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A Phenomenological Study: Exploring High School Students' Experiences Earning an Entrepreneurship Diploma (ED) in an Entrepreneurship Education Secondary School Program

WRITTEN BY: **DR. CHRISTINE GALIB,** EdD Alumna

SUPERVISING PROFESSOR: **DR. JOYCE PITTMAN**

October 2020

ABSTRACT

As of 2015, 42 states reported some type of entrepreneurship education standards, guidelines, or proficiencies and 18 states required entrepreneurship education courses to be offered at the high school level. Yet, there is only limited research on the experiences of students in degree-granting entrepreneurship education secondary school programs that promote an entrepreneurial mindset. This leads to a limited understanding for the secondary school leaders and curricula developers designing and implementing these programs and potentially may result in the creation of ineffective programs. The purpose of this phenomenological study was to explore high school students' lived experiences earning a high school Entrepreneurship Diploma (ED) that was designed to promote an entrepreneurial mindset. This study analyzed qualitative data, collected through questionnaires, interviews, and reflection matrices, from the ED Cohort 1 members, as well as their parents and former program faculty.

ABSTRACT *(continued)*

Four results emerged from the study's findings: (a) The uncertain and non-traditional future work landscape necessitates a diverse and holistic skillset, which this ED promoted; (b) Participation in numerous and reoccurring experiences that enable high school students to apply classroom learning to real world problem-solving and presentation empowers students to develop confidence and take risks; (c) Sustained collaborative and teamwork-based learning leverages social relationships, and helps students to develop and understand the value of support networks; and (d) Self-reflection and feedback in the context of entrepreneurial mindset development enables powerful and purposeful self-discovery of an authentic identity. These results offer valuable insights to secondary school leaders and curricula developers designing and implementing entrepreneurship education programs that promote an entrepreneurial mindset in students. Since these results also indicate the skills with which high school students might be entering college or the workforce, these results are indirectly valuable to college administrators and employers, who desire entrepreneurially minded individuals or employees.

CONTEXT

The Fourth Industrial Revolution is comprised of the exponential growth in globalization, autonomation, and digitization of work and has resulted in a global startup revolution and the emergence of the gig economy (Bakhshi, Downing, Osborne, & Schneider, 2017; Schwab, 2016; Startup Genome LLC, 2018). These factors have led to the desirability of creativity and an entrepreneurial mindset in the 21st century (Silverman, 2018). Entrepreneurship education increasingly has emerged as a vehicle to promote an entrepreneurial mindset in students, but mostly in universities, and with limited qualitative literature on entrepreneurship education programs in high schools that promote an entrepreneurial mindset (Gold & Rodriguez, 2018).

PROBLEM

Secondary school leaders and curricula developers seeking to design and implement programmatic approaches to promoting an entrepreneurial mindset in high school students have a limited understanding of how high school students experience degree-granting entrepreneurship education programs that promote an entrepreneurial mindset. This limited understanding is a problem, since it contributes to a gap between how secondary school leaders and curricula developers perceive students' experience of entrepreneurship education and how students actually experience entrepreneurship education. This gap potentially leads to the design and implementation of entrepreneurship education curricula that ineffectively promote an entrepreneurial mindset.

PURPOSE

The purpose of this phenomenological study was to explore high school students' lived experiences earning a high school Entrepreneurship Diploma (ED) that was designed to promote an entrepreneurial mindset.

PARTICIPANTS

The target population for this qualitative, phenomenological study was individuals who met the criteria of having a substantive degree of first-or-secondhand, shared experiences with respect to the studied phenomenon of the experience of earning the ED. This study's 11 participants — three ED Cohort 1 members, six parents, and two former faculty — were selected using snowball sampling. The researcher identified prospective participants who were ED Cohort 1 members, their parents, or former program faculty, emailed them an invitation to participate, and asked them to recruit other potential study participants.

DATA COLLECTION & ANALYSIS

To enable participants to describe their lived experiences with respect to earning the ED, the researcher used the following data collection methods: (a) anonymous, self-administered, open-ended response questionnaires, (b) semi-structured interviews, (c) reflection matrices on Cohort 1 members' curricular and extracurricular experiences, and (d) the researcher's journal. First-and-second cycle coding methods were used to analyze the data. First cycle methods included descriptive, in-vivo, emotion, values, and narrative coding. Second cycle methods included pattern, focused, and axial coding.

FINDINGS

Five findings emerged from the data analysis: (a) Influence on college and career choices and readiness; (b) Value of real-world experiences and exposure; (c) Cohort 1 membership as formative to realizing the value of support networks; (d) The Entrepreneurship Diploma as a zone of holistic development; and (e) Discovery of authentic, unique self-identity as empowering. Each finding consisted of three themes (Figure 1).

▶ **FIGURE 1:** Findings and themes that emerged from the research.
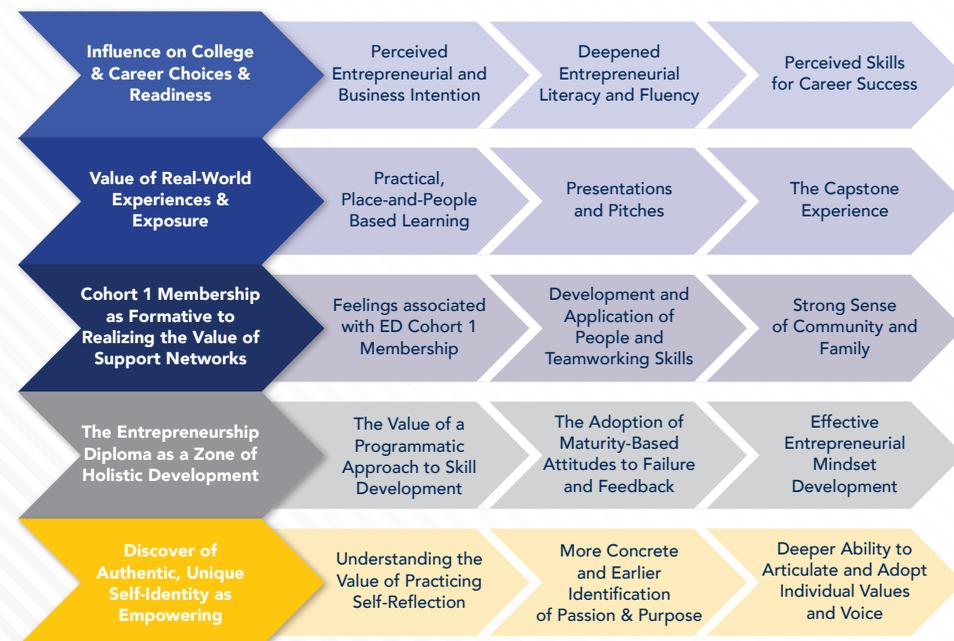
RESULTS

This study produced four results: (a) The uncertain and non-traditional future work landscape necessitates a diverse and holistic skillset, which this ED promoted; (b) Participation in numerous and reoccurring experiences that enable high school students to apply classroom learning to real world problem-solving and presentation empowers students to develop confidence and take risks; (c) Sustained collaborative and teamwork-based learning leverages social relationships, and helps students to develop and understand the value of support networks; and (d) Self-reflection and feedback in the context of entrepreneurial mindset development enables powerful and purposeful self-discovery of an authentic identity.

These results extend the qualitative literature on how high school students expereince entrepreneurship education programs that promote an entrepreneurial mindset. These results provide insights on what study participants perceive as valuable with respect to ED Cohort 1 members' preparedness for the future work landscape, their participation in an entrepreneurship education program, and their entrepreneurial mindset development. By considering these results in the design and execution of entrepreneurship education, secondary school leaders and curricula developers can create more effective programs for students.

CONCLUSIONS

Three conclusions emerged from the results. First, study participants perceived that earning the ED as a high school diploma enabled Cohort 1 members to develop and apply skills that better position them to navigate and succeed in their future work landscape. Second, study participants perceived that Cohort 1 members felt more prepared to lead and manage teams, design presentations, engage their creativity and innovate, start and scale a business, and take risks. Third, study participants perceived that Cohort 1 members developed an entrepreneurial mindset by presenting, pitching, working in teams, completing Capstone, and self-reflecting. These conclusions invite secondary school leaders and curricula developers to develop, implement, evaluate, and certify curricula that enable high school students to practice and apply a diverse and holistic range of skills in order to develop their entrepreneurial mindset.

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Dr. Christine Galib serves as the Senior Director of Programs at The Ion. In this role, she oversees the development and execution of programs at The Ion, including The Ion's Accelerator Programs, Workforce Development Programs, Academic Programs, and Community Education Programs. She also directs The Ion Smart and Resilient Cities Accelerator, which supports selected startups as they develop and deploy technology that connects ideas, people, and communities in Houston. The Accelerator is backed by the Mayor's Office, the City of Houston, Microsoft, Intel, and TX/RX, Houston's non-profit makerspace. Christine is the founder of Plan My Plate, which offers leadership, management, creativity, innovation, mindfulness, and wellness consulting. A Teach For America alumna with experience in investment management, pre-medical studies, and educational consulting, Christine holds her bachelor's from Princeton University, master's from the University of Pennsylvania, and doctorate from Drexel University. Her speaking, writing, and research interests include entrepreneurial mindset development, creativity, innovation, leadership, mindfulness, wellness, and apologetics.

▶ **RESEARCH BRIEF NO. 2**

STEAMing Ahead with Teamwork: Transferring Administrative Support to a Virtual Setting Due to COVID-19

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SUPERVISING PROFESSOR: **DR. ALONZO FLOWERS**

October 2020

ABSTRACT

Due to the COVID-19 pandemic, many educational classes and extra curriculars have suddenly moved to a virtual setting. This study seeks to provide the lived experiences (Seidman, 2019) of administrators as they transition a summer STEAM program to a virtual setting. The summer STEAM program consisted of approximately 100 students from various schools in a large northeastern US city. Through interviews, participant-as-observer observations (Billups, 2020), and document analysis of weekly updates, call logs, and administrative documents, this research details the shift in support mechanisms that administrators found to be valuable to instructors.

AIM

The purpose of this qualitative study is to understand how a STEAM program's administrative team transitioned instructor supports to a virtual setting for their summer program.

ISSUE

Out-of-school programs have become a way to incorporate meaningful science, technology, engineering and mathematics (STEM) integration for students outside the confines of a school day. However, it is difficult for some instructors to authentically blend the four disciplines together and researchers are still exploring best practices (Kelley & Knowles, 2016). Furthermore, instructors in out-of-school programs are not necessarily certified teachers or individuals who hold a STEAM-related degree. Instructors can be supported by ensuring they have solid STEM content knowledge, creating STEM partnerships, and prioritizing STEM within the program so that instructors have higher levels of comfort with STEM programming and content (Cohen, 2018). Supporting instructors is important because of the academic and behavioral benefits for students in out-of-school STEM programs (OSSPs) that utilize an inquiry-based approach (Gates, 2017). While effectively supporting instructors in OSSPs is possible while programs can meet face-to-face, the fallout from the COVID-19 pandemic is uncharted territory. Yet, supporting instructors in providing effective OSSP is more important than ever due to the academic repercussions of COVID-19 school closures. Effective summer programs has helped reduce the impact of summer slide (Smith, 2012). This study provides an understanding of how a summer STEAM program supported instructors as in-person programming was transitioned to a virtual setting. The study is guided by the following questions:

(1) *How did the summer program's administrative team transition support systems (i.e., professional development, meetings, instructor support) to a virtual space for instructors?*

(2) *To what extent does Summer STEAM change the way they provide support to instructors?*

INITIAL FINDINGS

Three themes emerged from participant interviews, observations, and document analysis. Those themes were (a) supporting instructors to focus on teaching, (b) everyone pitching in during a time of need, and (c) creating new support structures.

To support instructors' ability to focus on teaching, administrators attempted to reduce teacher burnout, removed new layers of student challenges, and decided on the direction of technology for the overarching program. These supports allowed instructors to shed some of the "extras" that are involved in teaching and focus on their craft. One administrator shared that "[teachers] would text me and be like, 'Hey, we're working on this digital activity…Can you go with him into a breakout room?' And I would do that." Jumping in and out of classrooms became commonplace for administrators throughout the summer. Additionally, administrators were ready to help out in new and unexpected ways such as:

> The number of staff available to call kids, run computers to kids, just troubleshoot the problems that will come up…it's just one teacher without the flexibility of a nonprofit to have these unconventional roles.

As the summer evolved, administrators focused on simplifying teachers' instructional time and ability to teach in their classrooms. Simplifying teachers' insturctional time was accomplished by providing direct instructor support but also by solving unforeseen and foreseen problems that students would encounter while in class such as laptops breaking or connectivity issues.

The theme of everyone pitching in during a time of need was evident by: (a) how planning began early for the summer, (b) the overall structure of the program, and (c) the flexibility and team mentality of administrators. These different strategies translated to a shared decision making process in which multiple teammembers, rather than a single one, made a decision based on prior experiences. In developing a schedule, administrators sought the advice of educators who already were operating their programming in a virtual space. "We talked to those teachers to see what their schools were doing and what they liked and didn't like and that's kind of how [we] built the schedule we made in the summer program." Furthermore, issues like schedule and programming were a shared responsibility across the administrative team. One administrator shared "we had a couple of people on the team that were helping a lot…I know I was kind of the face of it, but there was a lot of people involved in that when speaking about a specific program." Throughout the interviews, the administrative team spoke about the team mentality when approaching problems to ensure effective programming. There was consistent reference to other members of the administrative team playing an instrumental role in transitioning the program to a virtual setting.

For creating support structures unique to the virtual space, grade team meetings, shift in administrative roles, and integrating potential teaching tools into meetings were new for this summer to support instructors in a virtual environment. At the start of the summer, the administrators demonstrated a way to engage students in a virtual classroom to students:

> I decided to do a Nearpod, like PD on the first day. I mean I wasn't doing a PD on Nearpod but just use it in the PD because I felt like if I was able to model using it that teachers would be able to think about how they could use it.

While engaging students over the summer was a challenging task, administrators demonstrated a piece of technology that could be utilized by instructors to increase engagement in staff meetings. Instructors were able to engage with the technology together and talk through how it could be utilized in the virtual space. Additionally, when students struggled to connect or be present, administrators took on additonal roles of supporting instructors to motivate students to be present. "The student support deans, I don't think I necessarily envisioned that they would call students as much as they did, because that's now really how it looks in person but they were willing to step into that role." While existing structures continued, there were certain aspects of administrators' roles that had to change to better support the program. The creation and shifting of support structures was a common theme across all interviews. For example, the support deans making phone calls for absent or unresponsive students was a transition due to a situation that did not exist for in-person programming.

SIGNIFICANCE & IMPLICATIONS

While there have been regional events that have prevented specific OSSPs from being held, such as extreme weather events, the COVID-19 pandemic has created an unprecedented challenging situation for educators and programs across the country. While research provides insight on best practices for supporting STEM instructors in OSSPs (Cohen, 2018) and best practices in virtual programming (McKlennon, 2006), existing research on transitioning from in- person to virtual programming is limited. This study, which fills this gap, has implications for OSSPs as they transition between in-person and virtual programming. This scholarship provides educational administrators of OSSPs a few best practices in how to provide support to their instructors during the school year and provide insights as to the challenges of this transition. This project provides administrators in a variety of settings ways to support their instructors in shifting in person STEM programming to a virtual space.

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Christopher Fornaro received his Bachelor of Science in chemical engineering from Rutgers University and Master of Education from Temple University. After working as a process engineer for roughly three years, he completed an alternative certification program and Master's degree as a Robert Noyce scholar, funded by a Wachovia grant. Over the next nine years, Chris spent time in public, charter, and independent schools teaching math and science classes. This time culminated in creating and managing the STEAM department and MakerSpace at The Shipley School.

Chris's research interests originate in trends he saw in STEM spaces both in and out of the classroom. Specifically, ways that STEM can be effectively integrated in and out of classroom spaces, out of school STEM programming, confidence in STEM programming for instrcutors and students, and informal learning environments. Chris has been a research assistant for Drs. Alonzo Flowers, Toni Sondergeld, Aroutis Foster, and Sheila Vaidya.

Building Bridges Between Multilingual Families and Urban Schools; A Qualitative Case Study

WRITTEN BY: **JANEL DIA,** PhD Student

SUPERVISING PROFESSOR: **DR. VERA LEE & DR. KRISTINE LEWIS-GRANT**

November 2020

ABSTRACT

Long established ideals of parental engagement in schools should have been the gold standard for engagement, particularly for families that are culturally and linguistically diverse (Ishimaru, 2016). Social justice leadership (Furman 2012) emplores school leaders to challenge established practices and create school cultures that welcome and engage multilingual families. While Yosso's (2005) community cultural wealth provides a framework for schools to identify the array of capital that multilingual families bring with them into the schools. To combat the barriers that families and schools often confront regarding parental engagement, this study highlights the work of bilingual counseling assistants (BCAs) as cultural brokers who bridge families, communities, and schools. While the analysis and data collection is ongoing, preliminary findings indicate the ways in which BCAs build upon the human capital of multilingual families in welcoming and acknowledging the cultural wealth they bring to schools. The significance of this qualitative study is that it elevates the work of BCAs as crucial members of the school staff despite working from the margins. Additionally, BCAs bridge multilingual families and schools through cultivating family-school-community partnerships.

AIM

This research seeks to elevate the work of bilingual counseling assistants (BCAs) as cultural brokers for multilingual families and the ways in which BCAs establish, cultivate, and facilitate family-school-community partnerships.

PROBLEM

Research has shown that family engagement is key to student success (Epstein, 2010), however, research has shown that the idea of best practices for family engagement does not fully encompass the needs and engagement of culturally and linguistically diverse families (Arauo, 2009; Auerbach, 2009, 2011; Baird, 2015). Often there are barriers that multilingual families face that preclude their engagement (Waterman & Harry, 2008; Beauregard et al, 2014; Morse, 1995; Valdes, 1996). Schools also face barriers to involvement with families (Caplan, 2000; Drake, 2000; Henderson et al, 2007). The adoption of a range of culturally responsive dispositions, approaches and methods to meaningfully engage multilingual families have been presented throughout the literature highlighted in this study.

In Pennsylvania, there are more than 61,000 English Learners (ELs) speaking more than 200 different languages. In Philadelphia, the services provided to English Language Learners or ELLs in the School District of Philadelphia, falls under The Office of Multilingual Curriculum and Programs or (OMCP). The OMCP office works with more than 15,000 ELLs who represent more than 130 countries and speak more than 100 home languages.

The School District of Philadelphia hires bilingual counseling assistants to "facilitate cross-cultural communication between students, limited-English proficient families, and District staff by providing culturally relevant and linguistically competent translation and interpretation services" (School District of Philadelphia website). BCAs are assigned to schools based on the percentage of ELLs in the school and are always guaranteed to return to the same school the following academic year. The research sites in this study have large percentages of students/families who spoke Spanish, Mandarin and Burmese.

RESEARCH STUDY DESIGN

This work is situated in two complementary theoretical frameworks, Yosso's (2005) community cultural wealth framework and Furman's (2012) social justice leadership framework. Together, these frameworks allow us to investigate multilingual family engagement in schools through the cultural brokering work of bilingual counseling assistants (BCAs). Community cultural wealth framework (Yosso, 2005), is constructed of six cultural capitals: navigational, aspirational, linguistic, resistance, social, and familial which encompasses the forms of capital and the knowledge that Students of Color bring with them from their homes and communities into the classroom. Furman's (2012) framework of social justice leadership dimensions conceptualizes leadership for social justice as praxis (a Frierian concept which integrates reflection and action) along five dimensions: personal, interpersonal, communal, systemic and ecological.

The research questions in this study were: what strategies are schools with high linguistic diversity using to communicate with and engage families and what strategies schools use to engage community partners? To answer those questions, one-hour interviews were conducted with a central office administrator, principals, lead ESL teachers and bilingual counseling assistants. In addition to interviews, focus group discussions were conducted at both Spruce and Walnut (pseudonyms) with Spanish-speaking families and Burmese families. A codebook was specifically designed to identify instances of community cultural wealth and social justice leadership.

A codebook based on concepts in community cultural wealth and social justice frameworks was constructed by the research team to identify exemplar quotes and develop reliability from the interview transcripts. The research team then coded additional interviews separately, then reconvened to exchange and discuss coding together.

FINDINGS

While this research is presently ongoing, preliminary findings for this study indicate that the work of BCAs surpasses translating and interpretive services. BCAs build upon the "community cultural wealth" (Yosso, 2012) of multilingual families in welcoming and acknowledging the various forms of capital they bring to schools.

IMPLICATIONS

This research seeks to contribute to the field in two significant ways. First, this research seeks to elevate the work of bilingual counseling assistants (BCAs) who serve multilingual families. BCAs are crucial members of the school staff, yet they occupy a marginal role within the school's leadership structure. As a bridge for multilingual families, BCAs establish, cultivate, and facilitate family-school-community partnerships. Secondly, this work seeks to contribute to existing literature through deepening studies regarding social justice leadership and highlighting the transformative influence of BCAs who adopt a social justice stance in their work.

ACKNOWLEDGEMENTS

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A Multisite Case Study of the Alignment of Institutional Change Strategies and Culture for Guided Pathways Reform Implementation in California Community Colleges

WRITTEN BY: **JEFFREY D. ARCHIBALD,** EdD Student

SUPERVISING PROFESSOR: **DR. DEANNA HILL**

ABSTRACT

As more than 200 community colleges implement a guided pathways reform framework, they must engage a faculty fatigued by change initiatives that have been implemented with varying degrees of faculty participation and success. The purpose of this qualitative case study was to explore the alignment between the strategies used to implement guided pathways-based organizational change and faculty engagement in guided pathways reform initiatives within the organizational culture of two California community colleges with the goal to understand the role of organizational culture in transformational change and identify best practices in faculty engagement. Preliminary findings supported the role of organizational culture to spur faculty engagement and guide transformational change strategies.

AIM

The purpose of this qualitative case study was to explore the alignment between the strategies used to implement guided pathways-based organizational change and faculty engagement in guided pathways reform initiatives within the organizational culture of two California community colleges with the goal to understand the role of organizational culture in transformational change and identify best practices in faculty engagement.

PROBLEM

Community colleges in California have participated in multiple reform initiatives in the past decade that have resulted in major changes to the system. Jenkins and Cho (2013) proposed a framework for a "guided pathways" model that included "clear roadmaps to student goals," "on-ramps to programs of study," and "embedded advising, progress tracking, feedback and support," which helps students track progress and stay on their chosen educational pathways (pp. 28-29). Prompted by $150 million in grant funding, all 114 community colleges in California are "actively working on or implementing a Guided Pathways model" (California Community Colleges Chancellor's Office, 2019, para. 4). The speed and constancy of change, coupled with varied faculty involvement in decision-making, can produce the reduced enthusiasm that is a telltale sign of change initiative fatigue (Reeves, 2010). As community colleges implement mandated and incentivized transformational change, they must secure the participation and buy-in of increasingly fatigued faculty stakeholders or risk the resistance and failure of the change initiatives.

This study was guided by the overarching research question: How has the alignment of organizational change strategies and the organizational culture of three California community colleges selected to participate in the national implementation of guided pathways influenced faculty participation in the reforms and the success of the implementation? Two subquestions were:

(1) *How have the community colleges involved their faculty members in the organizational change initiative?*

(2) *How have the community college's organizational strategies to implement "guided pathways"-based change aligned with their organizational cultures?*

PRELIMINARY RESEARCH FINDINGS

Two California community colleges served as research cases. At each case site, seven faculty and administrator participants completed a one-on-one interview via Zoom. Documents related to guided pathways implementation and meetings as well as recordings of pathways convenings and events served as confirmatory data for triangulation. Data were coded using descriptive and in vivo methods and codes combined and analyzed to reveal the following case themes and sub-themes:

CASE A	CASE B
(1) Slow, deliberate change • Emphasis on formal governance • Focus on building "buy-in"	(1) Constant, iterative change • Distributed leadership structure • Flexibility and revision
(2) Cultural factors affecting change • Comparisons to other colleges • Top-level leadership issues	(2) Cultural factors affecting change • Pride in being a model college • Strong executive influence
(3) Challenges with momentum • Faculty leadership turnover • Sustain and widen participation	(3) Valuing faculty involvement • Emphasis on collaboration • Expectation of new and adjunct faculty participation

Preliminary cross-case analysis revealed common themes of handling resistance through adaptation and emphasizing the inevitability of change as well as centering the student experience through narratives, data, and a connection to student equity efforts.

PRELIMINARY CONCLUSIONS

Colleges A and B both utilized implementation strategies aligned to their institutional cultures but saw results at different speed and levels of success. Implications linked to the research include:

- College A's value of formal governance slowed implementation but increased comfort with change. This cultural framework was less conducive to rapid, transformational change in contrast to College B's informal, flexible, and experimental culture.

- College B's faculty expressed higher levels of engagement linked to a campus climate that values and socializes faculty into a change-based, participatory culture.

- College A's faculty leadership transition and past administration-faculty trust issues clearly impacted change strategies, speed, and success.

- College A and B effectively used student success and its connection to the college mission and faculty intrinsic motivation to drive change efforts.

PRELIMINARY RECOMMENDATIONS

- Colleges implementing transformational change must be sensitive to the institutional values and processes that shape the organizational culture. The pace of change may be adapted to these cultural norms and to minimize resistance.

- The socialization of new faculty to be both adaptive to change and participatory in decision-making processes is critical to long-term success of organizational change and creating an organizational culture that is responsive to the need for transformational change. Colleges should focus on keeping new faculty active in decision-making processes and involving them in change efforts.

- Colleges should keep the student experience in both narrative and quantitative form at the center of any transformational change efforts. Student focus allows a clearer connection to the college mission and taps into the shared values of constituent groups that will need to buy into and facilitate the change process.

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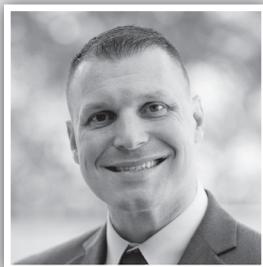
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How Higher Education Forgot about Non-Traditional Aged Black Men: Narratives from Non-Traditional Aged Black Men During the College Application Process

WRITTEN BY: **DR. KENNETH L. JONES,** EdD Alumni

SUPERVISING PROFESSOR: **DR. ALONZO FLOWERS**

December 2020

ABSTRACT

This qualitative study used portraiture as a research method to highlight and understand the lived experiences of three Black-male, non-traditional aged learners during the college admissions application process. Much of the research around the college admission process for Black men is historical with focus on the overarching impact of historical court decisions, diminished school resources, and ethical college admission practices to increase access for traditionally aged minority students, but very little research exists on how Black non-traditional male learners make meaning of their college application experiences, or the spaces where their stories are being told. I captured some of those stories in this research.

AIM

The aim of this study was to explore the experiences of non-traditional aged Black men (over the age of 30) as they navigate the college admissions application process to understand the barriers that may have stopped them from successfully matriculating in colleges and universities.

PROBLEM

While college admissions experts predict that there will be an overall decline in undergraduate enrollment at colleges and universities in the next 10 years from traditional-aged students, the non-traditional aged undergraduate enrollment is expected to increase. Non- traditional learners are a "forgotten population of students in the conversation about educational access (Bohrman, et al., 2019, p. 28)".

Kasworm (2008) and Perna and McLendon (2014) have emphasized that this reality is heightened among non-traditional Black male learners as the largest demographic of Americans interested in obtaining a college education. Based on findings reported by the National Assessment of Education Progress (NAEP, 2019), Black men are among the lowest acquirers of higher education credentials, only achieving more than Latino identified men in the United States. Supported by data from the National Association for College Admission Counseling (NACAC, 2018), the problem is that a significant percentage of Black men (43%) with an interest in returning to college do not complete the application process, which ultimately can limit their life choices (Kasworm, 2008 & 2014; Perna, 2016). As Wright and Graces (2018) articulated, "success begins prior to enrollment with the admissions process where expectations about the education experience are forged" (Wright & Graces, 2018 p.59).

Supported by data from the National Association for College Admission Counseling (NACAC, 2018), the problem is that a significant percentage of Black men (43%) with an interest in returning to college do not complete the application process, which ultimately can limit their life choices (Kasworm, 2008 & 2014; Perna, 2016).
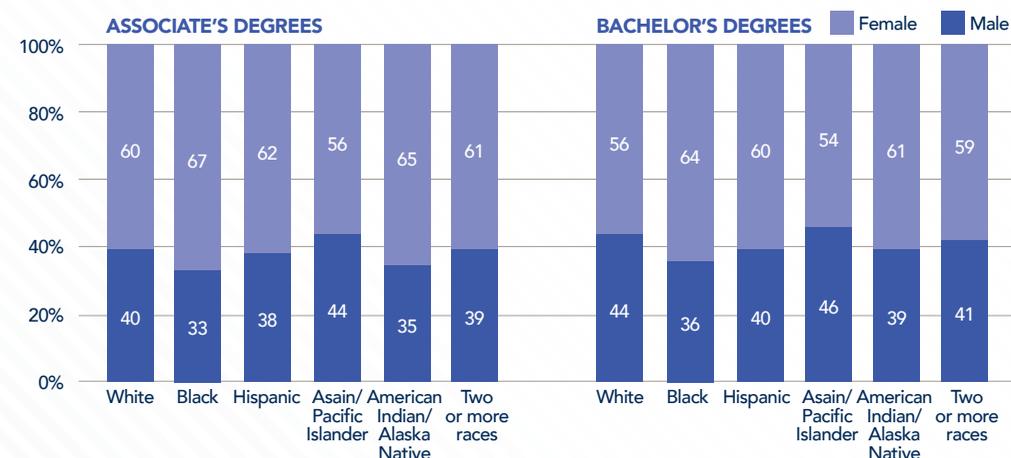

▶ **FIGURE 1:** Percentages of degrees conferred 2015-2016 academic year by sex and race as provided by the National Center for Educational Statistics (NCES, 2019).

SIGNIFICANCE

Higher education must begin to assess its role in producing contributing members to society; given the significant disproportionality of education to income ratio for people who do not have a college degree (U.S. Census Bureau, 2018). As a society, we must address the inequality of college access for all Black men. Especially in an age of college admission bribery scandals from people who simply have the financial means to gain access. The attainment of a college degree is nearly required to be considered for careers that are better able to sustain an individual. With a significant percentage of Black men not having this access, they are more likely to turn to destructive ways to make ends meet for their families and themselves (Bethea, 2016; Dancy, et al., 2014; Flores & Horn, 2017), which ultimately impacts factors outside of the scope of this research. This reality is amplified in the stories of non-traditional aged Black men as they attempt to navigate the added pressures of head-of-household responsibilities. There is an evident difference economically between individuals that have obtained a degree and those that have not, and with Black men facing double the challenge to attain access to these degrees, it is paramount to hear their experiences to better support their needs.

RESEARCH FINDINGS

Framework

Perna's (2006) integrated college access model contended that various factors impact a minority student ability to attend college, such as the communities in which they reside, resources available, the high schools they attend(ed), and the states in which they live. Perna asserted, "if each of these factors are considered by admission professionals and community partners during the decision-making process for college admissions, underrepresented minority students will gain an equal playing field in representation as students in college" (p. 122.).

Method

Portraiture was used to capture the experiences of the men participating in this study. Cemented in a constructivist worldview and initiated on a phenomenological epistemology, portraiture is a methodology that links art and science, integrating "the systematic and careful description of good ethnography with the evocative resonance of fine literature" (Lawrence- Lightfoot & Davis, 1997, p. 4). Because the educational environment has significantly changed newer understandings of the "college student must be considered" (Witz, 2006, p. 254). Education leaders are called upon to seek more relevant approaches to gather stories than the traditional forms of qualitative research (Tuck & Yang, 2013). Portraiture bridges the gap between this need in scholarship and understanding the true experiences of under-represented minority students by re-envisioning inquiry in an under-researched student population (Brooks, 2017; Tuck & Yang, 2013).

Over the course of one college recruitment season, I observed each participant with their families in home settings, interactions with their resources, college admission offices, counseling staff, and finally in their peer-to-peer interactions. Each participant was observed in a variety of settings for about two weeks at counseling meetings, peer gatherings, casual interactions in school and home, counselor programs, and all

interactions around college prep. Remaining in alignment with the portraiture framework, two phases of interviews were completed with each participant to ensure the consistent development of the portrait.

▶ **TABLE 1:** Data collection and analysis timeline

DATA COLLECTION	DATA ANALYSIS	CONSTRUCTION OF PORTRAITS
Interviews and Observations	Phase I – Open Coding	Portraits Constructed
Transcription	Phase II – Narrative Coding	Results Reported
	Phase III – Pattern Coding	Conclusions and Implications
	Emergent Themes Decided	

RESEARCH QUESTIONS

This study was guided by the overarching question:

What are the experiences of Black male non-traditional aged students engaged in the college admissions process at mid-size moderately selective public universities?

It was further supported with three underlying sub-questions:

(1) *What are the barriers, if any, that non-traditional aged Black men (over the age of 30) encounter as they work on completing the college application process for the first time?*

(2) *What institutional factors, if any, impact non-traditional aged college Black men in the college application process?*

(3) *How do non-traditional aged college Black men who are applying to college for the first time describe the college application process?*

DISCUSSION OF FINDINGS

Based on the interviews, observations and data analysis, I constructed three portraits that provide rich details about each participant and their college application experiences. Each of the men of this study highlighted the trials and triumphs of their own process. Findings from each of the men's experience provide a clearer picture of what admission professionals should consider in enrolling their classes. Although each of the men provided their own experiences, they are interconnected through their journeys. Analyzing the portraits alongside their assumptions about the college application process, I found that the experiences of applying to college for the men in my study concentrated on three main areas: *(a) fear of the process or not having enough to contribute to be successful in applying, (b) support from others that are knowledgeable, and c) being in an environment conducive to successfully completing the application.*

Analyzing each of the portraits three themes emerged: (1) their early education experiences, (2) their actual college application journey, and (3) the advice they would give to other non-traditional Black men in their shoes. Focusing on the key findings of this study, the men's experiences support new knowledge of what other non-traditional Black men could face as they apply to college for the first time. Based on these findings, it is concluded that non-traditional Black men's college access must factor in decreasing fear, advocate for support, and promote environments where adequate knowledge of the college process is accessible.

CONCLUSIONS & IMPLICATIONS

While this study represents a worthy beginning, it is my hope that it serves as a springboard for further dialogue and research about Black male non-traditional learners. As with many studies, this study raises more questions than it answers. The men that were interviewed as part of this study highlighted a sample of experiences that warrant further exploration, which could provide even more understanding on non-traditional Black male learners. Their stories provide additional context to the literature around college access issues, but do not do justice to the larger issues at play, such as socialization, historical support, notions of success and career, race culture in America, and the relationship between Black men and higher education historically. Due to the limitations of my study, further research should be conducted on more non-traditional aged Black men in other cities. In addition, research should also be conducted to explore the stories of non-traditional aged Black women learners. These types of studies may help open more dialogue about how to close the achievement gap. While the research may not get to all of the answers, it may help more non-traditional learners feel empowered that their voices matter when admissions professionals and senior level enrollment managers at four-year institutions are considering their entire applicant pool.

This study focused on the application experiences of three non-traditional aged Black men. Utilizing a qualitative methodology — portraiture, participants were observed, two phases interviews were conducted, taped, transcribed, and analyzed to create deep narratives (portraits) to illustrate the experiences of my participants as they applied to college for the first time. Themes of *fear, support,* and *environment* emerged as their experiences were transformed into their portraits. There are vast opportunities to understand the experiences of the non-traditional aged college student, but it is paramount for educational advocates to comprehend the true needs of the Black male non-traditional student. The men in this study are important examples that shed light on a process that seems to be designed to forget them. With the knowledge uncovered in the portraits in this research, college admission offices may now have a frame of reference as to how to adequately include this demographic in the shaping of their undergraduate classes.

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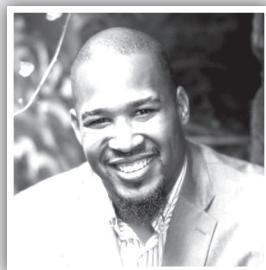
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▶ **RESEARCH BRIEF NO. 6**

Leadership without Boundaries: Exploring Career Pathways of Women* in Higher Education Administration

WRITTEN BY: **KATRINA STRULOEFF,** PhD Student

SUPERVISING PROFESSOR: **DR. ALONZO FLOWERS**

December 2020

ABSTRACT

With the passing of Title IX of the Education Amendments Act of 1972, federal law prohibited discrimination against women in higher education. There remains significant barriers that impact the progression of women in higher education administration leaving an inequality in the representation of women in these roles (Clark & Johnson, 2017; Klenke, 2018). This study explores the pathways of women in higher education administration through semi-structured interviews using an intersectional feminist lens. Allowing participants to critically reflect, three categories of observations emerge: destiny and fit, complexities of social practices, and advocates/allies.

AIM

The purpose of this study is to qualitatively explore how women leaders in higher education critically reflect on aspects of their career trajectory.

ISSUE

With a pipeline of experienced and educated women in the United States, there is something stopping them from reaching top leadership in higher education (Clark & Johnson, 2017; Diehl & Dzubinski, 2016). Klenke (2018) notes that "relatively small numbers of women...progress up the academic career ladder or become institutional leaders" (p. 403). Many causes have been identified when examining the lack of women in leadership roles including "socialization practices," "societal opportunities," lack of role models, and demands of family life (Klenke, 2018, p. 403). Through this study and the following research questions, the pathways and personal navigation of barriers specifically of three women in higher education administration will be explored and shared. To understand what career barriers exist for women and how they are navigated, researchers must create spaces for hearing the voices of successful women in higher education administration. This study provides a space for women in higher education administration to critically reflect on their career pathways and inform women, as well as their advocates/allies, on the systematic and societal barriers plaguing these pathways.

RQ1: What are the pathways (including but not limited to experience, decision-making process, and motivations) for women in higher education administration roles?

RQ2: What are the primary self-identified barriers of women in higher education administration?

RQ3: How do women navigate through self-identified barriers successfully?

STUDY DESIGN & METHODOLOGY

An intersectional feminist lens (Carastathis, 2014) was used to investigate how women in higher education administration reflect upon their journey. The intersecting categories highlighted through the lens of intersectionality represent a "dynamic interaction between individual and institutional factors" (Hancock, 2007, p. 64). This study of higher education administration was a qualitative phenomenological study designed to assemble the experiences of successful women. Using convenience sampling, three women in higher education roles were selected to participate through a series of two 30-minute semi-structured interviews. During the interviews, participants were encouraged to critically reflect on their personal experiences and process in becoming successful women in higher education including motivations, barriers, navigation of barriers, and their pathways compared to others through a protocol of open-ended questions.

INITIAL FINDINGS

The women in this study have achieved high roles within academia while navigating personalized, social, and institutional barriers. Their critical reflection on their labyrinths are valuable for informing research on the lived experience of women in higher education

and offering knowledge for future women leaders. In these interviews, three themes have been identified to understand their experiences. Those themes *(1) destiny and fit, (2) complexities of social practice,* and *(3) advocates/allies* will be discussed below.

Destiny and Fit. Each of the three women in this study noted that they did not aspire to hold a position in higher education administration, nor did they have a consciously mapped pathway. All highlighted that there was uncertainty about their career plans. Although shared pathway was followed to attain their roles, each of the participants noted that in higher education administration they feel a sense of fit. Fey phrased it succinctly when asked about her motivation to work in higher education, "I don't know, it's just where I felt like I belonged" (FeyInt1).

This sense of belonging ties directly to two other patterns that emerged in the interviews. First that the participants are mission-driven individuals, dedicating their careers to their values. This is demonstrated in this excerpt from Mary's interview, "I'm very motivated by that same idea that the purpose of higher education should be to provide solutions for the public good... exactly the job that I have" (MaryInt1). The second pattern seen in all of the interviews was job satisfaction. All three women discussed their satisfaction in their role and accomplishments in higher education administration.

Complexities of Social Practices. While all three women feel that sense of destiny and fit in their roles, they have also had their career trajectories shaped by complexities of social practices. These complexities vary in influence for each woman but were individually addressed throughout the interviews. Each of these complexities is created by societal practices and norms that have shifted the pathways for these women. Fey addresses how her choices have been formed around *care for others* as she reflects, "I have been all about taking care of other people, my children, my students, organizations that I support..." (FeyInt1). Care for others ties directly to the second social practice, *familial and partnership responsibilities*.

Research has demonstrated that family and partners positively impact a man's career, but often does not have the same positive impact on a women's career (Clark & Johnson, 2017). Another closely tied but distinct social practice is the concept of *second shift* for women. Mary hinted that child-rearing is an additional burden for her and thus an organization that allows for that prioritization is appealing. The time and energy put into care for others, familial and partnership responsibilities, and second shift prioritizes others and obligations over self. These complexities of societal practices care for others, familial and partnership responsibilities, second shift, and self-care separation greatly impacted the career pathways of these women. Their decisions and commitments formed their trajectory.

Advocates/Allies. Upon critical reflection, each of the three women referenced the importance to date of advocates/allies for helping them achieve success. Specifically, Mary and Fey verbalized their appreciation of family members/partners supporting them. The support and efforts that have helped these women succeed have not only come from family and partners but also men in the field. By providing networking opportunities and hiring women, men have been essential advocates for these women. The importance of advocates/allies is not strictly gendered. All participants highlighted the impact that other women had on their pathway. Quin put it simply, "I think women are willing to be generous to each other" (QuinInt1). Specifically, they emphasized the idea of sending the elevator back down for other women through mentorship, encouragement, and purposeful resource allocation.

SIGNIFICANCE & IMPLICATIONS

The findings of this study provide additional insight for women in higher education administration and those aspiring to these roles to know the similarities that exist within their shared experiences. In addition, the study outlines the realities of these women's experiences for others who are not in these roles to attempt to inform and call on their advocacy/allyship for women in higher education. The researcher acknowledges the roles of leadership in higher education do not exist in a vacuum, but rather in the context layers of systemic power of the institution. This effort must extend for the full intersectionality of women including but not limited to race, sexuality, and ability. These embedded barriers are strong in the academy and must be addressed to support women leaders.

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Examining the Impact of one Professional Development Program in Structured Literacy on Teacher Knowledge: A Quasi-experimental Study

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January 2021

ABSTRACT

Most students require explicit, systematic phonics-based instruction to learn how to read. Many teachers, however, lack the expert knowledge about the English language necessary to implement these structured literacy methods when teaching K-12 students to read (National Council on Teacher Quality, 2020). This quasi-experimental study examined whether teachers' knowledge of English language structures increased significantly following participation in one online professional development (PD) program that is aligned with the International Dyslexia Association's (IDA) Knowledge and Practice Standards for Teachers of Reading (KPSTR). The KPSTR are intended to guide teacher training specifically in structured literacy practices. The program was self-directed and could be completed in varying time frames, and included the opportunity to participate in virtual communities of practice (VCP).

ABSTRACT *(continued)*

Pre and posttest data from the Reading Assessment Survey (RAS) were collected for 61 in-service teachers. Results indicated that participants' composite RAS posttest scores were significantly higher than pretest scores following participation in the PD program. There was not a significant difference in RAS gain scores (the difference between pre and posttest scores) depending on rate of program completion, and there was not a significant relationship between RAS gain scores and frequency of participation in the VCP. These results indicated that the online, IDA accredited program in structured literacy was effective in increasing teachers' knowledge of the constructs needed for structured literacy instruction and represents a high-quality PD opportunity for teachers of reading.

AIM

The aim of this study was to better understand how teachers can be effectively prepared to implement structured literacy practices in the classroom. Professional literacy organizations such as the IDA (2018) have developed knowledge and practice standards to guide evidence- based teacher training and have accredited programs that are aligned with their guidelines. There is limited research, however, that examines whether PD programs that follow codified professional practice standards significantly increase teacher knowledge in reading content. The purpose of this study was to examine the impact of one online, IDA (2018) accredited professional development program in the Northeast corridor of the United States on teacher knowledge of English language structures.

RESEARCH PROBLEM

The most recent data from the National Assessment of Educational Progress indicates that only one third of fourth and eighth grade students are able to read proficiently on grade level (National Center for Educational Statistics, 2019). Children who do not read on grade level by the fourth grade are at greater risk for school drop-out and involvement in the criminal justice system than their grade-level peers (Schneider, Chambers, Mather, Bauschatz, & Bauer, 2016). Despite a well-established research base indicating that all children learning to read benefit from explicit, systematic structured literacy instruction (Young, 2020), teachers frequently do not receive the training needed to master the knowledge and skills necessary to effectively implement structured literacy in the classroom (National Council on Teacher Quality, 2020). Research has shown that robust knowledge about code-based instruction is positively correlated with higher reading outcomes for students, and that high-quality PD can effectively increase teacher knowledge (Ehri & Flugman, 2018).

METHOD

This quantitative study compared the composite RAS pre and post test scores of 61 teachers who completed the online, IDA accredited PD program in structured literacy. The RAS measures teacher knowledge of phonology, word recognition, fluency, vocabulary, comprehension, and literacy assessment, concepts that have been previously identified as essential components of effective reading instruction (IDA, 2018). Analyses were also conducted to determine whether there were significant differences in RAS composite gain scores (the difference between pre and posttest composite scores) depending on rate of program completion, and whether there was a significant relationship between RAS gain scores and frequency of participation in the VCP. The following research questions guided this study:

(1) *Is there a statistically significant increase in teachers' composite scores on the Reading Assessment Survey (RAS) following participation in one online, IDA accredited structured literacy professional development program?*

(2) *Is there a statistically significant difference in RAS composite gain scores among teachers who participated in one online, IDA accredited structured literacy professional development program depending on pace of program completion (fast, moderately fast, moderate or slow)?*

(3) *Is there a statistically significant relationship between RAS composite gain scores and frequency of participation in the virtual community of practice (from zero to eight sessions) among teachers who participated in one, online IDA accredited structured literacy professional development program?*

FINDINGS

- Results from a dependent sample t-test indicated there was a significant increase in participants' RAS composite scores following participation in the online, IDA accredited PD program in structured literacy. The effect size was large, indicating that 77.6% of the variance associated with RAS posttest scores was attributed to participation in the structured literacy PD program.

- Results from a one-way ANOVA indicated there was not a significant difference in RAS gain scores depending on rate of program completion. The effect size was low, with only 2.3% of the variance in RAS composite gain scores attributed to rate of program completion.

- Results from a Pearson product correlation indicated there was not a significant relationship between RAS gain scores and frequency of participation in the virtual community of practice. The effect size was low, with only 2.4% of the variance in RAS gain score attributed to frequency of participation in the virtual community of practice.

CONCLUSION & DISCUSSION

The efficacy of the online, IDA accredited PD program suggests that providing teachers with training that is aligned with the KPSTR can effectively increase teacher knowledge of structured literacy constructs and should be considered in lieu of traditional short-term stand and deliver PD workshops. The online format has the potential to expand access to high quality training for teachers of reading, including to those who live in areas where access to in person training is limited. Further, the significant increase in teacher knowledge of English language structures following participation in the target PD program represents an important step in changing classroom teaching strategies that have the potential to increase student reading outcomes.

The gains made in teacher knowledge were likely related to the active, content focused and collaborative nature of the learning activities. This experiential approach to PD was highly

relevant to teachers' classroom practices, an essential feature in meeting the needs of adult learners who benefit from making direct connections between newly acquired knowledge and their professional work activities (Knowles et al., 2015). Allowing participants the flexibility to determine how quickly or slowly they wished to work, did not interfere with the efficacy of the program, and respected the adult teachers' developmental need to learn for themselves, and engage in continued personal and professional growth (Knowles et al., 2015). Finally, a non- significant relationship between RAS gain scores and frequency of participation in in the VCP suggested there was a mix of knowledge levels among teachers during VCP sessions, with the potential that lower knowledge teachers had the opportunity to learn from higher knowledge teachers, allowing for active engagement and reflective learning to promote the development of individual competencies.

RESEARCH IMPLICATIONS

An important next step would be to conduct quasi-experimental research to examine whether adding coaching to the online, IDA accredited PD program would further strengthen teachers' mastery of English language constructs. Adding ongoing classroom-based supports to professional development in structured literacy would provide teachers with the opportunity for individualized, real time feedback that has the potential to bolster both conceptual and practical understanding of English language structures. Another important step would be to apply the constructs associated with implementation science to examine what systemic changes are needed to support sustained implementation of structured literacy practices in the classroom following PD. This should include tracking student outcomes to determine how they relate to teacher knowledge of English language structures. Finally, using qualitative inquiry methods to develop a deep understanding of how teachers perceive their professional development experiences will be important in creating the type of systemic supports needed to bring structured literacy methods to scale.

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She has developed a particular interest in literacy and has worked as an advocate for scientifically based best practice reading instruction as a Board member of the Pennsylvania Branch of the International Dyslexia Association. Maria is also involved with the Read by 4th Campaign in Philadelphia and chairs the Teacher Preparation and Support working group, focused on advancing teacher training that is aligned with the science of reading. Maria is a doctoral candidate in the Educational Leadership and Management program at Drexel University with a concentration in public policy. She will complete her dissertation defense in the 2021 winter term.

"How can we make it equitable?": The Critical Role of School-level Business Administrators in Managing School Resources

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January 2021

ABSTRACT

This qualitative phenomenological study explores how high school business administrators (SBAs) navigate issues of equity when managing resources. The data is analyzed through Grubb's logic of improved school finance, yielding themes aligned with the four resource types: simple, compound, complex, and abstract (Grubb, 2008). Preliminary findings indicate that SBAs influence the extent of equity experienced by a school community. The findings elevate and reframe the role of an SBA beyond its traditional conceptions. Furthermore, the findings can inform professional development and policy aiming to systematize equitable resource management.

AIM

This study problematizes traditional notions of school business administrators by connecting their role to their capacity to influence the equitable distribution of resources in their specific school contexts. By giving voice to SBAs, this study seeks to address the identified gap in the use of qualitative methods to document the perspectives of school-level business administrators, especially regarding resource allocation (Campbell, 2011; McClain & King, 2009; Ray et al., 2005).

PROBLEM

Within the field of education finance, there is an absence of literature focusing specifically on the role of school business administrators. The SBA is largely responsible for management of school resources and for the implementation of financial policy as determined by the local education agency. Much of the literature available on school business administrators comes from a practitioner magazine, *School Business Affairs*, published by the Association of School Business Officials International (ASBO). According to a survey conducted with ASBO members, the majority of participating SBAs reported that they viewed their technical skills as most essential to successful job performance (McClain & King, 2009). A more recent article focused on how school business administrators may influence the equitable distribution of resources. Bubness (2020) noted that "ensuring that those resources are used accordingly is a delicate balance, and it's one of the key roles that business and finance professionals play in the budget process" (p. 20). As the financial policies and obligations of schools become more complex in the current educational and political climate, the role of the SBA has become increasingly important to the functionality of a school building. Although SBAs work in schools every day, interacting with students, teachers, staff, and school leadership, their voice is conspicuously absent from research literature, specifically in the area of education business management.

This study seeks to answer the following research question:

(1) *How do high school business administrators navigate issues of equity through their role as mediators of school resources?*

THEORETICAL FRAMEWORK

Educational economist, Dr. Warner Norton Grubb III developed a theory known as "logic of improved school finance" (Grubb et al., 2006; Grubb, 2007; Grubb, 2008). Grubb argues that traditional approaches to evaluating the relationship between financial inputs and outputs in the context of schools do not provide a sufficient understanding of what he contends is a much more complicated interaction (Grubb et al., 2006; Grubb, 2008). Grubb's logic of "improved" school finance complicates the idea that more money will automatically render better educational outcomes to include the process of how that money is applied (Grubb, 2007).

Grubb's theory aims to illuminate the nuances of managing resources as the school-level and to show the challenges of equitable distribution in the highly politicized context of schools (Grubb & Allen, 2011). To represent this idea, he developed the "landscape of equity" which includes four types of resources: simple, compound, complex, and abstract

(Grubb, 2008). Grubb defines resources "as those practices and programs within schools and classrooms (including the human resources) that improve valued outcomes" (Grubb, 2008, p. 106). With this definition, Grubb's logic complicates the common view that all resources will influence the same outcomes to include a differentiated view where different resources may render different outcomes depending on the context of the school and its personnel (Grubb et al., 2004). Thus, according to Grubb's theory, there is no set of "magical resources" that will solve the equity problem in education finance (Grubb, 2008, p. 134). Rather, one must consider how the resources are "constructed" at the school-level between administrators, teacher, and school staff. This aspect of Grubb's logic lends itself well to critical qualitative research as it seeks to uncover a deeper understanding of the hows and whys of human interactions (Erickson, 2011).

RESEARCH DESIGN

This phenomenological study uses qualitative methods to address the research question. Using purposive and snowball sampling, two SBAs from the same large, densely population suburban school district were selected to participate. There was about a 35% difference in the percentage of students qualified for Free and Reduced priced Meals (FARMS) between the two schools, indicating a disparity of wealth between the two school communities.

Data was collected through semi-structured interviews conducted via a web-based platform. The researcher performed two rounds of coding in her data analysis. In order "to keep the data rooted in the participant's own language" (Saldaña, 2013, p. 7), the researcher used in vivo coding technique for the first round. Next, the researcher applied the four resource type codes developed from Grubb's logic of "improved" finance to the data. These codes included: simple resources, compound resources, complex resources, and abstract resources. Several themes emerged aligning with each resource type.

PRELIMINARY FINDINGS

The school business administrator is in the unique position to facilitate decisions about how school resources will be allocated and then applied to the construction of the simple, compound, complex, and abstract resources. Simple resources include inputs that cost money such as the budget line items that are often stressed in traditional production functions. The simple resource themes that emerged in this study included experiences with funds allocation, accounts management, and additional funds procurement. Compound resources require two or more resources to be included in order for either to work efficiently. Without both resources present in an example of compound resource, sometimes the intended effects of one resource can be negated by the absence of the second resource. The SBAs in this study discussed programs and implementation as a compound resource experienced in their role.

Similar to some compound resources, complex resources recognize the human element involved in how resources are constructed. In this study, SBA self-efficacy and SBA management style emerged as themes for complex resources. Like complex resources, the final type, abstract resources are hard to discern. However, Grubb argues they are often the most effective resources. Abstract resources capture many of the intangible aspects of a school that are hard to observe from the outside but are deeply felt and understood by those

within. The abstract resources identified in the data of this study include school climate, socioeconomic capacity of a school community, and organizational structure.

DISCUSSION

Decisions SBAs make every day either increase or decrease the extent of equity experienced by all members of the school community. The way school business administrators navigate resource management impacts teachers, other school administrators, school staff, student's family members, and most importantly, the students themselves. Through the theoretical framework of Grubb's logic of "improved" school finance, the findings reveal how complex the role of a school business administrator can be. The findings also indicate that some SBAs are applying a social justice mindset when navigating issues of equity in school resource management.

SIGNIFICANCE & IMPLICATIONS

The preliminary findings of this study indicate that a qualitative inquiry can deepen the understanding of the role of an SBA and is a needed contribution to education finance scholarship. The kinds of equitable practices implemented by the SBAs in this study are the kind of "bottom-up" knowledge that would be useful to inform macro-level policies. Sharing these examples of equitable practices would elevate the status of SBAs while also reframing the role to include this focus on equity. The findings could help inform professional development for other SBAs to better understand how they can approach similar situations through a social justice lens. Lastly, these understandings can illuminate how SBAs are able to increase equity at various levels to policymakers and other stakeholders.

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A Phenomenological Exploration of High School Teachers' Perspectives on Collaboration and Implementation of Practice in the Context of College and Career Readiness Framework

WRITTEN BY: **KELLY DIPIETRO-EDWARDS,** EdD Student
SUPERVISING PROFESSOR: **DR. SHEILA VAIDYA**

February 2021

ABSTRACT

The purpose of this study was to explore teachers' lived experiences with peer collaboration to understand how a context of accountability and data-driven decision-making may influence teachers' collaborative experiences on the integration of non-assessed skills into existing curriculum. This study utilized interviews, artifact review, field notes, and researcher's journal to develop rich descriptions of teachers' experiences. Conclusions indicate teachers cognitively recognize the importance of employability skills as a college and career readiness indicator; however, their implementation of practice still demonstrates a focus on student academic achievement. Administrators should be cognizant of teachers' experiences when implementing organizational structures to support collaboration.

PROBLEM

Teacher collaboration has been shown to increase student academic achievement on standardized tests and other traditional forms of classroom assessment (Akiba & Liang, 2016; Benerjee, 2016). In addition to content knowledge, employability skills that are generalizable across academic disciplines, industries, and job sectors are necessary for students to be college and career ready (Carnevale, Smith, & Strohl, 2013). A national emphasis on teacher accountability that is measured through student academic achievement through standardized testing may affect teachers' ability to peer collaborate on initiatives not directly linked to student achievement data.

RESEARCH AIM

The purpose of this study was to explore teachers' lived experiences with peer collaboration to understand how a context of accountability and data-driven decision-making may influence teachers' collaborative experiences. This study was guided by the following research questions:

(1) How do teachers understand college and career readiness indicators and the implementation of these practices within the classroom?

(2) How do teachers describe their beliefs about peer collaboration on the integration of employability skills into existing curriculum in an era of accountability?

(3) How do teachers describe their experience with peer collaboration on the integration of employability skills into existing curriculum in an era of accountability?

METHOD

Purposeful sampling was utilized to identify potential research participants who were teachers and collaborated on the integration of employability skills into their existing curriculum as part of the district's blended learning cohort. In-depth interviews were conducted via Zoom with five research participants and the data was triangulated with artifacts of teacher collaboration that were provided by the participants, the researcher's field notes, and the researcher's journal. Each interview lasted between 30 and 55 minutes and was recorded. The interview protocol consisted of 10 open-ended questions and the semi-structured design allowed the researcher to ask follow-up questions as appropriate. First cycle of coding included In Vivo and Concept coding. The second cycle of coding included Pattern coding to identify emergent themes from the data (Saldaña, 2016).

FINDINGS

The findings of this study are organized by five themes that are supported by multiple sub-themes. The themes and sub-themes are identified in Figure 1.
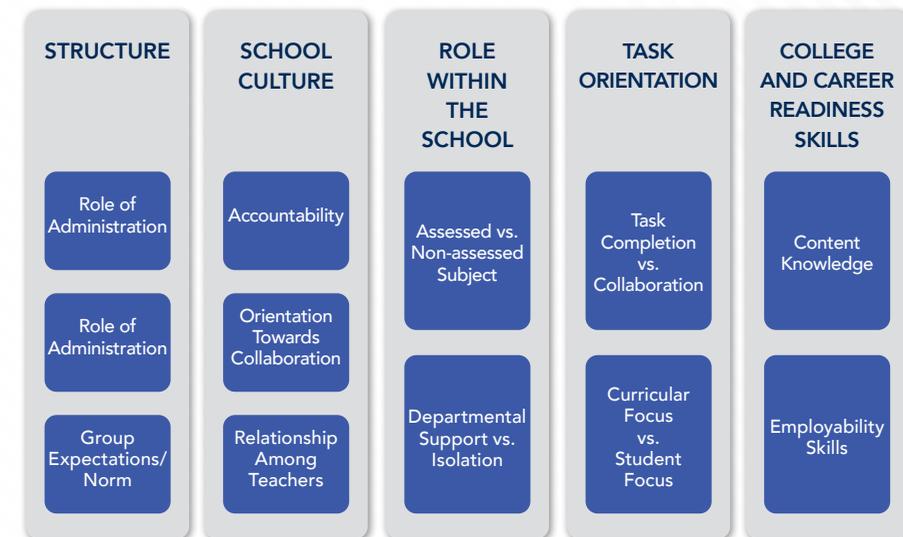

▸ **FIGURE 1:** Findings and themes that emerged from the research

CONCLUSION & DISCUSSION

Three conclusions emerged from the research. First, participants consistently identified employability skills such as critical thinking, communication, and collaboration as being equally or more important to demonstrate college and career readiness than content knowledge. Teachers who taught assessed courses described collaborative experiences with an emphasis on content knowledge and student academic achievement, while teachers who taught non-assessed courses described collaborative experiences that were focused on student skill development, such as critical thinking and communication. This may illustrate the impact that an era of accountability has on teacher collaborative practice. Second, all participants described positive beliefs towards peer-collaboration on the integration of non-assessed skills into the existing curriculum, and expressed varying degrees of satisfaction with the results of the collaborative process. Third, participants described both positive and negative experiences with teacher collaboration. Negative experiences were attributed to group dynamics and the willingness of others within the group to collaborate, lack of dedicated time for collaboration with a clearly articulated purpose, and the evolving vision of the blended cohort. Positive experiences were attributed to positive emotions related to group relationships, group accountability that was moderated by the technology coach, and regularly scheduled time with clearly defined expectations for the collaboration to occur.

RESEARCH IMPLICATIONS

This phenomenological study explored teachers' experiences with collaboration on the integration of non-assessed skills into existing curriculum within the context of an era of accountability. Recommended action steps for administrators include integrating organizational structures that support teacher collaborative practice such as: regularly scheduled time for collaboration to occur, clear articulated objectives for the collaboration sessions, and administrative support for a culture of collaboration. The limitations of this study provide opportunities for future research. The limited sample size provides an opportunity for future research to study the impact of teaching an assessed course may have on the ability and willingness to collaborate on initiatives not directly related to student achievement and the long- term impact that the COVID-19 school closures have on teachers' beliefs about the role of collaboration in their professional practice.

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Kelly Di Pietro-Edwards is a doctoral candidate pursuing her EdD in Educational Leadership and Management with a concentration in Educational Administration. She earned her Bachelor of Arts in Spanish from The Pennsylvania State University (2005), followed by a Master of Arts in Hispanic Studies from Villanova (2010) and Master of Science in Educational Leadership from Wilkes University (2017). Kelly has 15 years of experience in education serving as a middle school Spanish teacher, high school assistant principal, middle school assistant principal, and secondary curriculum liaison. She served on the Berks County Career Pathways Education Advisory Committee. Her professional interests include college and career readiness skills, developing K-12 curriculum to meet the needs of a diverse workforce, and teacher collaboration. Kelly anticipates completing her dissertation defense in Spring 2021.

Media Analysis of News Articles during COVID-19: Renewal, Continuity and Cultural Dimensions of Creative Action

WRITTEN BY: **DAVID MATTSON,** PhD Student

SUPERVISING PROFESSOR: **DR. JENNIFER KATZ BOUNINCONTRO**

February 2021

ABSTRACT

Worldwide, the COVID-19 pandemic has forced people to adapt quickly and reexamine interactions and responsibilities towards communities in creative ways. This presentation details a qualitative media analysis (Altheide & Schneider, 2013) of fifty online news articles (*Los Angeles Times* and *New York Times*) published between March 17th and August 6th, 2020 using the keywords "creativity" and "COVID-19." Informed by a definition of creativity as actions that are considered both "new" and "appropriate" (Sternberg & Lubart, 1999), articles describing a "creative action" were kept for analysis. The presentation discusses the themes derived during this analysis- "renewal and continuity" and "the multidimensionality of creativity" which elaborate and contextualize a perspective of socio- cultural creativity theory and propose two implications of this study. The first implication posits that creativity was an observable, cultural response to the COVID-19 pandemic. The second implication offers a broader concept of how cultural resources function as dynamic constraints on creativity.

PURPOSE

The purpose of this qualitative media analysis were twofold. First, the research seeks a deeper understanding of how individuals and communities responded creatively to COVID-19 and the resulting quarantine. The researchers conceptualized this study by observing diverse responses to quarantine regulations. It was clear that our society was affected at every level. This study gathers a range of data, published reporting by the New York Times and Los Angeles Times, to analyze a group of responses. Second, this research applies a socio- cultural perspective of creativity (Glaveanu et al, 2019) to inform the data analysis and coding process. Researchers utilized this perspective because it describes the dynamic range of creative action at both the individual and cultural levels (Glaveanu et al. 2019). The data collection necessarily included examples of both individual, group, and domain specific creativity. Analysis of such diverse data required a theory that unifies prior creativity research of multiple domains within a common perspective. Sociocultural creativity theory, relatively new within the field, offered researchers the vocabulary and theoretical frame to compare multiple aspects of creativity in a single analysis.

DATA COLLECTION

The media analysis was conducted by searching through the archives of two national newspapers, the New York Times and the Los Angeles Times. These two newspapers were chosen for several reasons. Both the NYT and LAT are newspapers with high relative readership and wide coverage. The broader audience of these newspapers provided the researchers with articles touching on events across the entire country. Additionally, these newspapers are situated in states that experienced the outbreak of COVID-19 very differently. The researchers considered that different approaches in governmental and societal reactions in New York and California might provide a balance within the sample data. Articles published between March 19th and August 6th were considered viable for inclusion. The primary criteria for acceptance were the keywords, "Creativity" and "COVID-19." Articles were discarded if they did not refer to any specific action as creative or use the term in a way that was significant to the content of the article. Although hundreds of articles met the criteria for selection, the researchers limited their analysis to fifty articles divided between three researchers for analysis.

DATA ANALYSIS

Data analysis was conducted using two rounds of coding. The first round of coding was conducted asynchronously by the three researchers. After an initial round of open coding, the researchers met to compare codes and create a codebook with examples and quotes (Saldaña, 2014). The second round of coding use the data analysis strategy of Theoretical Proposition (Yin, 2018) to organize the codes within the perspective of a sociocultural theory of creativity. To address the validity and reliability of the codes, coding occurred iteratively.

Coding was discussed in team meetings and coding was examined across team members (Merriam, 2009). When new concepts emerged, the team discussed them. Three codes "creativity for social justice," "negative impact of creativity," and "creative resilience" were added during the discussions. Then, the research team reread the media articles and coded

for these three new codes and updated the data, attesting to adequate engagement in the data analysis (Merriam, 2009). The codebook was shared again with updated data, to make sure the codes were applied consistently to the articles across the team members.

FINDINGS

The data analysis provided two overarching themes of creativity within the articles. The first theme was the "Multidimensionality" of creativity. This theme included articles that chronicled the diverse ways creativity was applied as a response to the pandemic. Examples include symphonies that changed the format of their performances from in-person to online. Artists of all kinds were forced to change their creative practice to conform to new environments. Creativity was used as an expression or tool of resilience to help individuals stay connected during the isolation of the quarantine. Some artists thrived under these new restrictions, producing new art and finding inspiration through solitude. Others struggled with the cancellations and isolation forced on them by restrictions. Many artists who relied on performances as income were left without funds while they waited for government assistance. Loss of income was not the only reported negative consequence. Many artists reported feeling anxious, isolated, and deprived of a sense of joy and meaning. They view their art as a way of life, not just their employment.

The second theme of creativity derived from the data analysis was "Renewal and Continuity." This theme addressed the broader cultural adjustments, as well as personal adjustments within specific domains of creativity. Religious institutions that traditionally gather as groups to celebrate religious holidays were forced to adjust their plans to meet the restrictions of the COVID-19 quarantine. Many of these congregations found alternative locations to meet outdoors, other used online forums to gather virtually. These improvisations show communities use resources to renew and uphold cultural meaning.

Schools were forced to shift theatre performances to online platforms. Fashion shows, television award shows, concerts, gallery artists, comedian, among others were forced to alter their tradition to meet new environmental standards. Architecture was highlighted in both newspapers as an example of how a domain might shift because of new cultural expectations. Office buildings with open designs, a popular demand before the crisis, are rethinking how to adjust their use of space to account for social distancing.

The researchers arrived at two emergent conclusions from this media analysis. The first conclusion was that creative actions comprised an observable, communal, and cultural response to the COVID-19 pandemic. The volume and diversity of the creative responses documented by both newspapers supported this conclusion. Moreover, the researchers only selected a portion of the articles that met the criteria for analysis. A larger, funded research team would find many more observable acts to confirm this conclusion. The second conclusion emergent from this study was the essential role of cultural resources to facilitate creative improvisation in a changing environment. Populations that experienced inequality before the quarantine faced additional constraints to their creative responses.

This study suggests the following implications for further research. Utilization of the sociocultural perspectives of creativity facilitated the discussion of both individual and cultural creativity within the same theoretical structure. Further research using this perspective of creativity should expand interpretation of creative actions to include the

broader spectrum of domains where creativity is studied. Additionally, the importance of cultural resources to supply affordances for creative action may be an important finding for creativity researchers who wish to address social justice issues within creativity research.

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David Mattson is a second year PhD student at Drexel University School of Education. David received a master's degree in education with an emphasis in Curriculum and Instruction from George Mason University in 2018. Prior to returning to academia, David taught ESL in Guadalajara Mexico for three years and taught English as a second language in Virginia for three years.

David's research interests center around the intersection of creativity, cultural psychology, teacher professional development and culturally responsive pedagogy within art education.

Preventing Violent Extremism through Education

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SUPERVISING PROFESSOR: **DR. KRISTY KELLY**

March 2021

ABSTRACT

This research seeks to explore the role of educators in preventing violent extremism and encouraging deradicalization, in particular how their context informs their choice of educative approaches and the way in which they view those choices. Violent extremism continues to be a major challenge both internationally and in the US. This fall, the Department of Homeland Security declared right-wing nationalist extremism, white supremacist extremists in particular, a threat to the security and stability of our federal and state government (Homeland, 2020). This research should illuminate the way in which extremist ideologies and violence can be prevented though education.

AIM

This proposed research addresses a gap in our understanding of the role of educators, in diverse contexts, in the preventing of radicalization of individuals and participating in the deradicalization of individuals.

PROBLEM OR ISSUE

The Southern Poverty Law Center in their 2020 report stated that the work of preventing violent extremism is better housed under the Department of Education and Health and Human Services than the Department of Homeland Security (Janik & Hankes, 2021).

Research needs to be conducted on what educative tools can be effectively implemented to prevent violent extremism, and what educative tools help deradicalize those who are already ideologically enmeshed with radical groups. Post-conflict societies have long grappled with these challenges, and international comparative education has embraced the notion of a dual face to education (Bush & Saltarelli, 2000) which demonstrates education as a driver or exacerbator of conflict as well as a potential ameliorator. Much like Bush and Saltarelli's (2000), Hughes (2020) demonstrates that curriculum can be used for indoctrination, but argues that critical theory provides guidance on how education can be used to prevent violent extremism, as it can also be used for both indoctrination and the deconstruction of hierarchies. For this reason, educators need to seriously evaluate both the explicit and hidden curriculum that is taught to students and the pedagogy employed. Teachers are actors within a system that often reproduces hierarchies, violence and prejudice; therefore, teacher agency is extremely important in not only how they implement roles in the spaces that they control, but also how the exert influence within and outside of the system (Apple, 1995; Bourdieu & Passeron, 1990). Without changes to education as it currently stands, the world is likely to continue to see the rise of extremist groups.

RESEARCH FINDINGS

The research questions for this multiple embedded case study are:

(1) What role does local context play in how national and international educative policies are deployed across different frameworks and designs?

(2) How do educators embrace and resist their role in using educative tools to prevent extremist ideologies and deradicalization?

(3) How do educators view their successes and failures in preventing extremist ideologies and deradicalization?

The conceptual framework for this research is built from an understanding of violence and violent extremism, approaches to mitigating violent extremism and the role of educators and education in preventing violent extremism.

A case study is an appropriate research method when looking closely at the context of different situations (Yin, 2012; Baxter & Jack, 2008). The unit of analysis, or subject, will be the educational programs, and the object will be the manner in which education is used as a tool to prevent violent extremism (Thomas, 2011). The cases will be bound by time as the UN called to address this in 2016, and by educational program (Yin, 2012). The

goal is to gain insight and understanding of how programs have interpreted international and national plans and guidelines when developing educational curriculum and the role that educators play in that process, making it an intrinsic case study (Stake, 1995). A requirement of case study research is multiple data sources (Yin, 2012); this research will use triangulation of data from different sources (document analysis, semi-structured interviews, participant observations) (Baxter & Jack, 2008). Document analysis (Bowen, 2009) semi-structured interviews, and participant observation (Billups, 2020) are appropriate methods for qualitative research.

Thomas (2011) points out that analytical eclecticism is the key to case study research, so the use of multiple methods of data collection will be beneficial. This research will be theory building, it that is hopes to produce a theory of how nations and subnational actors use education as a tool to prevent violent extremism (Corbin & Strauss, 1990). Cases will be studied sequentially (Thomas, 2011).

Sampling will be conducted through snowball sampling which is appropriate for controversial and potentially private topics (Creswell, 2019; Valerio et al., 2016). First, organizations will be identified that are leaders in the field including, but not limited to Learning for Justice, Facing History and Ourselves, and Black Lives Matter Curriculum. Second, appropriate representatives involved in designing and implementing anti-extremism education programs will be identified and invited to be interviewed about their work. The study will utilize a snowball sampling strategy to recruit additional participants from organizations and their networks. All participants will be adults over the age of 18. It is anticipated that up to 50 adults will be included. All invited participants who provide consent will be included in the study.

CONCLUSION/DISCUSSION

While education is often a site of reproduction of social hierarchies (Apple, 1995; Bourdieu & Passeron, 1990), and can be a driver of conflict (Bush & Saltarelli, 2000), there is also space for education to be a preventor of violent extremism (Hughes, 2020). Educators and educational organizational agencies must take their role in preventing violent extremism seriously in order to prevent continuing domestic violence, extremist ideologies and civil conflict from dividing our nation.

RESEARCH IMPLICATIONS

Implications for from this research should help guide educators, advocates, policy makers and national government in the development of evidence-based approaches to preventing violent extremism in different contexts. While curriculum is already in place in some locations, discussions of pedagogy are often not included, and should be focused on in more detail in future research studies.

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▶ **RESEARCH BRIEF NO. 12**

Bridging the Gap Between Urban Adolescent Females of Color and STEM: A Hermeneutic Phenomenological Study

WRITTEN BY: **DR. VAN V. TRUONG,** EdD Alumna

SUPERVISING PROFESSOR: **DR. ALONZO FLOWERS**

April 2021

ABSTRACT

Despite decades long efforts, current data continues to suggest that females of color are the one of least represented groups within the STEM career pathways. This research presents findings from a qualitative study utilizing data from an out-of-school (OST) STEM program that targeted adolescent females of color in a northeastern city in the United States. This study explored the perspectives of eight urban adolescent females of color to understand how their participation in an informal learning environment has shaped their STEM learning and interest in pursuing STEM careers. The research was done through the lens of critical race theory grounded in education, feminism, and situated learning theory.

AIM

The aim of this hermeneutic phenomenological study was to explore the lived experiences of urban adolescent females of color within the context of an OST STEM program, namely Program XXX. This study sought to advance understanding of the participants' experiences in a high school based STEM OST enrichment program, particularly their personal 'context' that is framed by gender, race, and ethnicity, and the influences of these demarcations on their STEM learning experiences, as well as their interest in pursuing STEM educational programs and careers. Data collected and analyzed from this research may provide guidance to researchers, policy makers, industry leaders, program leaders, district leaders, educators, and parents in advancing research on informal STEM learning and developing multiple STEM pathways for urban adolescent females of color.

PROBLEM

There is a vast amount of literature documenting the need to diversify the United States STEM fields and the need to recruit more skilled workers to fill STEM positions. One common theme among the studies is the disproportionately low representation of females of color in STEM educational programs and subsequently careers. The limited recruitment of females of color to STEM has historically been described through a variety of causes, such as social factors (Cho, et al., 2013; Malcolm & Malcolm, 2011; Ong, et al., 2011), institutional structures (Espinosa, 2011; Alfred, et al., 2018), early education classroom environments (Alfred et al., 2018), and poor advising in higher education (Ong, et al., 2018; Ong et al., 2011). Based on the current data, however, females of color are not persisting in the STEM sphere (National Science Foundation, 2017). As such, a number of questions regarding the recruitment and persistence of girls of color in K-12 remain to be addressed.

RESEARCH QUESTIONS

The central question that this study sought to explore is:

How do the lived experiences in an OST STEM program influence the STEM learning and personal interest in pursuing STEM educational programs and professions for urban adolescent females of color?

The following research questions were designed to gain insights into the lived experiences of urban adolescent females of color:

(1) *How do urban adolescent females of color who attended an OST STEM program describe their perceptions about the barriers and challenges they have faced in STEM?*

(2) *How did participating in an OST STEM program influence urban adolescent females of color perceptions of their ability to do science and mathematics?*

(3) *How do urban adolescent females of color who attended an OST STEM program understand STEM career pathways?*

(4) *How do the lived experiences of urban adolescent females of color who participated in an OST STEM program influence their personal interest in pursuing STEM educational programs and professions?*

RESEARCH FINDINGS

Framework

The guiding theories for this study are critical race theory (CRT) in education (Collins, 2000; Crenshaw, et al., 1995; Delgado & Stefanicic, 2000), critical race feminism (CRF) and intersectionality (Crenshaw, 1991; Cho et al., 2013; Showunmi, 2014), and situated learning (Lave & Wenger, 1991). Conceptually, the notions of CRF, CRT in education, intersectionality and the double bind of race and gender (Cho et al., 2013; Crenshaw, 1993; Delgado et al., 2012; Malcolm et al., 2011; Ong et al., 2011) are equally important when exploring issues related to females of color in STEM. These foundational theories informed the methods, analysis of the data, and the interpretation and implications of the results. In addition, theory and practice from the world of situated learning theory in the context of informal STEM learning were employed to provide context for the results. It also provided the foundation for developing effective and holistic interventions that helped females of color build interest in STEM.

Method

The philosophical underpinnings that informed this study were phenomenology and hermeneutics which allowed for the exploration and provision of a deep understanding of the essence of the participants' experiences in Program XXX and the influence this program has had on their STEM learning, interest, and participation. The sample size of this study included eight urban, adolescent girls who identified as females of color. The participants were purposefully chosen. Qualitative methods such as in-depth semi-structured interviews, journaling, observations, audio recordings, and documents and artifacts analysis were used to collect data.

The phenomenological thematic data analysis strategies, including the process outlined by Moustakas (1994) and Diekelmann, Allen, and Tanner (1989) were used to analyze and transform the data. Additional validation methods were used to ensure accurate representation and interpretation of the participants' lived experiences in Program XXX. Furthermore, ethical issues and concerns were considered throughout the study in order to provide trustworthy outcomes.

CONCLUSIONS/DISCUSSION

The major findings of the data collected in this study include the following:

- Parents, particularly mothers, females of color school-teachers, and STEM program leaders had the most influence on urban females of color's interest and participation in STEM.

- All of the participants made references to the factors that positively impacted their participation in the OST STEM program: exposure to informal STEM learning; flexibility in learning; access to STEM mentors, role models, and peer support networks; opportunities to work in the STEM fields; increased self-awareness and confidence through social engagement activities; and opportunities to travel.

- Factors such as racial-ethnic bias, gender bias, disparities in access to K-12 STEM education and activities, negative STEM perceptions, and discouragement from teachers had decreased urban females of color's early childhood interest and participation in STEM. These factors are collectively known as STEM barriers for urban adolescent females of color.

- The participants made references to educational factors that negatively impacted their STEM experiences around the lack of exposure to STEM learning, to quality teachers, to support systems, and access to STEM program and career awareness opportunities in K- 12.

The findings from this study show that there is a need to develop STEM pathways beginning in primary grade levels and continuing on to secondary grade levels that focuses on building a strong mathematics and science foundation, as well as ensuring racial and ethnic equity. In addition, the findings in this study point to the need for collective efforts being made in terms of immense structural and policy *changes* to help advance females of color in STEM. For example, reversing the underrepresentation of females of color in STEM requires the education system to capture the imaginations of all learners starting from the elementary grade levels (Young, et al., 2017).

CONCLUSIONS & RESEARCH IMPLICATIONS

The findings in this study suggested that urban females of color interested in STEM are inspired and encouraged to participate in STEM educational programs and career activities by both internal and external factors. It is important to note that although findings in the literature showed that participation in STEM enrichment programs is a step toward increasing interest in pursuing STEM careers and participation in STEM educational programs for females of color, it is not enough to ensure participation in the STEM fields. As such, females of color need intentional support and guidance by all those around them to educate them on STEM opportunities and provide encouragement as they seek to pursue STEM classes and careers.

While this study is important in highlighting the participants' perceptions of how participating in an OST STEM program prepares them for imminent STEM learning, future research recommendations point to the need to examine the long-term impacts of participating in this type of informal learning (Roberts et al., 2018). Exploring participants' future course taking patterns, persistence in STEM related courses, choice of college majors and/or careers, and experiences in STEM careers are all areas needing further research.

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Van Truong's educational background includes an Ed.D. in Educational Leadership and Management with a concentration in Creativity and Innovation from Drexel University; a M.Ed. in Secondary and Special Education from Chestnut Hill College; and a B.S. in Chemistry from Temple University. As an educational researcher, Dr. Truong's research takes an equity and social justice orientation toward STEM education in the urban public school settings. Van's research explored STEM motivational pathways, particularly interventions that engage, support, and advance urban adolescent females of color in STEM educational programs and careers. Her other research interests include equity, diversity, and inclusion in STEM; intersectionality and STEM; integrative STEM education; and creativity and innovation in the educational field and workplace.

Dr. Truong has over 10+ years of experience as an educator, and has taught at the primary, secondary, and post-secondary grade levels of science in both urban and suburban school environments. She has also taught in various contexts including alternative, private, and public schools. In addition to teaching, Van has served as an assessment and curriculum specialist, instructional coach, educational consultant, and professional development trainer. Outside of the education sphere, Van has worked as a science research lab assistant, a program manager for a private tutoring firm, as well as a program coordinator for a youth mentoring program in the non- profit sector.

How High-Achieving First-Generation STEM Students Persevere and Succeed in College: A Mixed Methods Study

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ABSTRACT

Hispanic and Black students are disproportionately represented among first-generation students and significantly underrepresented in STEM degree programs and careers. This mixed methods convergent study examined high-achieving first-generation minority STEM students to identify the non-cognitive constructs, resources, and strategies that may help inform STEM student support programs targeting students from at-risk populations. The quantitative segment of this study examined whether grit, growth mindset, and self-regulation had a significant effect on GPA and time to degree completion. The qualitative component explored the experiences and resources that helped high-achieving first-generation STEM students persevere through challenges to complete their college degrees. The findings of this study indicated that grit and growth mindset had a significant effect on GPA but not time to degree completion. Self- regulation did not have a significant effect on either dependent variable. This study also revealed the various campus resources, relationships, and strategies that helped high-achieving first- generation STEM students persevere through challenges and complete their college degrees.

AIM

The purpose of this research is to examine the impact of grit, growth mindset, and self-regulation in high-achieving first-generation minority STEM students and to understand the experiences and resources that helped these students overcome challenges to degree completion.

PROBLEM

Hispanic and Black students are disproportionately represented among first-generation students and significantly underrepresented in STEM degree programs and careers. First-generation student support programs abound, yet degree completion rates continue to be significantly lower for first-generation college students than their non-first-generation counterparts, especially for those pursuing STEM degrees. According to the most recent national data, only 24% of first-generation students obtain a four-year college degree after six years (NCES, 2018). Educational attainment for first-generation students pursuing STEM majors is even more dismal, with only 16% of first-generation students in STEM graduating in six years (NCES, 2018). This graduation rate is of increasing concern given that government agencies and policymakers continue to prioritize STEM education, emphasizing its role in job growth, global expansion, and sustainability. However, despite the STEM push, there continues to be an inadequate number of STEM graduates available and able to fill vacant STEM-related positions (Verdin & Godwin, 2015; U.S. Department of Labor, 2018).

RESEARCH FINDINGS

Quantitative analysis revealed that grit and growth mindset had a significant positive effect on GPA but not time to degree completion. Conversely, self-regulation did not significantly affect GPA or time to degree completion. Similarly, grit and mindset predicted the participant's GPAs but did not predict time to degree completion, whereas self-regulation did not predict GPA or time to degree completion for the first-generation STEM student participants. However, the interaction of all three constructs significantly predicted GPA and time to degree completion.

Qualitative interviews provided the context of how these non-cognitive traits manifested for high-achieving first-generation STEM students. Four themes emerged from their stories: (a) personal challenges while in college exacerbated academic challenges, (b) campus resources and supportive relationships with peers and mentors from similar backgrounds and experiences encouraged academic success, (c) a sense of purpose and personal interest in their respective STEM fields motivated students to persevere through academic challenges (aligned with grit), (d) when overcoming academic challenges effort matters more than intelligence (aligned with having a growth mindset).

CONCLUSION/DISCUSSION

The findings and conclusions of this study support that high-achieving first-generation STEM students are gritty, have growth mindsets, and positively self-regulate to meet their personal and academic goals. Additionally, these students are active participants in their educational experience seeking assistance from supportive relationships and campus or external resources when necessary.

Five results emerged during the meta-analysis of the quantitative and qualitative findings: (a) high-achieving first-generation STEM students are gritty, (b) high-achieving first-generation STEM students exhibit growth mindsets, (c) self-regulation did not increase GPA but was critical in perseverance strategies, (d) none of the non-cognitive constructs helped first-generation STEM students graduate faster, and (e) access to campus resources and STEM support programs, research and internship opportunities, and peer and faculty mentors are significant to high- achieving first-generation STEM student success.

RESEARCH IMPLICATIONS

The findings and conclusions of this study indicate that the area of time to degree completion for first-generation STEM students warrants future research. The overall goal of higher education is not only academic performance but timely graduation. However, this study found that none of the non-cognitive constructs examined significantly affected how long it took first-generation STEM students to graduate. In addition, the sample size for the time to degree completion segment of this study was small. Therefore, future research may consider replicating this study with an increased sample size. Additionally, future research may want to consider the interaction effects of several non-cognitive constructs relative to degree completion since the interaction of grit, growth mindset, and self-regulation predicted degree completion where the individual constructs did not.

This study revealed that grit and growth mindset, while significant, only explained a small to moderate effect on academic performance. This finding suggests that other variables have a more substantial impact on academic achievement for first-generation STEM students than grit and growth mindset. Therefore, future research should continue to explore other variables that may positively impact academic success for this population.

Grit and growth mindset played a significant role in how first-generation STEM students persevered through challenges and approached setbacks while in college. There is a considerable amount of research about the role these non-cognitive constructs play in academic performance. However, a limited amount of extant research explores the roles that grit and growth mindset play in helping students from this population overcome challenges and persist in their college degree programs. The findings of this study suggest that future research exploring these non- cognitive constructs relative to how first-generation students approach setbacks is warranted.

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Dr. Sasha Ortiz has worked in higher education in various capacities for over 10 years, serving primarily at-risk and underserved minority student populations. Currently, she serves as the Campuses Director for the Pathways to Student STEM Success Program (PTS3) at CUNY Lehman College. Sasha has presented at several national conferences, including the most recent 34th Annual Conference for the Hispanic Association of Colleges and Universities (HACU). Her research interests entail exploring how positive psychological theories and concepts can influence retention and persistence strategies for first-generation minority STEM students. Sasha received her EdD in Educational Leadership and Management with a concentration in Learning Technologies from Drexel University. She earned her Bachelor of Arts in Psychology with a minor in Religious Studies from Swarthmore College and her Master of Science in Higher Education with a Global and International Education concentration, also from Drexel.

Educational Networks on Twitter in COVID-19

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April 2021

ABSTRACT

The COVID-19 pandemic has disrupted schools worldwide and posed unprecedented challenges to education. This study collects education and COVID-related Twitter data and uses social network analysis (SNA) to explore the features and evolvement of the networks among educational stakeholders on Twitter in the pandemic. This brief presents preliminary findings from analysis of data from May (around the peak of school closures) and September (around the start of a new semester) in 2020, which sheds light on how the educational community has utilized social networks as a way to connect in the time of crisis.

RESEARCH AIM

The purpose of this study is to explore the features of the educational networks on social media (i.e., Twitter) during the COVID-19 pandemic and how the networks had evolved. The educational network here is defined as the network of educational stakeholders, namely any individuals or entities that have posted education-related tweets during a specified timeframe.

RESEARCH PROBLEM

The COVID-19 pandemic has created a new normal for teaching and learning. In 2020, over 160 countries mandated temporary school closures; many countries pursued the option of remote learning to mitigate the loss of learning (World Bank Education, 2020). This rapid and systematic transformation has brought challenges to everyone involved with education: teachers, students, staff, institutions, parents, and policymakers. Teachers specifically need administrative and technical support as well as adequate professional development (PD) to successfully transition from face-to-face to online teaching environments (Kebritchi et al., 2017). For many, the challenges go beyond teaching to issues of work-life balance, child/elderly care, economic instabilities, and psychological traumas associated with the pandemic.

Fortunately, social media provides a low-cost, easily accessible platform for its users to network and share support. Even before the pandemic, informal online communities and networks have served as a sometimes-preferred alternative to traditional, face-to-face PD among educators (Macià & García, 2016). Social media has played a key role in forming these informal communities and enabling self-initiated networking. Twitter, as an increasingly popular social media application, encourages text-focused discourse for professional purposes. Twitter also hosts high-volume, longitudinal data with rich information that can provide useful insights into public interactions, discourse, and sentiment regarding a particular topic during social events (Beigi et al., 2016). While social media data has gained traction in some disciplines, there is scarcity in educational research that takes advantage of social media to understand communities and narratives among education stakeholders against a social context or educational crisis (e.g., the COVID-19 pandemic).

PRELIMINARY FINDINGS

This study is a work-in-progress and will evolve to be part of a mixed-methods study involving SNA and qualitative analysis to understand salient themes in social media discourse within these networks. While the research questions for the more extensive study are still under development, this brief presents preliminary findings that aim to address the following questions:

(1) *What are the primary features of educational networks in May and September 2020 on Twitter?*

(2) *How are the educational networks on Twitter similar or different in September compared to May 2020?*

SNA MEASURES	MAY 2020 (N=3547)	SEPTEMBER 2020 (N=7917)
Nodes	7160	14785
Edges	4054	9154
Network Density	0	0
Average Degree	0.566	0.619
Network Diameter	1	1
Eigenvector Centrality	0 (49.54%) 0.04 (47.16%) 1 (0.01%)	0 (53.55%) 0.01 (0.9%) 1 (0.01%)
Modularity	0.999	0.998

Social Network Analysis of Educational Networks on Twitter in May and September 2020 (N=11464)

This study adopts a large-scale, open-access COVID-19 dataset by Banda et. al (2020), who used the API method to capture all tweets with keywords concerning "COVID19." The researcher filtered this original dataset with education-related keywords: "teach", "educate", "school", "student", "university", "college". The final dataset contains both COVID and education-related keywords and consists of 11,464 tweets: 3,045 from May and 7,917 from September. This study's network is defined as a directed network with nodes being Twitter users and edges being the "reply" interactions.

CONCLUSION & IMPLICATIONS

More than double education-related tweets were posted in September than in May 2020 that also addressed issues of COVID. The educational network was overall sparse (density=0), with most interactions happening on a one-on-one basis (diameter=1). There were few influential features in the network, as indicated by the low centrality measure. Educational stakeholders seemed to interact with only a limited number of individuals on Twitter and rarely branching out to others (modularity being close to 1). It seems that Twitter has not yet shown its full potential in forming powerful networks or well-connected communities among educational stakeholders in this crisis. However, the drastically increasing tweets (nodes) about education and the growing interactions (edges) in September compared to May does indicate that social media attention had focused much more on educational topics against the COVID-19 context in the latter half of 2020 compared to earlier months.

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Yiyun (Kate) Fan is a 2nd year Ph.D. student in the School of Education and a research assistant in the GLIDE Lab and the Method Lab. Her research interests center around learning sciences, educational technology, learning analytics, and quantitative methods in higher education. She is passionate about applying interdisciplinary perspectives and bringing new, state-of-the-art analytical approaches to address educational issues. For that reason, she is also pursuing a graduate minor in Data Science from Drexel University's College of Computing and Informatics. Born and raised in southern China, she finished her B.A in English at Fudan University, Shanghai. She obtained her M.S.Ed in Higher Education from the University of Pennsylvania and had professional working experience in online education, instructional design, and student life.

The Influence of Feedback on Creativity and Beliefs About Creativity

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May 2021

ABSTRACT

Education leaders have called for educational reform around competencies; however, educators will be challenged in their enactment of new curriculums if they do not have concrete, research- based guidance on how to teach for competencies. Creativity is a competency that requires further elaboration on how it can best be understood and taught in educational settings. Feedback is a leverageable element of the learning process which educators can use to facilitate student learning. An underexplored area in educational research is the effect of feedback on students' creativity and creative self-beliefs. In this experimental study, the influence of feedback valence on creative performance and beliefs about creativity is explored in an undergraduate student sample. Positive feedback was found to correlate with higher levels of creative appropriateness; however, no effect of feedback was found on creative novelty. Feedback was found to interact with individuals' ratings of the desirability of creativity, indicating that individuals who view creativity as a more valuable trait have a tendency place a higher value of feedback on creativity. These results offer support for the notion that feedback may be a classroom practice which educators can use to guide students in their creative development.

BACKGROUND

In recent years, there have been calls from education leaders to enact educational reform around competencies. Various educational stakeholders from around the world assert that the shift towards competency-based learning is necessary to meet the global job demands of the near future (NRC, 2012; OECD, 2018). Creativity is a competency which requires further contextualization within educational research for it to be taught effectively in schools. The influence of feedback on creativity and creative self-beliefs is an underexplored area in educational research and feedback is a potentially leverageable element of the learning process which educators may be able to use to teach for creativity.

DEFINITIONS

Creativity is a particularly relevant target for educational research as there are such varying lay beliefs about creativity and its development. In this study, creativity is defined as the ability to generate novel and appropriate ideas and products (Amabile, 1982). Beliefs about creativity are defined as a person's beliefs about their own creativity, such as their ability to be creative, whether creativity can be learned or is an inborn trait and the desirability of creativity as a useful skill (Katz-Buonincontro et al., 2016).

Feedback can be understood as a response to a learner's performance which is intended to support the learner's cognition, motivation or behavior (Fong et al., 2018). Consistent with Bandura's (1977) social learning theory, it is posited that feedback, an environmental factor, interacts with personal factors, beliefs about creativity, to influence creative behavior. Several studies, originating mostly from cognitive psychology as well as some from education, have explored the influence of feedback on creativity. The characteristics of feedback under study have been varied revealing the multidimensional nature of feedback. In addition, various individual factors, such as self-determination, self-efficacy, and other motivational factors, have been explored as mediators of the relationship between feedback and creativity.

PRESENT STUDY

Studies on the influence of feedback valence on creativity have shown mixed results. Some studies have shown positive feedback to have an ameliorating effect on creativity (George & Zhou, 2001; Hu et al., 2018; Langley, 2018; Noefer et al., 2009; Oettingen et al., 2012; Zhou, 1998), whereas a few studies have shown negative feedback to have an ameliorating effect on creativity (Katz-Buonincontro et al., 2017; Kaufman & Vosberg, 2007; Lee, 2019). Following a prior study by Zhou (1998), we investigated the influence of feedback valence on creative performance. We attempted to replicate Zhou's results using updated creativity tasks as well as the addition of a measure of creative self-beliefs. The following two research questions were examined:

(1) *What is the influence of feedback valence on the novelty and appropriateness of individuals' creative responses on standard creativity tasks?*

(2) *How does feedback interact with individual difference measures of creative achievement and beliefs about creativity?*

RESULTS

Seventy undergraduate participants (N = 70) completed the experimental study on a computer in a university psychology lab (Figure 1). Participants' creative performance was rated by two independent raters using the Consensual Assessment Technique (Amabile, 1982). All ratings showed excellent reliability using the intraclass coefficient: ICC (2,2) = .92 for CPS novelty, .87 for CPS appropriateness, .84 for DT novelty, and .83 for DT appropriateness. The creative novelty and appropriateness scores after receiving either negative or positive feedback formulated the dependent variable of interest. Also of interest was whether there was an interaction between individual beliefs about creativity and creative novelty and appropriateness post-feedback.

There was no significant difference between negative and positive feedback on creative novelty (F2, 65 = 0.06, p > 0.05). There was a statistically significant difference between negative and positive feedback on creative appropriateness (F2, 65 = 6.52, p <0.01) where positive feedback predicted higher levels of creative appropriateness. The difference in these two means is proportional to Zhou's (1998) results and is in alignment with other previous literature indicating that positive feedback enhances creative performance. The only significant correlation between an after-feedback score and beliefs about creativity was a positive correlation between desirability of creativity and novelty after feedback (r = 0.27, p <0.05). This suggests a small, but potentially interesting tendency for those who believe creativity to be desirable to produce higher novelty after feedback of any kind. This finding is consistent with Sansone's (1986) finding regarding personal valuation which suggests that individuals who value creativity more highly may be more susceptible to the effects of feedback on their creative performance. The results of a second study (N = 213), designed to elucidate the interaction between task type and feedback, are forthcoming.

▶ **FIGURE 1:** Study Design
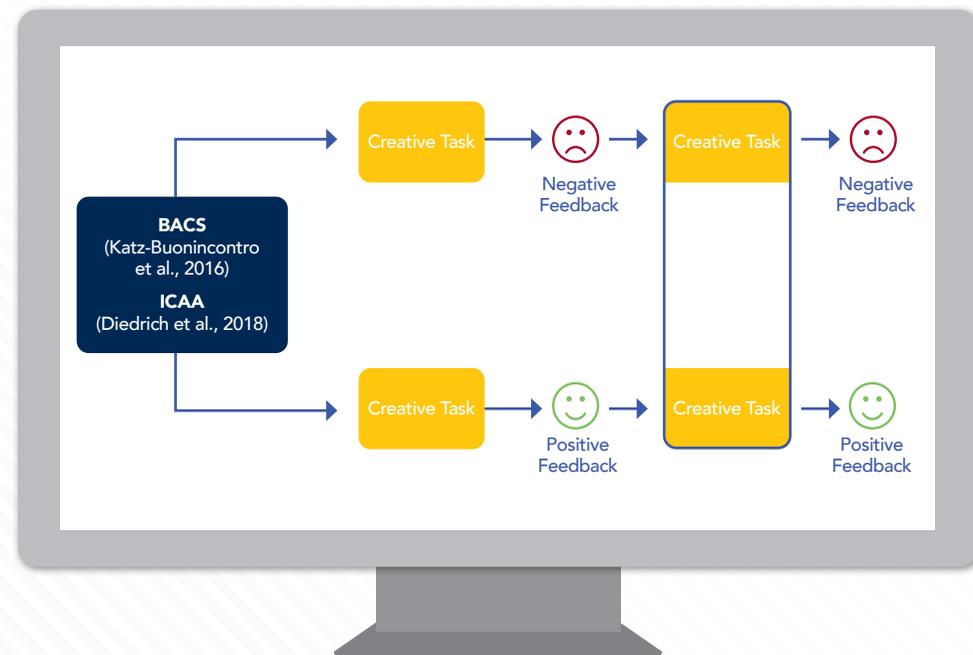
DISCUSSION & IMPLICATIONS

In this study, we showed that creative appropriateness was significantly influenced by feedback valence whereas creative novelty was not. When people rated creativity more highly as a desirable trait, we found a significant effect of feedback whereas those who rated the desirability of creativity as lower, were less influenced by feedback. These results suggest that educators may be able to increase the appropriateness of students' creative performance by offering positive feedback on their creative work. Furthermore, if students see creativity as an important learning competency and desirable career skill, they will value feedback on their creative work more highly. This has implications for educators as they transition to competency- based curriculums where they are explicitly trying to foster students' creative thinking as a lifelong competency.

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