRIGHT**

February 2022

ABSTRACT

While standards and policies have been developed to increase elementary students' engagement with engineering, a lack of engineering-focused teacher preparation coursework and professional development (PD) has left the majority of K-5 teachers unprepared to integrate engineering into their current classroom practices. The purpose of this literature review was to explore the ways in which researchers have conceptualized, developed, and implemented engineering-focused PD for elementary educators. Findings suggest most PD sessions aimed to develop teachers understanding of and self-efficacy toward implementing engineering/STEM integration (n=15), the engineering design process (n=13), and engineering content knowledge (n=13). A balance of quantitative, qualitative, and mixed methods studies were employed to assess the success of each PD program which ranged in length from 6 hours-152 hours. Based on the findings from this literature review, the design, implementation, and evaluation of future development should address two gaps: (1) the needs of teachers who have experience with engineering education and (2) the lack of critical frameworks.

AIM

The purpose of this literature review is to explore the available research on engineering-focused teacher preparation and PD for elementary educators. More specifically, this literature review seeks to understand the focus and structure of existing PD programs, the theoretical and conceptual frameworks used to guide the development of each PD program, and to establish an understanding of the research methods and data collection tools employed to understand the impact of engineering-focused PD on elementary educators.

PROBLEM

Until recently, there has been no well-established tradition of engineering in the K-12 classroom, however, the formation and adoption of the *Next Generation Science Standards (NGSS)* or similar frameworks by 44 states across the country (US), as well as the establishment of the *Framework for K-12 Science Education* (NRC, 2012), has brought engineering-focused practices, disciplinary core ideas, and crosscutting concepts towards the forefront of STEM instruction. Educational researchers have found that the integration of engineering into K-12 spaces can improve students' academic performance in math (Cunningham & Lachapelle, 2007; Diaz & King, 2007; Fortus et al., 2004) and science (Cunningham et al., 2020). Additionally, engineering education has the potential to engage students in 21st century skills (Meyer & Tauer, 2015), enhance students' understanding of what engineers do (Thompson & Lyons, 2008), and increase the number of students who would consider pursuing careers in engineering (Chan et al., 2019).

The problem with integrating engineering into the K-12 classroom then, lies not in the pedagogy itself, but in the preparation of the teacher, as most remain unprepared to engage students in engineering content and practices (Katehi et al., 2009). The majority of teacher preparation programs in the United States require minimal science, mathematics, and technology methods courses for pre-service teachers at the elementary level and historically, engineering has not been addressed at all. Additionally, opportunities for engineering-focused PD for in-service teachers are limited. Banilower et al. (2018) found that the majority of elementary teachers (63%) received less than 6 hours of science PD within a three-year span. The lack of attention to engineering in teacher preparation programs and PD programs is troubling, considering the vast majority of elementary teachers lack even a general understanding of what engineers do (Cunningham et al., 2006) and how engineers use mathematics and science (Hammack et al., 2020), therefore leaving teachers with little to no preparation for effectively engaging elementary students in engineering concepts and practices (Lachapelle & Cunningham, 2014; Katehi et al., 2009, National Commission on Mathematics and Science Teaching for the 21st Century, 2000).

To remediate this problem, some schools, universities, and organizations have developed and implemented engineering-focused PD in the hopes of increasing teachers' engineering content knowledge and self-efficacy, while simultaneously improving their pedagogical practices. The purpose of this literature review is to examine the ways in which educational researchers have developed, implemented, and examined the impact of engineering focused PD for elementary educators thus far.

METHODOLOGY

A three-phase process was employed to review the relevant literature on engineering-focused PD for elementary educators. Phase 1 included a search of the database, ERIC. Database scanning produced 193 peer-reviewed articles based on the main search terms of *engineering, PD, and elementary*. The database search indicated that a large portion of relevant articles were published in *School Science and Mathematics, Journal of Science Teacher Education, and Journal of Pre-College Engineering Education Research*. Phase 2 began with an initial screening of all 193 articles, which involved reading the title and abstract of each article. Application of the exclusion criteria eliminated studies that did not specifically focus on engineering (i.e. PD programs that addressed integrated STEM in general) and studies that did not include elementary educators, thus reducing the number of studies for further analysis to 40. To conduct Phase 3, a spreadsheet was created in Google Sheets to organize key pieces of information from each article such as the design of the study, delivery of the PD, and key findings. As each of the 40 articles were read, notes were added to the Google Sheet, which allowed for the analysis and synthesis of the articles over time. Additionally, the Google Sheet allowed for the comparison of frameworks, approaches, and findings across the articles.

RESEARCH FINDINGS

The purpose of this literature review was to examine the ways in which educational researchers have developed, implemented, and examined the impact of engineering focused PD for elementary educators. In terms of the methodology employed, there were 13 quantitative studies, 14 qualitative studies, and 13 mixed methods studies. The most commonly used data collection tools included surveys and questionnaires, knowledge tests, interviews and focus groups, observations, and artifacts such as lesson plans. Less frequently used data collection methods included photos and photo-journals, the Draw-an-Engineer Test, reflective diaries, and research memos/field notes. Regarding theoretical and conceptual frameworks, Bandura's self-efficacy theory (n=10), engineering integration or STEM Integration (n=5), the nature of engineering (n=3) and engineering design (n=2) were utilized most often. It should be noted, however, that nearly a third of all studies (n=13) failed to explicitly articulate the theoretical or conceptual framework utilized.

The focus and structure of each engineering PD varied. Educational researchers tended to address a specific grade, grade range, or elementary teachers as a whole. Other researchers developed more broad scoping PD programs in which multiple levels were included (i.e. elementary, middle school, and high school teachers). The length of the PD sessions varied widely, with some PD sessions lasting just one day (6 hours), while others were 4 weeks (152 hours) in length. The focus of the PD sessions was often on engineering/STEM integration (n=15), the engineering design process (n=13), and engineering content knowledge (n=13). Additional foci included curriculum development (n=5), the use of specific curriculum such as Engineering is Elementary (n=5) and engineering practices (n=4). During the PD sessions themselves, researchers engaged teachers in engineering design challenges, lesson planning, lectures and dialogue, dramatic inquiry, modeling and observing, tool development, and discussions with engineers as guest speakers.

LIMITATIONS

While this was an extensive review of the literature, it was by no means exhaustive. The cross referencing of other databases such as ProQuest and Google Scholar, as well as the consideration of studies cited in each journal article would further contribute to my overall understanding of engineering-focused PD for elementary educators. Additional search terms such as *teacher education*, *teacher preparation*, *elementary teacher education*, *teacher PD* should also be utilized in the future to ensure all applicable studies are retrieved for analysis.

RESEARCH IMPLICATIONS

The findings from this literature review call for the design, implementation, and assessment of engineering-focused PD for elementary educators in two specific areas. First, the majority of the engineering PD sessions evaluated were geared towards teachers who had little to no engineering experience. Given that the NGSS were written and adopted by states nearly a decade ago, it may be necessary to start gearing some engineering PD sessions towards enhancing the existing pedagogical practices of elementary teachers, specifically identifying and addressing any observable or perceived areas of need. Second, the PD evaluated in this literature review often lacked an explicit theoretical or conceptual framework to serve as the foundation of the study. Furthermore, none of the PD programs approached engineering instruction through a critical lens. Due to the increasingly diverse population of US schools and the overall goal of increasing the number of female and minority students pursuing STEM careers, it is imperative that teachers understand how to utilize students' personal identities as the premise of their STEM instruction. For that reason, future PD should employ theories and frameworks such as feminist theory, sociotransformative constructivism, or culturally relevant pedagogy as the foundation of their program development.

CONCLUSION

This literature review was conducted to better understand the present state of engineering-focused PD for elementary educators by elucidating current trends and patterns in this line of inquiry and identifying active gaps. Two gaps identified in this literature review included the lack of engineering PD geared toward teachers who have already integrated engineering into their elementary classrooms and the absence of engineering-focused PD that utilized critical theories, pedagogies, and frameworks as the foundation of their program development. This literature review can offer a conceptual basis for the development and implementation of future engineering-focused PD opportunities for elementary educators.

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► RESEARCH BRIEF NO. 9

Collaboration, Dialogue, and Creativity as Instructional Strategies for Accredited Architectural Education Programs: A Mixed Methods Exploratory Investigation

WRITTEN BY: **DR. DAVID C. SLEDGE**, EdD Alumni

SUPERVISING PROFESSOR: **DR. FREDRICKA REISMAN**

February 2022

ABSTRACT

The new National Architectural Accreditation Board (NAAB) 2022 accreditation requirements call for a redesign of accredited architectural education from solitary projects to collaborative group creative production. This mixed methods study conducted at the Massachusetts Institute of Technology School of Architecture and Planning (MITSAP) blended cross-sectional statistical analysis applied to quantitative data from the Reisman Diagnostic Creativity Assessment (RDCA) for creative assessment and self-efficacy, with grounded theory and axial coding matching the 11 creativity factors of the RDCA to qualitative semi-structured interviews. Both methods consisted of the same sample (n=20): architecture professors, and graduate MITSAP students to study perceptions on collaboration, dialogue, and creativity in architectural education.

AIM

The purpose of this study was to explore how the new NAAB accreditation requirements should be implemented, based on the perceptions of architecture professors and graduate students regarding collaboration, dialogue, and creativity in architectural design education.

PROBLEM/ISSUE

The National Architectural Accreditation Board began requiring instruction in “Leadership and Collaboration” as a Program Criteria for accredited architectural degree (NCARB, 2020) programs in 2022, but did not provide specific guidance in how to meet the new requirements. Further, there has been only one dissertation on collaboration instruction within architectural education (McPeck, 2009) addressing the gap in scholarship on collaboration training in architecture degree programs. Furthermore, the growing innovation economy is placing pressure on architectural education to prepare students for the realities of professional architectural practice that is now almost entirely digital and collaborative. Hence, multidisciplinary approaches in design education are needed now more than ever (Mattessich et al., 2001) to encourage creativity and support innovation. Although resistance to collaborative design based on myths and misunderstandings in architectural education is a lingering problem (Rodriguez et al., 2018), scholars have shown that the profession of architecture must become increasingly collaborative to keep pace with the advancing innovation economy. Thus, the need to better understand collaborative design, dialogue, and creativity for accredited architectural education programs is significant, and urgent to meet the demands of contemporary architectural practice that is increasingly multidisciplinary.

Research Questions

- (1) *How do architecture professors and graduate architecture students perceive “collaboration” in architectural design education?*
- (2) *How do architecture professors and graduate architecture students perceive “dialogue” in architectural design education?*
- (3) *How do architecture professors and graduate architecture students perceive “creativity” in architectural design education?*
- (4) *What are the self-perceptions of architecture professors and graduate architecture students of their “creative strengths” as measured by the RDCA?*

► CONCEPTUAL FRAMEWORK

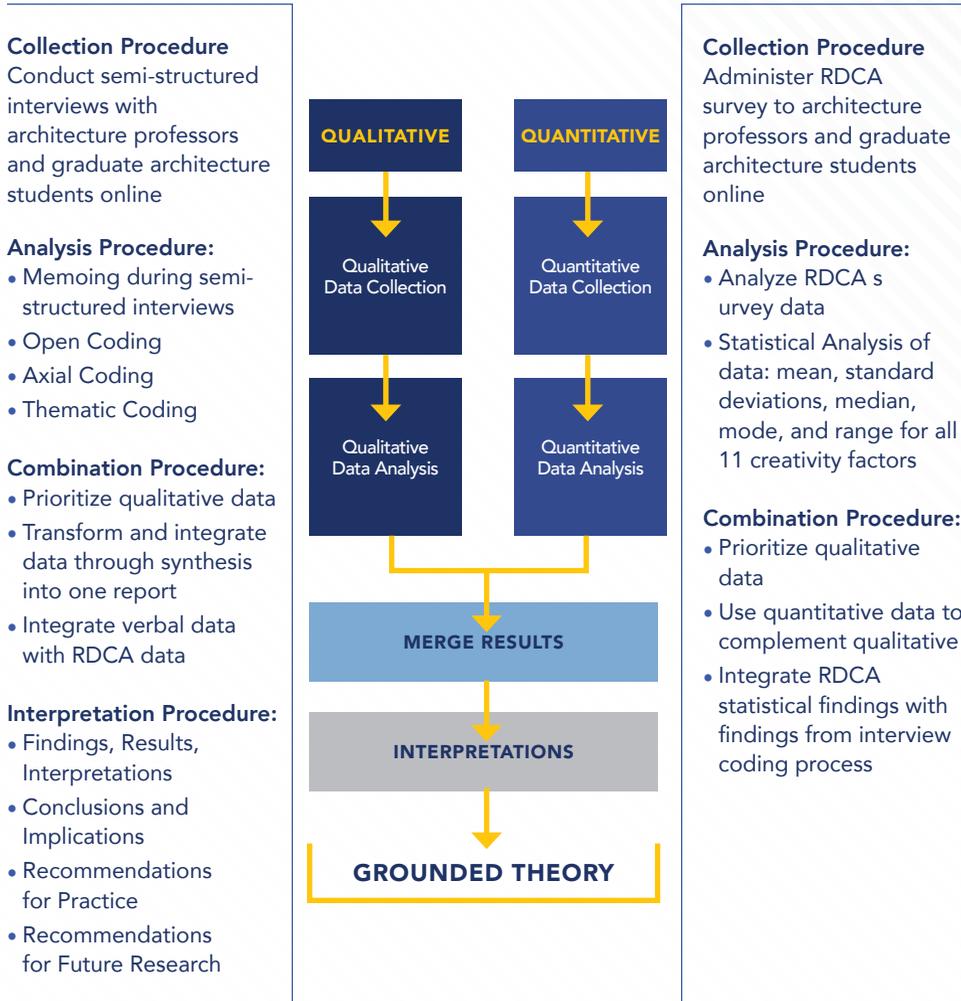


Research Findings

Seeking to generate theory for phenomena where none previously existed, grounded theory guided a research design that relied upon recursive data analysis from semi-structured interviews and creativity self-assessments in a mixed methods study. Scholars of qualitative research designs, Bloomberg and Volpe (2016) state, “Grounded theory is most appropriately employed in studies where little is known about a phenomenon of interest. The purpose of grounded theory is to inductively generate theory that is grounded in, or emerges from, the data” (p. 49). To allow the formation of theory grounded in empirical data, this study tapped 20 participants representing a theoretical sampling of architecture faculty and graduate architecture students at accredited architecture programs.

A mixed methods approach examined how architecture professors and students perceived collaborative design instruction in accredited architecture programs. The researcher utilized grounded theory methodology to (a) generate hypotheses where none existed previously (b) provide qualitative data that is richly descriptive with quotes to convey how architecture professors and graduate architecture students perceive collaborative design instruction, and (c) complement the analysis of the quantitative evidence on the self-perceptions of creativity from the RDCA. Both qualitative and quantitative data were needed to fully understand and build a substantive-level theory centered on collaborative design instruction in architectural education. The rationale of this mixed methods study aligned with the researcher’s intentions for “...theory developed by the researcher is articulated toward the end of the study, and this theory hopefully has explanatory power to make a significant contribution in terms of knowledge building and potential practical application” (Bloomberg & Volpe, 2016, p. 50).

► CONVERGENT MIXED METHODS DATA PROCESSING DIAGRAM



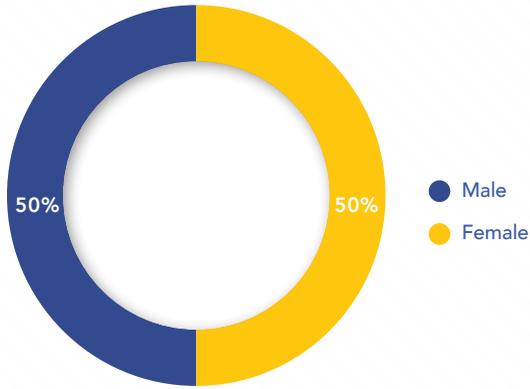
Note. Participants provided qualitative and quantitative data to the researcher concurrently and only online per Drexel University guidelines for Human Subjects Research during the COVID19 Pandemic of 2020-2021. Concurrent data collection and analysis “involving multiple recurrent stages of data collection and the refinement of abstract categories of information” and the “constant comparative method of data analysis” (Bloomberg & Volpe, 2016, p. 50) helped discover grounded theory this study.

► MIXED-METHODS RESEARCH QUESTION DATA COLLECTION & ANALYSIS MATRIX.

RESEARCH QUESTIONS	DESIGN	DATA COLLECTION METHODS	DATA ANALYSIS
<p>Research question 1: How do architecture professors and graduate architecture students perceive “collaboration” in architectural design education?</p>	<p>Qualitative data Provides descriptive and interpretive information from interviews with professors and graduate students</p>	<p>Semi-structured, individual interviews with professors and students</p> <p>Data recorded/transcribed with <i>REV.COM</i> — a voice to text online data analysis software</p>	<p>NVivo software program for coding data includes:</p> <ul style="list-style-type: none"> • In Vivo • Process • Initial • Focused • Axial • Theoretical <p><i>Memoing</i>: notetaking</p>
<p>Research question 2: How do architecture professors and graduate architecture students perceive “dialogue” in architectural design education?</p>	<p>Qualitative data Provides descriptive and interpretive information from interviews with professors and graduate students</p>	<p>Semi-structured, individual interviews with professors and students</p> <p>Data recorded/transcribed with <i>REV.COM</i> — a voice to text online data analysis software</p>	<p>NVivo software program for coding data includes:</p> <ul style="list-style-type: none"> • In Vivo • Process • Initial • Focused • Axial • Theoretical <p><i>Memoing</i>: notetaking</p>
<p>Research question 3: How do architecture professors and graduate architecture students perceive “creativity” in architectural design education?</p>	<p>Qualitative data Provides descriptive and interpretive information from interviews with professors and graduate students</p>	<p>Semi-structured, individual interviews with professors and students</p> <p>Data recorded/transcribed with <i>REV.COM</i> — a voice to text online data analysis software</p>	<p>NVivo software program for coding data includes:</p> <ul style="list-style-type: none"> • In Vivo • Process • Initial • Focused • Axial • Theoretical <p><i>Memoing</i>: notetaking</p>
<p>Research question 4: What are the self-perceptions of architecture professors and graduate architecture students of their “creative strengths” as measured by the RDCA?</p>	<p>Qualitative data Reisman Diagnostic Creativity Assessment (RDCA) is the Creativity Self-Assessment (CSA) used to provide scores for the sample. The RDCA provides nominal data based on factors validated to correlate to creative ability and potential, as perceived by the test-taker.</p>	<p>All participants tested on 11 aspects of creative thinking based on self-perceptions via the RDCA</p> <p>The RDCA online program collects data by posing a series of questions and uses the answers to generate a creativity profile. Profiles are presented as raw numerical scores and percentages of total score.</p>	<p>Quantitative Software for descriptive statistics — <i>Excel</i> for RDCA scores:</p> <ul style="list-style-type: none"> • Frequencies • Means • Standard Deviations • Exclusive Range • Likert-type profile and numerical assessment in 11 categories

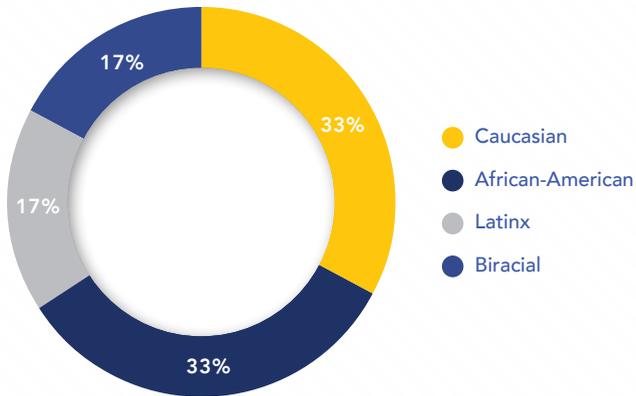
► FIGURE 4.1

Distribution of Participants by Gender



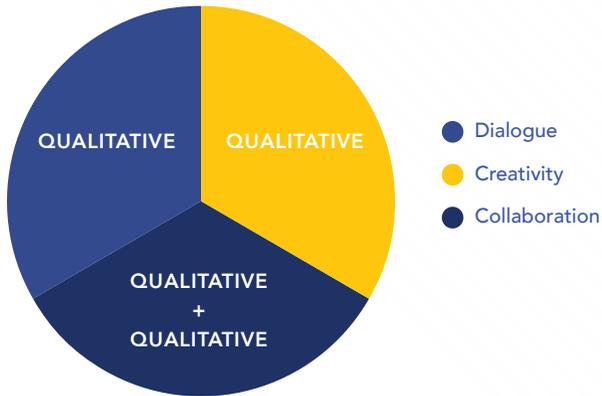
► FIGURE 4.2

Distribution of Participants by Ethnicity

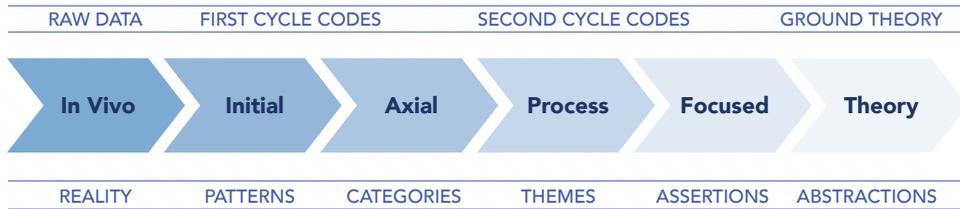


► FIGURE 4.3

Distribution of Findings by Research Method



► PROGRESSION OF FIRST AND SECOND CYCLE CODING PROCESS WITH MEMOING



RESEARCH FINDINGS

This study explored the perceptions of architecture faculty and graduate architecture students on three aspects of contemporary architectural education: collaboration strategies, dialogue instruction, and creativity studies. The goal of the study was two-fold: first, investigate how the NAAB accredited architecture program requirement for instruction in collaboration could be conceived as part of a holistic curriculum, and second, explore how architectural education could be reconceived to meet the changing demands of the emerging innovation economy. To fully understand these interrelated topics, a mixed methods research design combined coding analysis of qualitative semi-structured individual interviews, with descriptive statistical analysis of quantitative data from the RDCA. A literature review also considered the same three topics as the conceptual framework for this study. A theoretical sample having the prerequisite education and lived experience to contribute knowledge on contemporary architectural education helped the researcher achieve data saturation. A substantive-level theory grounded in the data and findings of this study emerged: “Collaboration Strategies” should be linked to “Dialogue Instruction” and “Creativity Studies” as one curricular unit to reconceive architectural education holistically for the emerging innovation economy.

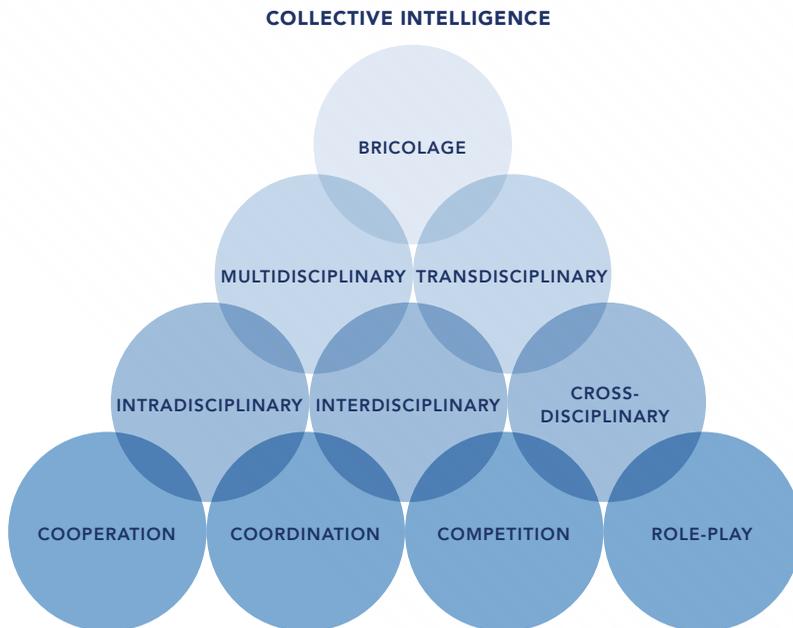
Relatedly, improved communication, transparency, equity, and peer-to-peer learning were repeatedly mentioned as integral components in need of change in architectural education. Participants expressed awareness of social, cultural, and racial issues affecting architectural education, and common misperceptions about collaborative design in architecture school and professional practice. “Creativity” was described as a defining aspect of architectural education, “dialogue” as necessary for teamwork, and “collaboration” as the reality of professional practice. The qualitative and quantitative findings of this research facilitated a deeper understanding of collaboration, dialogue, and creativity: three important topics germane to architectural education and professional architectural practice.

COLLABORATION FINDINGS

Architecture professors and graduate architecture students perceived collaboration in architectural education as working relationships centered around varying degrees of formality. Collaboration was perceived to be necessary for successfully completing group tasks such as building class site models and compiling class research documents. These task-oriented applications of collaboration were seen as the base level of instruction, but other uses were mentioned, such as, exploring emerging issues in architecture, documenting a spectrum of interrelated topics within a subject, helping students generate more design ideas, producing more robust class discussion, managing complex projects, preparing for practice through “Role-Play,” and complying with the NAAB requirements as well.

Participants described how collaboration strategies can foster peer-to-peer learning in architectural design education. Students described how collaboration helped them learn more from classmates within their cohort, and from others above and below them in matriculation. Professors echoed the benefits of collaboration raised by students and spoke at length advocating more collaboration among educators to enhance research and mentoring. Senior and junior professors critiqued how the structure of tenure and promotions in academia discourages open collaboration and collegiality among faculty by encouraging each individual to “claim credit” for as much work as possible, and trickles-down to students who resist collaborating in architecture design studios for individual credit and grades. Participants communicated that there is a lack of training among professors and students on how to teach and evaluate collaborative design work fairly, and how to best use collaboration to activate creativity for improved architectural designs. Instruction in collaboration tailored for architectural design education was perceived as lacking.

► HIERARCHY OF COLLABORATION STRATEGIES FOR ARCHITECTURAL EDUCATION



Dialogue Findings

Architecture professors and graduate architecture students perceived dialogue as a type of discussion that aids education in four important ways: (a) shared knowledge, (b) shared understanding, (c) shared exploration of broad topics, and (d) collaboration. Participants primarily described dialogue most often with the words “open” and “conversation” to convey a “sharing” knowledge both within and across disciplines. In this conception, dialogue was perceived as a running conversation spanning across related industries to construct knowledge. Yet, participants did not mention the “art of listening” and dialogue was not communicated as co-inquiry, co-creation, or collective intelligence, but as purposeful teamwork. Participants conveyed how dialogue can play a role in “collaborating to learn and learning to collaborate,” foster peer-to-peer learning, achieve reality-based education, and activate learning in architectural education.

Creativity Findings

Architecture professors and graduate architecture students perceived creativity as the bedrock of architectural education and the impetus for entering architecture school. The desire to express “limitless creativity” by designing distinct, original buildings was discussed. Of the attributes associated with creativity, “originality” was most highly regarded. But the presumption of unbounded freedom of expression in architectural education has created challenges that remain difficult to overcome, such as, the difficulty of evaluating original designs coupled with students’ demands for more overall transparency and accountability. The more original the students’ creations are (never seen before, breaks rules, unconventional), the more architecture professors viewed evaluating students’ original designs as problematic.

Further, professors said evaluating students’ creative work is inherently problematic, ineffective, and sometimes a futile undertaking. Both professors and students stated that grades are often irrelevant when evaluating creative work and that what really matters is how feedback is given to contribute to the flow of educational experience. Applying a number or letter grade in evaluating design students is difficult and sometimes useless. An instructive narrative that evaluates the work from agreed upon expectations, a rubric of sorts, may be a better solution.

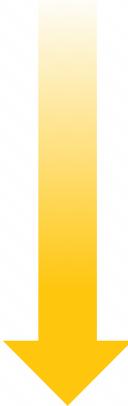
Grading creative work was judged to be a conundrum in architectural education. On the one hand, professors and graduate students extolled the efficacy of their architecture education, their individual creative ability, their creative self-efficacy, and their narrative of exceptional creative expression. On the other hand, professors and students recognized the need for more objectivity, transparency, accountability, and standardization to equitably grade creative work. These two aims need not be mutually exclusive according to architecture professors, especially when objective criteria are communicated before the creative design process begins.

Participants perceived “Flexibility” -the ability to generate many different categories of novel ideas, elaborate on ideas when speaking, evaluate viable solutions and then select the best option, as their least-strong creativity ability. Additionally, participants did not express awareness of how each creativity attribute can be individually targeted. Nonetheless, professors and architecture students perceived their creative strengths with great regard, suggesting their creative self-efficacy, or belief in one’s creative ability, is “very high” overall.

► **COMPARISON OF QUANTITATIVE AND QUALITATIVE FINDINGS ON CREATIVITY FACTORS**

Creativity factors ranked by scores on the RDCA as percentage of total

Axial codes ranked by occurrence spoken when describing creativity

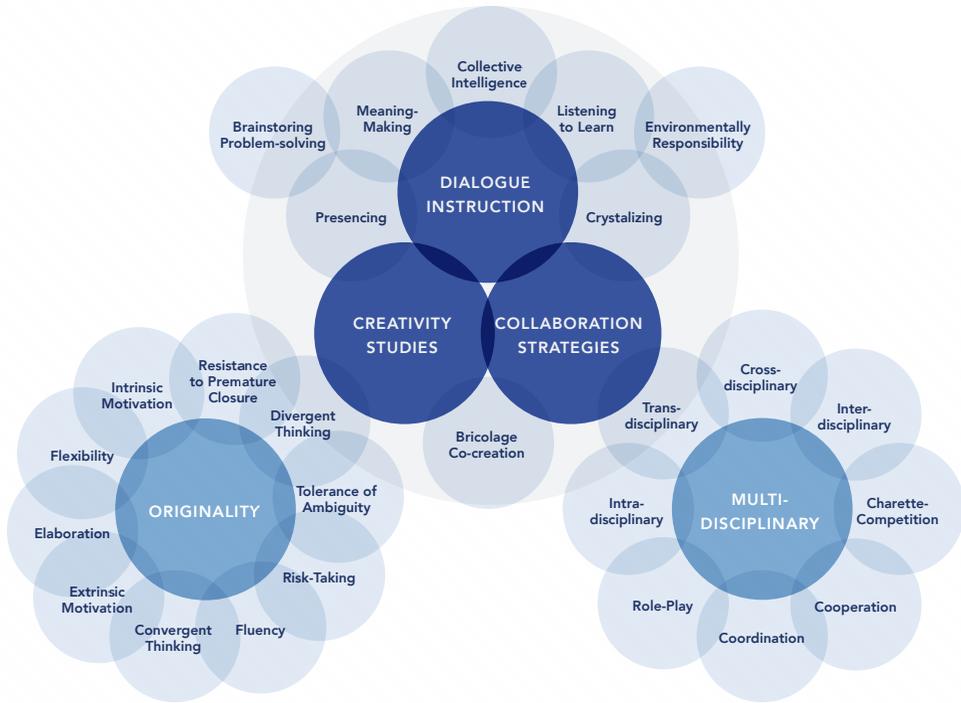
Creativity factors ranked by scores on the RDCA as percentage of total		Axial codes ranked by occurrence spoken when describing creativity
1. Fluency	<p>HIGHEST</p>  <p>LOWEST</p>	1. Originality
2. Convergent		2. Resistance to Premature Closure
3. Risk Taking		3. Tolerance of Ambiguity
4. Extrinsic Motivation		4. Elaboration
5. Resistance to Premature Closure		5. Fluency
6. Divergent Thinking		6. Convergent Thinking
7. Originality		7. Intrinsic Motivation
8. Intrinsic Motivation		8. Divergent Thinking
9. Elaboration		9. Risk Taking
10. Tolerance of Ambiguity		10. Extrinsic Motivation
11. Flexibility		11. Flexibility

Note. Quantitative data and qualitative data align on only one creativity factor: “Flexibility,” indicating it is the least developed and the least understood/valued attribute correlated to creativity for this sample.

CONCLUSION/DISCUSSION

The research findings revealed that the current system of evaluating and grading creative design work in architectural education is inadequate and out of touch. Although there was no recent data on the efficacy of learning in collaborative teams rather than in solitary design projects, this study concludes that collaboration produces better design projects in architecture school and more closely matches contemporary professional practice. Architectural education should go beyond simply meeting the NAAB 2022 Program Criteria requirements for accreditation to reconceive architectural design education holistically (NCARB, 2020). The profession of architecture is a multidisciplinary enterprise, as recognized by the new NAAB Program Criteria requirement for Leadership and Collaboration training. Although architectural practice is diverse, there are research gaps on how creative collaboration works among diverse students (ethnicity, gender, and orientation) in architectural education. Finally, can architectural education determine whether “creatively collaborating to learn” in school, is analogous to “learning to creatively collaborate” in the real world? The findings of this research recommend that Collaboration Strategies, Dialogue Instruction, and Creativity Studies become a curricular unit in architecture programs to prepare students for success in the innovation economy.

► **CONCEPTUAL FRAMEWORK: COLLABORATIVE ARCHITECTURAL EDUCATION CURRICULUM**



► **GROUNDING THEORY: BUILDING CURRICULA FOR COLLABORATIVE ARCHITECTURAL EDUCATION**



PRACTICE IMPLICATIONS

There are several major implications for practice from this study.

- (1) *Collaboration should occur among students both laterally on the same educational level and vertically in the various stages of matriculation for peer-to-peer learning.*
- (2) *Collaboration training should include “Role-Play” to help ease students’ transition into the job market and promote “reality-based” education.*
- (3) *Training in dialogue is needed in architectural education to foster collaboration, peer-to-peer learning, stakeholder engagement, diversity, equity, inclusion, and decolonization.*
- (4) *Architecture students should be included in dialogues on complex global environmental issues such as climate change, disaster reduction, sustainability, and resiliency.*
- (5) *Strategic development of the individual abilities correlated to creativity in general, and “Flexibility” specifically, should be part of architectural design education and practice.*
- (6) *Architectural history/theory/criticism classes should include scholarship from the field of Creativity Studies to deepen understanding of “Big-C” architectural creative geniuses.*
- (7) *Active Learning Classrooms that encourage peer-to-peer collaborative learning with students facing one another in clusters should be the physical layout of design studios.*
- (8) *Rubrics, assessments, heuristics, and descriptive evaluations can address the perceived inequalities in grading design work often exacerbated by cultural differences, competing points of view, and misunderstandings between professors and students.*
- (9) *Collaboration strategies, dialogue instruction, and Creativity Studies should extend across the entire curriculum, from senior and junior faculty co-publishing research and teaching in teams, to architecture students on all levels of matriculation in a design school.*
- (10) *This study reveals that without further clarification that minimizes the ambiguity of what from the NAAB expects for the new collaboration requirement, architecture programs cannot be evaluated equitably to maintain the accreditation required for licensure.*

RESEARCH IMPLICATIONS

- (1) *Research should be conducted in all three accredited architecture degree programs: B. Arch, M. Arch, and D. Arch, to explore how the NAAB program criteria for collaboration training should be implemented in each degree program specifically.*
- (2) *This study should be replicated with a larger sample of architecture students to add the perspective of differential statistics and make inferences about the population.*
- (3) *A longitudinal study should examine the long-term impact of focused training in creativity with a “Paired samples t-test” to draw inferences from RDCA scores over time.*
- (4) *Research into heuristics specifically targeted for architectural design education should be undertaken to study the efficacy of different instruments to determine what works.*
- (5) *This study should be replicated across interrelated environmental design disciplines to compare perceptions of professors and students in each field to promote synergy.*

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Dr. Sledge graduated *summa cum laude* with a Doctor of Education from Drexel University, *summa cum laude* from the Massachusetts Institute of Technology with a Masters degree in the history/theory/criticism of architecture, Third In Class With Honors from Ecole d'Art Americaines in Fountainbleau, France, and magna cum laude from North Carolina State University with a Bachelor of Architecture. Sledge is a member of Kappa Delta Pi International Honor Society in Education, and recipient of the *Fredricka K. Reisman Award for Outstanding Graduate Work in Creativity*. He had the honor of representing Drexel University in 2019 at the International Conference on Knowledge, Innovation, and Enterprise in Dubai, United Arab Emirates. His published conference paper was awarded Second Place in the Creativity Category. Sledge, EdD has published on topics ranging from creativity, history/theory/criticism, design, and architectural education. He has worked in architecture firms and taught architectural design and history/theory/criticism for over a decade. Professor Sledge has taught architecture at University of Knoxville- Tennessee, Georgia Institute of Technology, Ecole Nationale Superieure d'Architecture de Paris La Villette, Howard University, and Drexel University. Dr. Sledge was born at Duke University, which was designed by the famous Black Philadelphia architect Julian Abele (1881-1950), who was the designer of Philadelphia Central Library, and the Philadelphia Museum of Art located beside a "Rustic Pavilion" designed by Frank Furness in 1866. Sledge currently teaches architecture in Sacramento, CA.

► RESEARCH BRIEF NO. 10

Seeds to STEM Project: Supporting Nutrition and Health Choices for Minoritized Children in Urban Settings

WRITTEN BY: **DARA BRIGHT**, PhD Student

SUPERVISING PROFESSOR: **DR. TONI MAY**

March 2022

ABSTRACT

Enochs and Riggs (1990) developed the Teachers' Efficacy and Beliefs Instrument (TEBI) to evaluate educators' judgements about their ability to evoke student success; however, there has been inadequate psychometrics conducted on this instrumentation. This study provides a psychometrically sound instrument development and construct validation process for our modified version of TEBI. The qualitative data indicated that item revisions were required before quantitative data collection. The modified TEBI measure will inform the curriculum Pre-K-STEM, nutrition, and literacy programming for an NIH-funded grant.

AIM

This research seeks to develop and validate instruments for a bilingual nutrition, STEM, and literacy Pre-K curriculum-based program to increase these literacy forms for minoritized children in urban settings.

PROBLEM OR ISSUE

The field of teacher education has effectively explored the concept of teacher efficacy and beliefs (TEB). It has been operationalized as educators' assessment of their own abilities to evoke change or improve their students' learning (Moran and Hoy, 2001). Research has linked teacher efficacy and beliefs (TEB) to instructional quality, effective teaching pedagogy, and positive learning experiences (Buric and Kim, 2020; Daumiller et al., 2021). Therefore, TEB are some of the most critical components to consider when discussing student academic outcomes and motivation (Schiefele and Schaffner, 2015), particularly for preschool, an important formative year for learning (Moran, 2019). Yet, there is also very little literature specifically focused on the TEB in the preschool space. The existing body of research evaluating TEB in preschool has primarily measured this construct qualitatively. While quantitative studies have solely relied on factorial analysis and Cronbach's Alpha for reliability and validity (Aslan et al., 2016; von Suchodoletz, 2018). These quantitative instruments utilize two statistical measures that are not considered sound based on psychometric standards (Dabaghi et al., 2020).

Therefore, there is a gap in the literature on sound instrumentation for TEB. As TEB is often context-specific, it becomes imperative that urban preschool teachers feel well-equipped with high-quality instructional content for STEM, literacy, and nutrition to educate their diverse student body. It is difficult for urban educators to *feel* well-equipped when there is a lack of STEM, nutrition, and literacy resources that centers their students' diverse ways of knowing and culturally sustaining teaching practices in these subject areas. Despite the literature offering a link between minoritized preschool student success and culturally relevant teaching practices (Durden et al., 2015), there remains a dearth in curriculum and preschool professional development to prepare urban educators to serve these populations.

This research project contributes to the body of literature by developing and validating several instruments related to TEB and content tasks to measure the impact of Pre-K curriculum developed for minoritized children in urban settings. The most utilized teacher efficacy instruments include the Teachers Efficacy and Beliefs Instrument (TEBI) and Teacher Sense of Self Efficacy scale (SSES) (Enochs and Riggs, 1990; Tschannen-Moran and Hoy, 2001). Similar to other instrumentation, these two tools lack adequate psychometric validation and rely almost exclusively on factorial analysis and Cronbach's Alpha. As a result, we do not presently have a sound instrument to understand teachers' efficacy and beliefs at the pre-school level, which inhibits our ability to create a Pre-K curriculum appropriately.

RESEARCH FINDINGS

This study utilized the five types of validity evidence developed by the Standards for Educational and Psychological Testing (AERA et al., 2014). These five types of validity evidence include content, response process, consequential/bias, internal structure, and relationship to other variables. The first three types of validity evidence are collected qualitatively. The latter two forms are evaluated quantitatively through Rasch measurement analysis. The study's TEB instrument modified the existing TEBI to align with national standards for preschool education. Our Subject Matter Experts (SMEs) and content panels reviewed the modified TEBI survey and offered feedback based on their expertise in our preliminary findings for content validity evidence. Modifications were made based on their suggestions and alignment indicators. Subsequently, the second form of validity evidence was collected, response process, in which cognitive interviews were conducted. Several item-specific modifications were made based on sample participants' feedback on the instruments. The last form of evidence collected thus far, consequential/bias evidence, sought to assess whether the instrument caused the participants to have negative emotional responses. Only one participant indicated that they felt uncomfortable during the survey. They did not teach the content we were inquiring about, which led us to revise our instructions at the beginning of the survey.

CONCLUSION/DISCUSSION

This process of developing and validating the TEBI, and associated subject matter tasks, has shown that this iterative method is invaluable to creating a solid educational measure. It is crucial that when scholars develop their own instruments, we are intentional about ensuring that the instrument has undergone a rigorous and psychometrically based development and validation process. Alternatively, if scholars elect to utilize existing instruments, they must document evidence aligned with the appropriate construct. There are negative consequences to utilizing unsound instrumentation and unvalidated items, such as the subgroups of the intended population being excluded and experiencing discrimination/bias from participating in the study.

RESEARCH IMPLICATIONS

This instrument development process will continue to undergo additional iterations of validation. After this process, the Pre-K teacher instruments offer a promising opportunity to evaluate teachers' pedagogical practices and beliefs appropriately. It also offers an instrument for researchers to adequately develop curriculum programming to ensure high-quality instruction.

ACKNOWLEDGEMENTS

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ABOUT THE AUTHOR



Dara Bright is a PhD student at Drexel University in the Education program. Dara earned her Bachelor of Arts degree in Government from The College of William and Mary (2018) and her Master of Science degree in Public Policy from Georgia Institute of Technology (2019). While at Drexel University, she is a Research Assistant in the Methods Lab. Dara's research interests focus on utilizing measurement instruments to aid in understanding students' experiences and inform policies on closing the opportunity gap in K-12 STEM spaces and access to higher education.

► RESEARCH BRIEF NO. 11

Understanding Risk Factors for Plagiarism Among MBA Students at a Northeastern US Research University

WRITTEN BY: **DR. CALEB MEZZY**, EdD Alumni

SUPERVISING PROFESSOR: **DR. CAMERON KIOSOGLIOUS**

March 2022

ABSTRACT

The probabilities of becoming a professional athlete in any sport are slight. For professional baseball players, the problematic scenario is slightly different as upwards of 1,500 baseball players will be released from their employer or team, making them victims of the “revolving door” (Pifer et al., 2020; Raabe et al., 2018).

This study examined the resources that: (1) prepare professional baseball players for transitioning into their next career or life; (2) identify the factors that play a role in the career transition of professional baseball players, and (3) reference current working models in professional sports or other industries that could rely on the application to transitioning from professional baseball.

The study leveraged the Delphi technique, a forecasting method that relies on a panel of experts. In this study, the Delphi method included a three-round series of questions completed by a panel of 27 experts to establish a framework to serve as a model for baseball players transitioning out of their playing careers. This framework provided a basis for a career transition program implemented from the onset of a professional baseball player’s career to their career exit.

AIM

The purpose of this study was to understand the career transitions of professional athletes to identify existing career transition models and factors that facilitate the career transition towards the development of a career transition model for professional baseball players. Prior to this study, there was no research-based model or program of this type exists for professional baseball players.

PROBLEM OR ISSUE

Currently, various models exist in the realm of career transition, but none specific to the needs of professional baseball players. The existing models provide a framework for phases of the athlete career transition. The intent was to develop a model for professional baseball players that efficiently address the vacancy of fulfilling these needs (Moviel, 2015).

It is known that one's career could be an abbreviated experience due to the minor league system and lack of financial security. In Minor League Baseball (MiLB), nearly 90% of players will be released from an organization at some point in their career (Raabe et al., 2020). This is the predicament faced by players who do not reach the highest level of their profession after years of training and dedication. The sensation is characterized as death since a player's life has been devoted to getting a job and keeping work (Brown, 2019). If the minor league system does not permit an advantageous environment for players to succeed, the problematic scenario of players entering retirement from baseball must be explored.

RESEARCH FINDINGS

This study used the Delphi method over six weeks and collected data from three rounds of opinions from expert panelists. The expert panelists who participated in the Delphi method's iterative process offered a unique perspective given their ability to meet the required criteria of Mental Health/Sport Psychologists, Player Services, or Retired Players within the last five years. Thirty-one experts participated in Round 1. Twenty-nine expert panelists completed the survey in Round 2. Twenty-seven panelists were able to finish and conclude the survey in Round 3. The Delphi study intended to establish a working model that applies to a demographic of professional baseball players encountering this complex transition process. The intended model features a ranking of essential factors yielding quantitative results along with qualitative results. The findings and results of the intended model address the void of a career transition model for professional baseball players. The qualitative and quantitative data from the three rounds of the Delphi study developed the career transition model for professional baseball players.

CONCLUSION/DISCUSSION

This study established a model to assist professional baseball players with transitioning their sport and into their next stage in life. The Mezy Athlete Career Transition (MACT) Model was developed utilizing the Delphi method and a panel of experts across mental health and sports psychology, player services, and retired baseball players within the last five years. This reality emerged in a four-part approach to the career transition process for professional baseball players. This study utilized the S-Four headings (i.e., Situation, Self, Strategies, and Support) from The Transition Guide (Schlossberg & Kay, 2003) in Round 1 on the original Delphi instrument to collect open-ended feedback. These four sections, which came from the emergent themes, are structured into an organized list of emergent factors and strategies from the expert panelists. The model is grounded in the results of the expert panelists that meet one of the three-prong criteria to provide content in a structured approach to address the transition process.

The four sections that come from the emergent themes and make up the MACT Model include:

- (1) *Home: Personal*
- (2) *First Base: Professional*
- (3) *Second Base: Game Plan*
- (4) *Third Base: Team*

RESEARCH IMPLICATIONS

- (1) *Focus on only one area of the criteria: or specific key Factor*
- (2) *Investigate the urgency of the critical factors within the transition process*
- (3) *Create a curriculum utilizing the structural approach of the model*
- (4) *Pilot study a group of professional baseball players*
- (5) *Application of the model to other sports*
- (6) *Application of the model to international baseball players and athletes*

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Dr. Caleb S. Mezzy earned his EdD from Drexel University in 2021. Dr. Mezzy's thesis centered on an analysis of the intersection of athletes and their career transition into retirement. This area is a passion, and inspired Dr. Mezzy to create a consultancy, Grit & Glue, which assists athletes to successfully transition from "life after sports". Dr. Mezzy is an accomplished sports business professional and Professor at Neumann University in Aston, PA. This allows him to combine his passion for the business with his work, life, and teaching experience. His track record of building effective sports business relationships has resulted in the growth of sports organizations, nonprofit and for profit, and successful careers of students under his guidance and mentorship at Neumann. Dr. Mezzy is married with one son, and another child expected in August. Dr. Mezzy enjoys collecting baseball cards, exercising on his Peloton, and spending time with his family and dog.

▶ RESEARCH BRIEF NO. 12

Neuromyth Awareness and Brain-Based Knowledge Among Academic Advisors and Academic Support Personnel

WRITTEN BY: **ELLANA BLACK**, PhD Student

SUPERVISING PROFESSOR: **DR. ALONZO FLOWERS**

April 2022

ABSTRACT

Educators' conceptualizations of knowledge can influence their practice, and this practice can in turn influence learners' beliefs (Johnston et al., 2001). Academic advisors and academic support services personnel are instrumental in students' postsecondary experience, yet little research has explored their brain-based knowledge and beliefs. This explanatory sequential study seeks to address that gap by exploring academic advisors and academic support personnel's awareness of neuromyths, general knowledge about the brain, and evidence-based practices. Findings from this study will advance understanding of the variety of forces influencing students' experience and learning.

AIM

The purpose of this study is to examine academic advisors and academic support personnel's awareness of neuromyths, general knowledge about the brain, and evidence-based practices. The study also seeks to learn about the professional development they engaged in between March 1, 2020, and October 1, 2021, explore the relationship between using evidence-based practices with advising students, and examine their interest levels in knowledge about the brain. Finally, the study seeks to understand how academic advisors and academic support personnel perceive the higher education landscape post-pandemic.

PROBLEM

While many educators share a deep desire to facilitate student learning and success, few have a sufficient level of understanding of how the brain learns. In fact, research has shown that educators across contexts and cultures believe neuromyths at high rates (e.g., Betts et al., 2019; Blanchette Sarrasin et al., 2019; Dekker et al., 2012; Dündar & Gündüz, 2016; Gleichgerrcht et al., 2015; Papadatou-Pastou et al., 2017). These incorrect beliefs about learning and the brain, which often stem from a misinterpretation or oversimplification of scientific findings (OECD, 2002), can lead to programming, approaches, and policy recommendations that are ineffective and a drain on valuable resources (Pasquinelli, 2012; Sylvan & Christodoulou, 2010). When put into practice, neuromyths can also promote fixed mindsets (Vaughan, 2017) and cognitive overload (Lethaby, 2016).

Academic advising and academic support services involve a lot of teaching. These personnel have the potential to significantly impact students' perceptions and learning and work very closely with students on issues related to academic engagement, studying, and completion of courses and their program of study. Indeed, research from Young Jones et al. (2013) found that academic advisors are crucial components of students' experience and can vitally impact a range of factors that influence academic experience, including the development of self-efficacy and practical applications of study skills. Even though advisors and academic support personnel are crucially important to students' educational experiences, little research to date has explored their awareness of neuromyths, general brain knowledge, and evidence-based practices.

CURRENT RESEARCH

The research questions guiding this explanatory sequential study are:

- (1) *Is there a difference in awareness of neuromyths, general knowledge about the brain, and evidence-based practices from the science of learning between academic advisors and academic support personnel and across demographic categories (e.g., type of institution, program level, program format, educational attainment)?*
- (2) *What types of professional development have academic advisors and academic support personnel attended between March 1, 2020, and October 1, 2021?*
- (3) *Is there a relationship between the type of professional development and awareness of evidence-based practices related to neuroscience, psychology, and education?*
- (4) *To what extent is there interest by academic advisors and academic support personnel in scientific knowledge about the brain and learning?*
- (5) *How do academic advisors and academic support personnel perceive the higher education landscape post-pandemic (i.e., instructional formats, professional development formats, opportunities)?*

The research team employed a convenience snowball sampling approach to recruit academic advisors and academic support services personnel to participate in the research. In the first part of the study, participants completed an online survey about their awareness of brain-based knowledge and evidence-based practices as well as the professional development they engaged in. In total, 105 surveys met the criteria for inclusion and will be analyzed using Qualtrics and SPSS. Means and medians will be looked at for each group, Crosstabs and ANOVAs will be used for comparisons across demographics, and if there are significant differences in each group, Kruskal-Wallis H tests will be used to make comparisons across groups.

The second part of this study consists of follow-up focus groups. These focus groups have yet to be conducted but will focus on the professional development programs participants engaged in. Focus group participants will be selected based on their indication on the survey that they are available and interested in participating in a follow-up focus group. Once gathered, this qualitative data will be coded and analyzed using NVivo.

SIGNIFICANCE AND IMPLICATIONS

Student learning and success is influenced by a variety of factors and numerous people, but to date, much research has focused primarily on instructors. Findings from this study will address the existing research gap by advancing understanding of the brain-based beliefs and knowledge academic advisors and academic support personnel hold. This is crucially important given that one's conceptualization of knowledge can influence practice, and this practice can in turn influence learners' beliefs (Johnston et al., 2001).

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Ellana Black is a PhD student in Drexel University's School of Education. Her research foci include the learning sciences (specifically Mind, Brain, and Education science), online learning, second language teaching and learning, higher education, and instructional design. She holds a bachelor's degree in Spanish from the University of Iowa and a master's degree in Teaching English as a Second Language from St. Cloud State University in Minnesota. Her master's thesis, "Second language listeners' metacognitive strategy use," explored the relationship between university-level English language learners' metacognitive awareness and their listening comprehension and growth. Ellana has facilitated online professional development events for international English teachers; taught English as an additional language and English for Academic Purposes to adults and post-secondary learners in the United States, Brazil, and online; and worked as a professional academic advisor at several colleges and universities in the United States.

► RESEARCH BRIEF NO. 13

Dance as Therapy in Grenada: The Intersection of Gender, Education, and Crisis

WRITTEN BY: **DR. VANESSA AIRD**, EdD Alumna

SUPERVISING PROFESSOR: **DR. KRISTY KELLY**

April 2021

ABSTRACT

This narrative qualitative study explores the effects of “Dance as Therapy” on the emotional well-being of young women in Grenada. More specifically this study will explore the role dance and mindfulness plays regarding participants’ mood, social interactions, and goals/aspirations. This study was comprised of ten young women who are former students and/or teachers of Harmony Dance Academy (HDA); a mindful dance program on the island. Through semi-structured focus groups and one-on-one interviews, critical themes and findings emerged that helped to inform recommendations to the government of Grenada, dance educators, young Caribbean women, as well as for future research.

AIM

The purpose of this study is to first explore the challenges that young women in Grenada face, particularly through the intersectionality of gender, education, and crisis. It also looks at the role of “dance as therapy” in their lives, both prior to and during the COVID-19 pandemic. This study intends to tell the stories and amplify the voices of those that often go unheard. Pietraroia (2011) calls for more studies to be done on the effects of dance and movement programs on children who are underserved resulting in sustainable programming (p. 48). This study is an answer to that call.

PROBLEM

Whether they are faced with gender inequality, economic instability, natural disasters, or most recently, a global pandemic, young women in Grenada are no strangers to crises. Day after day, year after year, young women in Grenada are faced with prevailing patriarchal, social, and cultural norms, which define their gender roles and identities in society, starting at a very young age. Jocelyn Frye (2020), reminds us that “women of color often stand at the intersection of multiple barriers, experiencing combined effects of racial, gender, ethnic, and other forms of bias while navigating systems and institutional structures in which entrenched disparities remain the status quo” (p. 3). Grenadian women are no exception.

But what about those challenges that are less known, less spoken of? A recent report documented the hardships that young women in Grenada face that are often hidden from the general public (e.g., teenage pregnancy, single parenting, dependence on men for financial support and child maintenance, gender-based violence, transactional sex, etc.), (National Review Grenada, 2014, p. 15). Emotional challenges (e.g., depression and/or anxiety) also fall under this category, as it is often kept a secret - making it difficult to see, address, and/or seek help. While the benefits of “Dance as Therapy” have been heavily researched, the effects of such programming are undertheorized. The COVID-19 pandemic offers a unique opportunity to explore intersections between dance, education, emotional well-being, and crises through the experiences of young women. This study uses the case of dance in one country context, Grenada, to generate recommendations that will be of interest to dance therapists, educators, and policymakers more generally.

RESEARCH QUESTIONS

The following research questions guided this qualitative narrative study:

- (a) *What challenges do young women in Grenada face, particularly in terms of social stigmas, gender inequality, and discrimination?*
- (b) *What role(s) does dance play in the lives of young women in Grenada both in and out of school, particularly in terms of managing emotional wellness?*
- (c) *How has COVID-19 impacted young women’s relationship to dance? How has this impacted their sense of emotional wellness?*

FINDINGS

Several critical themes emerged during the data analysis process, each with a set of sub-themes; (1) Being Silenced, (2) Finding Voice: Before & Amidst a Global Pandemic, (3) The Impact of Mindful Dance Programming. The first theme presents what young women are coping with, particularly in terms of cultural stigmas, gender inequality, and discrimination, and how they have been silenced by it all. It also sheds light on various ways in which they cope, outside of dance. The second theme, Finding Voice: Before & Amidst a Global Pandemic, provides insight into what dance means for these young women and how their relationship with the art form has led to them finding their voice in the most unique ways. It also sheds light as to how the role of dance has changed in their lives since the onset of COVID-19. Theme 3, The Impact of Mindful Dance Programming highlights the benefits of programs like HDA, and the impact it has had on the participants and their students.

DISCUSSION

The findings of this study were developed through the perspective of ten young Grenadian women who participated in a mindful dance program, either as a student and/or teacher. An analysis of qualitative data from a focus group and individual in-depth interviews revealed the following findings:

- (1) *Participants have experienced and continue to experience gender inequality at home, within the school system, and in the workplace,*
- (2) *Participants have experienced and are experiencing emotional challenges (anxiety, depression, low self-esteem) as a result of discrimination, cultural stigmas, and lack of a trusted space in which to share and process their truth,*
- (3) *Participants' experiences reflect the positive impact dance and mindfulness had on their emotional and mental well-being.*

This study provides a look at the lived experiences of young Grenadian women as they seek to find their place within a male-dominated society due to cultural stigmas, gender inequality, and discrimination. The participants explained that things are slowly getting better for young women on the island but that there is still a very long way to go before they are seen and treated as equals to their male counterparts. They also spoke on the immense impact dance has had on their lives, both pre- and post-pandemic.

RESEARCH IMPLICATIONS

This study explored the challenges young women in Grenada are facing and how they are using dance and mindfulness practices to impact their mood, social interactions, goals, and aspirations. Overall, the results and findings concluded that mindful dance programs are beneficial both personally and professionally. Additionally, participants shared how the COVID-19 pandemic has had both a positive and negative impact on their dance practice. This, and future studies, can not only fill a void in the literature but can actually change the lives of the participants and those around them by coming together as black women and speaking truth to power.

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ABOUT THE AUTHOR



Vanessa Aird, EdD, has worked in the field of education for over 2 decades and spent her most recent years serving as Dean of Students within the independent school system. Beyond the school building, Vanessa is the founder and creative director of Harmony Dance Academy, a non-profit organization that provides mindful dance programming to underserved communities. She believes part of her life's work is to aid youth in reaching their full potential by first gaining a better understanding of self; all through the

power of dance. As such, Vanessa's research focuses on the impact dance can have on the emotional well-being of young women in her homeland of Grenada; as well as the need to create a safe space for them to express themselves. Vanessa successfully defended her dissertation in December of 2022 and is looking forward to expanding her research throughout the Caribbean.

▶ RESEARCH BRIEF NO. 14

WE ARE STEM: Black Girls’ Perspectives on Engaging in an Informal Culturally Sustaining STEM Enrichment Program and its Influence on the Development of Their STEM Identity

WRITTEN BY: **TAJMA CAMERON**, PhD Student

SUPERVISING PROFESSOR: **DR. ALONZO FLOWERS**

May 2022

A B S T R A C T

Despite Black female students demonstrating their STEM interests and aptitudes, this affinity towards STEM is not translating to representation within STEM fields. The literature suggests a critical factor influencing Black girls’ pursuance and persistence in STEM fields is the development of their STEM identities within formal and informal STEM environments. Informal culturally sustaining STEM environments provide Black girls with a space where their STEM identities can be cultivated and nurtured and where they can create counternarratives to the negative and deficit thinking surrounding Black girls as STEM learners. This pilot study will utilize a qualitative case study to examine the perspectives and experiences of Black girls as they participate in an informal culturally sustaining STEM setting. This examination can provide valuable insights on how to effectively foster the formation of Black girls’ STEM identities that can lead to sustained engagement and participation in STEM fields.

AIM

The purpose of this study is to examine the experiences of Black adolescent girls who are participating in an informal culturally sustaining STEM enrichment program by utilizing a case study design. Critical Race Feminism and Yosso's Community Cultural Wealth (Delgado, 1995; Wing, 1997; Yosso, 2005) will be used to explore the experiences of the Black adolescent girls who participated in the informal culturally sustaining STEM enrichment program in my study. Specifically, the research will explore the girls' experiences using the constructs of (a) STEM identity, (b) STEM self-efficacy, and (c) racial and gender identity. The goals are to investigate the following research questions:

- (1) *How do culturally sustaining STEM enrichment programs foster the formation of STEM identities in their Black adolescent girls?*
- (2) *How do Black adolescent girls navigate their multiple identities (i.e., racial identity, gender identity, and STEM identity) while participating in an informal culturally sustaining STEM enrichment program?*

PROBLEM

In the United States, STEM career fields are high-growth industries (Collins, 2018). However, Black women remain underrepresented in advanced STEM degrees and as STEM professionals. While existing research has identified different factors explaining the issues of Black students' persistence and recruitment in STEM fields (Ong et al. 2018; Ortiz et al. 2019; King & Pringle, 2019), gaps in the literature exist concerning the impact of informal culturally sustaining STEM enrichment programs on fostering the formation of STEM identities in their Black students. Critical to increasing representation in STEM pathways is fostering the formation of Black students' STEM-scholar identity.

METHODOLOGY

To address my research questions, I will utilize a qualitative case study design that will occur during an academic school year (9 months, September – June). A qualitative research approach was chosen for this study because qualitative research methods “are valuable in providing rich descriptions of complex phenomena; tracking unique or unexpected events; illuminating the experience and interpretation of events” (Sofaer, 1999, p. 1101). Specifically, the case study method will be used to “gain a holistic and in-depth view of the research problem” (Baskarada, 2014, p. 1). Researchers state that utilizing case study research requires an intensive analysis of an individual unit (Baskarada, 2014). Therefore, the case study design method lends itself useful in providing an opportunity for the researcher to gain a deeper understanding of the research problem being investigated (Baskarada, 2014). In addition, the use of a case study design will be necessary for this study given our limited knowledge about the experiences of Black girls in informal culturally sustaining STEM enrichment programs. Furthermore, it will allow me to develop a comprehensive understanding of the small population of Black adolescent girls that have access to and will participate in this kind of informal STEM learning environment. The qualitative data collection methods that will be utilized in this study are video observations, self-expressive artifacts, demographic questionnaire, and semi-structured interviews.

POTENTIAL LIMITATIONS

The proposed pilot study will take place at an informal culturally sustaining STEM enrichment program that is within the community. A potential limitation is that I am not in control of the inner workings and running of the program and therefore, there are elements that are out of my control.

RESEARCH IMPLICATIONS

As noted by Burt and Johnson (2018) “Developing talent in science, technology, engineering, and mathematics (STEM) remains a national priority, one for which increasing the number of STEM participants from historically underrepresented populations is germane” (p. 257). Therefore, gaining more perspectives and insights directly from Black girls participating in an informal culturally sustaining STEM enrichment program is critical to gaining insights on how Black girls’ STEM talents and abilities can be nurtured and supported. Furthermore, learning from the experiences of this unique population of students can inform instructional practices, curriculum, and policies that are necessary in education reform.

CONCLUSION

As Collins (2018) asserts, acknowledging the STEM talent and achievement gaps by race and gender requires “understanding the critical aspects of Black student STEM identity (BSSI)” (p. 144). By showcasing the voices of Black adolescent girls who engage in an informal culturally sustaining STEM enrichment program, this study is committed to sharing how these experiences impact the development and nurturing of Black girls’ STEM identities. Black girls are often overlooked in STEM learning contexts, and current pedagogical practices tend to ignore the significant element of culture in fostering the formation of Black girls’ STEM identities. Moreover, the literature often focuses on deficit-oriented frameworks to explain the lack of representation of Black girls and women in STEM without valuing the positive cultural experiences that Black girls bring to STEM. Cultivating and nurturing Black girls’ STEM identity is critical to increasing representation in STEM fields. Utilizing culturally sustaining pedagogical practices is significant in fostering the formation of Black girls’ STEM identities. In looking at a synthesis of the literature that explores Black girls’ STEM identity, a significant factor that must be included in the research is the impact of culturally sustaining informal STEM spaces in fostering the formation of their Black students’ STEM identity. This research can also inform effective STEM talent development for Black students and other historically marginalized students.

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