



Doctoral Student

RESEARCH BRIEFS



VOLUME 3

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VOLUME 3

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► RESEARCH BRIEF NO. 1

Increasing STEM Career Awareness and Identity Exploration in a Space Summer Camp

WRITTEN BY: **HAMIDEH TALAFIAN**, PhD Student
SUPERVISING PROFESSOR: **DR. PENNY HAMMRICH**

October 2018

ABSTRACT

The need to prepare students for success in STEM fields begins with getting students to develop STEM identities which can be changed through educational programs and interventions (Kim, Sinatra, & Seyranian, 2018). This paper showcases the preliminary findings of a summer space camp designed to increase STEM career awareness and change the commonly accepted stereotypes for racial minorities. Projective Reflection (Foster, 2014) was used as a theoretical framework to assess learning as identity change over time in four areas: knowledge, interest and valuing, self-organization and self-control, and self-perception and self-definition.

AIM

The aims of running this camp and conducting this study were to increase STEM career awareness among minority students, provide an opportunity for them to explore different roles in these positions, and bridge students' interests with future careers in STEM. To this end, the students had the opportunity to choose among three different STEM-related projects: (1) astrobiology, (2) astrophysics and (3) astroengineering and work with their peers on a Mission to Mars project.

BACKGROUND & PROBLEM STATEMENT

Increasing STEM careers in the United States demands recruiting capable individuals with STEM backgrounds regardless of their gender or ethnicity to strengthen a diverse workforce in the 21st century (Hill, Corbett, & St Rose, 2010). While a significant number of initiatives have tried to provide educational programs for racial minorities and females, these groups are still experiencing social and emotional barriers that are preventing them from choosing STEM careers (Fowler & Schreiber, 2017). Perceived masculinity or anticipated stereotypes in STEM careers shape these students' decisions and motivations (Gottfredson, 2002) which in turn can shape their identities and their imagined future (Elmore & Oyserman, 2012). Research has shown that identity change leads to academic motivation and makes students interested in content (Kaplan & Flum, 2012; Oyserman, Bybee, Terry, & Hart-Johnson, 2004). This study aims to assess if and how students' identities change after an immersive one-week summer space camp designed for racial minorities. Students were assessed for STEM career content knowledge, interest and value in STEM, self-perception and self-definitions about STEM careers, and self-organization and self-control toward STEM activities.

METHODOLOGY

To pursue the aims of this study, the following research questions were posed:

- (1) **To what extent and in what ways does participating in the Easley Summer Space Camp positively change students' STEM career identity?**
 - (a) STEM career content knowledge
 - (b) Valuing and interest in STEM
 - (c) Self-organization and self-control towards STEM activities
 - (d) Self-perceptions and self-definitions about STEM careers
- (2) **To what extent and how have the students' STEM career awareness changed during the camp?**

Nineteen participants consented to be part of the study, 7 females and 12 males; most of whom (n = 18) self-identified themselves as African-American. The program lasted one week and the students were involved in three different projects that they initially picked based on their interests: astrobiology, astrophysics, and astroengineering. The mission was to make rovers and send rockets to Mars and collect soil samples and return them to the Earth using small-scale models and hands-on activities. They also visited a science museum, watched stars with a telescope and had a movie night to gain experience from all aspects of real-life STEM careers in an immersive environment.

This study enjoyed a concurrent transformative mixed method design with a survey constructed from the four constructs of Projective Reflection (1) knowledge, (2) interest and value, (3) self-perception and self-definition, (4) self-organization and self-control (Foster & Shah, 2016) for the quantitative part, and focus group interviews, self-reflective journals and observational notes for the qualitative aspect. The *STEM Career Awareness and Identity Change* survey was piloted for the first time as a pre and post-assessment instrument for tracing the students' identity change.

PRELIMINARY FINDINGS

Since the data analysis was not complete at the time of this representation, this paper focuses on the preliminary findings of one student's interview results. The analysis of Alex's (pseudonym) interview transcripts showed that the two constructs of (a) knowledge, and (d) self-perception and self-definition were more evident in this student's utterances in comparison with the constructs of (b) interest and valuing and (c) self-organization and self-control. As to knowledge, this student demonstrated many instances of foundational content knowledge around his astroengineering project by using technical language such as "The project I was doing was building a robot that could pick up tire stacks and beat a scorpion, a robot scorpion, but in the end the robot scorpion beat us because we didn't have enough tork ...". He also demonstrated problem solving as a type of metaknowledge by talking about the rovers' features: "Our robot is built to pick up rocks, destroy rocks, to collect little samples of it, and its legs are built to dig in the ground to like stick their feet on the ground to have good grip to stick on the surface". Also, he had a clear understanding of his skills and his capabilities: "I'm going to build a company - raise it from one small bottom to the top and start engineering stuff" which were coded under self-perceptions and self-definition. Also, he demonstrated his interest and valuing toward mechanical engineering by saying: "I wanna be a mechanical engineer". Self-organization and self-control construct which show types of regulated learnings were really hard to be demonstrated and coded in one focus-group interview. However, Alex was always referring to his group and their group work for building different rovers with different capabilities for collecting samples which were coded as socially-shared regulated learning when the learners are following a common goal.

CONCLUSION & RESEARCH IMPLICATIONS

The primary goal of this space camp was to increase STEM awareness among under-represented minority students. To a great extent, this goal was accomplished as students -regardless of their interests in STEM careers- left the camp with a clear understanding of these occupations. Early evidence suggests that the duration of future STEM camps should be longer so that the students have some time to further experience new roles and develop a better understanding of STEM careers. This will allow researchers to trace and study their identity exploration and change trajectories better.

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ABOUT THE AUTHOR



Hamideh Talafian is a third year PhD candidate in Educational Leadership and Learning Technologies (STEM concentration) at Drexel University. Her research interests focus on students' motivation in STEM, educational simulations and games, and experiential learning. Since she entered the program, Hamideh has been working with Interim Dean, Dr. Penny Hamrich on two NSF-funded projects on "Experiential Learning" and "Hypothesis-Driven Computational Genomics" which focused on engaging and motivating students in STEM disciplines. She is also working in Games and Learning in Interactive Digital Environments (GLIDE) lab, on an NSF-funded CAREER project with Interim Associate Dean, Dr. Aroutis Foster on designing and implementing educational games.

Hamideh received her Master's degree in Teaching English as a Foreign Language and her Bachelor's Degree in English Literature from the top-ranked universities in Iran and has over seven years of teaching experience in a number of schools and English institutes in Iran. She is currently working on a newly funded project aiming to develop STEM career awareness identity exploration among middle school under-representative minorities. As a part of her professional services, she is in the editorial board of the *Emerging Voices in Education Journal* based in the School of Education which is only for graduate students and is run by graduate students. She is also the reviewer of a number of journals and conferences including but not limited to JXE, NSTA, AERA, SITE, etc.

► RESEARCH BRIEF NO. 2

Exploring African American Men's Characterizations of Their K-12 Teaching and Learning Experiences in a Large Urban School District

WRITTEN BY: **STEPHEN FLEMMING**, EdD Student
SUPERVISING PROFESSOR: **DR. JOYCE PITTMAN**

November 2018

ABSTRACT

Black male students experience exclusionary discipline and are placed into special education programs at higher rates than other male students. This separation from educational spaces suggests a disconnect between teachers and Black male students. The purpose of this study was to explore the urban public school learning experiences of African American male graduates as they recall them. Additionally, the purpose was to advance teaching practices effective at meeting the needs of Black male students in the general education classroom. The researcher also drew upon the teacher preparation experiences of teachers of Black male students to determine the extent to which they felt prepared to work with Black male students.

PROBLEM

According to the U.S. Department of Education Office of Civil Rights (2014), African American male students are suspended and expelled at higher rates than other ethnic groups of male public school students in kindergarten through 12th grade. Researchers note disproportional rates of school discipline for African American male students are a decades old phenomenon. Fenning and Rose (2007) wrote that “the overrepresentation of ethnic minority students, particularly African American males, in the exclusionary discipline consequences of suspension and expulsion has been consistently documented during the past three decades” (p. 536). Research further suggests that one consequence of these exclusionary discipline practices, suspension and expulsion in particular, is the increased likelihood of African American male students’ contact with law enforcement (Monahan, VanDerhei, Bechold, & Cauffman, 2014).

Suspension and expulsion data are alarming for African American male students, as well as the data and scholarship on African American male students in special education. African-American males specifically comprise approximately 12% of all students served under the Individuals with Disabilities Education Act (IDEA) while representing 8% of the total public school population (U.S. Department of Education, 2014; U.S. Department of Education, 2016).

AIM

The purpose of this research brief is to succinctly present data and scholarship on the disproportionate representation of Black male students in school discipline and special education pipelines. Additionally, the researcher will present a synopsis of the research conducted and implications for further research informed by the public school experiences of four Black male graduates of a large urban school district.

RESEARCH FINDINGS

The findings reached in this study are based on interviews with four African American male graduates of a large urban public school system. The findings are also based on interviews with six public school teachers of African American male students. Each of the four African American male graduates and four of the teachers agreed to a single semi-structured interview. Each interview lasted approximately one hour. At their behest, two of the teachers met with the researcher in a small focus group. The focus group lasted approximately one hour.

The voices of all participants, all of whom are connected to a large urban public school system, all contributed to the findings. The researcher found, based on the experiences of the participants:

- The quality of African American males’ learning experiences is largely contingent upon the teachers themselves, the level of classroom distractions, their individual level of engagement, the teachers themselves, the teachers’ responsiveness to the students’ learning preferences, their experiences with school discipline, and the curriculum.
- The most critical qualities requested of urban teachers are high levels of relatability, high levels of responsiveness to students’ learning styles and needs, and the setting and maintenance of high academic standards and expectations along with provisions of support, race or gender of the teacher notwithstanding.

- Teacher preparation programs do not adequately prepare teachers for working with African American male students, which may affect why this population of students' experiences in school discipline and assignment to special education are at higher rates than male students of other ethnicities.

RESEARCH IMPLICATIONS

Potential areas for further research include how current Black male students in urban public schools describe effective teachers and teaching practice; what motivates teachers to implement or avoid culturally responsive classroom practices; and Black male students' perceptions of the effectiveness of Black male teachers (since each student participant recommended more access to Black male teachers).

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ABOUT THE AUTHOR



Dr. Stephen Flemming graduated in 2018 with his Doctor of Education degree with a focus on Educational Leadership and Administration from Drexel University's School of Education. Dr. Flemming is in his 12th year as a public schoolteacher with the School District of Philadelphia. He is also an adjunct professor at Delaware County Community College and is in his 20th year as a Sunday School teacher at his local church. Dr. Flemming's research has focused on effective practices for meeting the needs of Black male students in urban public schools

and the extent to which teacher preparation programs have prepared teachers to work with Black male students.

Dr. Flemming is also a Philly sports fan, particularly the world champion Philadelphia Eagles, an avid reader, Tweeter and an occasional Blogger.

► RESEARCH BRIEF NO. 3

“Picture after Picture:” A Mixed Methods Study of Instructional Practices in Art History

WRITTEN BY: **ALYSHA MELOCHE**, PhD Student

SUPERVISING PROFESSOR:
DR. AYANA ALLEN-HANDY

November 2018

ABSTRACT

Art history is a field in flux, especially in higher education. Recent international trends in literature have indicated changes in content and instructional methods. Due to a lack of empirical evidence, researchers of art history pedagogy rely on personal opinion and anecdotal evidence to form research problem statements. This study utilized an explanatory sequential mixed-methods design to understand what types of instructional methods are currently being used in art history classes. Results from quantitative observation and qualitative focus groups demonstrated that lecture was the most common teaching method. Additionally, data revealed emergent themes about student preference for certain teaching methods.

AIM

Art history, like many of the liberal arts, is experiencing changes as they attempt to respond to mounting calls for skill-based priorities in education. Despite a 'luxury' reputation, art history offers the opportunity to learn skills such as visual literacy, critical thinking, knowledge of history, global awareness, research skills, and creativity (Meloche & Katz-Buonincontro, 2018). As university art history instructors begin or continue to make changes to their pedagogical strategies, it is important for these changes to be based on quality, empirical studies in the field of art history education.

PROBLEM

A review of the literature revealed that the majority of problem statements in art history education research refer to a few examples of published round table discussions (Phelan, et al., 2005) or opinion articles (Collins, 54, no 3, 1995). Researchers have also relied on personal opinion and anecdotal evidence (Spivey et al., 2015). This study seeks to address a gap in the literature by using an explanatory sequential mixed-methods design to describe how art history is currently being taught.

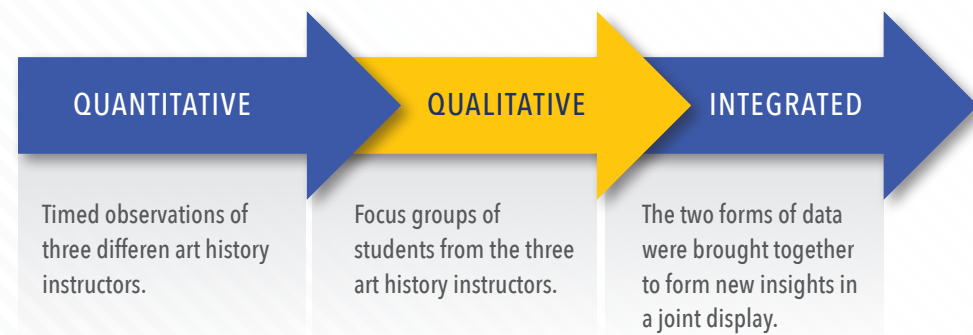
RESEARCH QUESTIONS

- (1) How much time do university art history instructors spend on different teaching methods?
- (2) What are student perceptions of art history instructional methods?
- (3) To what extent do the qualitative student perceptions confirm the data results from the quantitative observations of art history instructional methods?

METHOD

This study incorporated an explanatory sequential mixed-methods approach (Creswell & Plano Clark, 2018). In an explanatory sequential mixed-methods design data are collected at two points during the study. First, quantitative data were collected and analyzed by the researcher who took observational notes in class, utilizing a timing software. The quantitative data consisted of the timed observation notes, which were analyzed using averages and basic descriptive statistics.

The results from the quantitative data were then used to make decisions regarding the qualitative collection methods. Finally, the two forms of data were brought together to form new insights in a joint display.



RESEARCH FINDINGS

The results from the quantitative observation indicate that lecture was the most common classroom method used by each instructor-participant.

► TABLE 1: QUANTITATIVE OBSERVATION DATA RESULTS

	TEACHING ACTIVITY	MINUTES
AVERAGES	HOUSEKEEPING	M=7.5 SD=1.9
	ACTIVITY	M=4.1 SD=3.5
	DISCUSSION	M=18.3 SD=3.8
	LECTURE	M=42.4 SD=13.1

Selected focus group themes

- Focus group participant-representatives from each instructor confirmed that lecture was the most common method used by their art history instructors.
- It was common for participants to discuss feeling like the class involved too much lecture.
- Participants also expressed a desire for more activities, rather than lectures.

Selected joint display findings

- The joint display results confirm that activities are not frequently utilized as an instructor method in art history, however students expressed a preference for spending time on activities because the lecture could get fatiguing.
- Activities were mentioned in the focus group as a significant and memorable instruction method.
- A theme that arose was the student desire for a balance between lecture and activity methods.

CONCLUSION

This mixed-methods study has demonstrated that the results of the quantitative observation data of art history teaching methods are convergent with the student perceptions. The quantitative observation method would be appropriate for assessing teaching methods in the future. The anecdotal theory that the lecture method is the most common teaching method of art history was empirically demonstrated. Although publications suggested that art history classes were incorporating activities (Gasper-Hulvat, 2017), data from the current study suggests that this trend is still emerging. Finally, the focus group discussion revealed additional themes that would make for impactful future studies. For example, students mentioned how art history helped them gain critical thinking skills that they used outside of class, increased their global awareness, and helped them understand the present.

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ABOUT THE AUTHOR



Alysha (Aly) Meloche is a second year PhD student in the School of Education. She has a Master's degree in art history from Temple University's Tyler School of Art. Her current research interests are the intersection of creativity and the aesthetic experience. She is a contributing editor for the Art History Teaching Resources website, serves as websecretary of AERA's Graduate Student Council, a member of the advisory board for Integrative Teaching International, and an editorial board member of *EVIE Graduate Student Journal*.

► RESEARCH BRIEF NO. 4

A Phenomenological Study: Exploring College Students' Experiences and Perceptions About Adjuncts' Teaching Styles

WRITTEN BY: **NICOLETTE DIPIETRO**, EdD Student

SUPERVISING PROFESSOR: **DR. JOYCE PITTMAN**

December 2018

ABSTRACT

The purpose of this qualitative study using the phenomenological approach was to explore students' lived experiences through their perceptions of the effectiveness of adjuncts' teaching styles in one community college located in the Northeastern United States. This study used interviews to explore how college students describe how they learn most effectively, the teaching styles their adjunct instructors use in the classroom, and how they characterize an effective adjunct. Recommendations for further research include exploring teaching styles of adjuncts from specific academic programs, four-year institutions, as well as full time professors' teaching styles.

PROBLEM

The problem in this phenomenological study was the need to explore and understand students' perceptions of adjunct instructors' pedagogical teaching skills to enhance adjuncts' ability to use 21st century teaching skills as a tool to transfer their knowledge to their students. While many colleges and universities gather data through end of course evaluations that provide quantitative data, this study provided a deeper understanding about the students' experiences and perceptions of adjuncts' teaching styles. The number of courses adjuncts teach continues to increase, yet professional development opportunities for these educators continues to be scarce. Adjuncts teach about 58% of the courses in community colleges in the United States (JBL Associates, 2008). This research is important because "those who do most of the teaching don't know all that much about how their students actually learn" (Noone & Swenson, 2001, p. 24). An exploration of college students' experiences with adjunct instructors provided an increased understanding of college students' perceptions of adjuncts' teaching styles.

AIM

The purpose of this phenomenological study was to explore students' lived experiences through their perceptions of the effectiveness of adjuncts' teaching styles in one community college located in the Northeastern United States.

METHODOLOGY

A three-part, one-on-one, face-to-face, in-depth interview was conducted with five student participants. The researcher met each participant at the site at a time and date that accommodated the participants' schedules. Each interview lasted between 7 and 49 minutes and was recorded. The interview protocol included 11 open-ended questions and used a semi-structured design to allow for probing questions. The interview protocol was divided into three parts and each part was administered to each participant on a different date. In congruence with Bevan's (2014) phenomenological approach to interviewing, part one of each interview asked a total of four descriptive and narrative questions about the participants' experiences with teaching. Part two of the interview protocol asked five descriptive questions to the participants about their interpretations of adjuncts' teaching styles to apprehend the phenomenon. Part three of the interview protocol clarified the phenomenon by asking two questions about how to change the pedagogical skills in the classroom to enhance the effectiveness of adjuncts' teaching.

RESEARCH FINDINGS

The findings of this study are organized by four themes and supported through a number of relative sub-themes. The first theme, effective learning, explores the ways participants describe how they learn most effectively. Sub-themes include varied teaching approaches, open lines of communication, approachability, and application. The second theme, unfavorable adjunct teaching styles, describes the participants' experiences through five sub-themes: lecture, storytelling, one-size-fits-all approach, lack of structure, and communication barriers. The third theme explores the participants' favorable adjuncts' teaching styles in the four sub-themes of adaptability, application, caring, and content knowledge. The fourth and last theme explores effective adjunct teaching through five sub-themes: student-focused, organization, communication, content knowledge, and application.

CONCLUSION

► RESULTS IDENTIFIED IN THE DATA

RESULT PERCEPTION

- 1 Students perceive real world application methods to be an effective learning and teaching style they experienced with adjuncts.
- 2 Students perceive content knowledge to be a characteristic of effective adjunct teaching that they have experienced with adjuncts.
- 3 Students perceive communication to be a characteristic of effective learning and teaching styles, however they have experienced communication barriers with adjuncts.
- 4 Students perceive student focused and varied teaching approaches to be effective learning and teaching styles, however they describe their experiences as being instructor focused.
- 5 While students have experienced both adaptable and "one size fits all" teaching styles, they favor the adaptable approach to teaching.

RESEARCH IMPLICATIONS

This phenomenological study allowed for meaningful learning through interviews with five college students that provided this researcher with an understanding of how college students perceive their experiences with adjuncts' teaching styles. As with all studies the limitations of this study provide opportunities for further research. The student perspective on teaching styles in higher education using the phenomenological approach can be explored further through studying specific program adjuncts' teaching styles, adjuncts' teaching styles at four-year institutions, and studying full time professors' teaching styles.

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ABOUT THE AUTHOR



Nicolette DiPietro defended her dissertation at Drexel University in May 2018 and earned her Doctorate in Educational Leadership and Management with a concentration in adult education and organization development. Nicolette is currently the program coordinator of the hospitality and tourism management program at Rowan College at Burlington County (RCBC). In addition to leading the academic program at the college, she is also in her seventh year of teaching hospitality courses at RCBC. Most recently, Nicolette also began teaching in Drexel's hospitality management program as an adjunct instructor.

► RESEARCH BRIEF NO. 5

Understanding Current Math Teacher Perceptions of Literacy and its Role in their Classrooms

WRITTEN BY: **AMANDA REINSBURROW**, PhD Student

SUPERVISING PROFESSOR: **DR. VALERIE KLEIN**

December 2018

ABSTRACT

Literacy has a variety of definitions across disciplines. From reading to mathematics to technology, literacy is attached to all of these. This research is focused on understanding math teachers' definitions and use of literacy in their classrooms. Data collected will be used to begin to map teacher perspectives of literacy with definitions of literacy from the literature.

PROBLEM

While research exists in mathematics education around students' struggles with word problems, specifically for students with deficient reading and comprehension skills (Akbasli, 2016), there is less understanding of how to meaningfully incorporate reading strategies into math classrooms to address those deficiencies. In fact, it may not be worthwhile to incorporate general reading strategies in the math classroom, strategies needed for students to succeed at reading in math classrooms may be an advancement of the basic reading strategies they learn (Doerr & Temple, 2016; Shanahan, 2015). Further complicating this area of research are the multiple definitions and uses of the word literacy. The impact specific content area literacies (i.e., reading and math) have on success for students in a particular domain; leads to the need for multiple types of literacies to be used in content-rich domains (Shanahan, 2015). Thus, adding in content area literacy strategies may be beneficial. Shanahan and Shanahan (2008) recommend teaching content area literacy in order to support not only mathematics, but history and science as well.

AIM

The purpose of this research study is to explore mathematics teachers' perceptions of math literacy and reading literacy. The goal is to gain understanding of how educators conceptualize math and reading literacies individually and as connected, and how those perspectives may inform their instruction or opportunities for professional development.

RESEARCH QUESTIONS

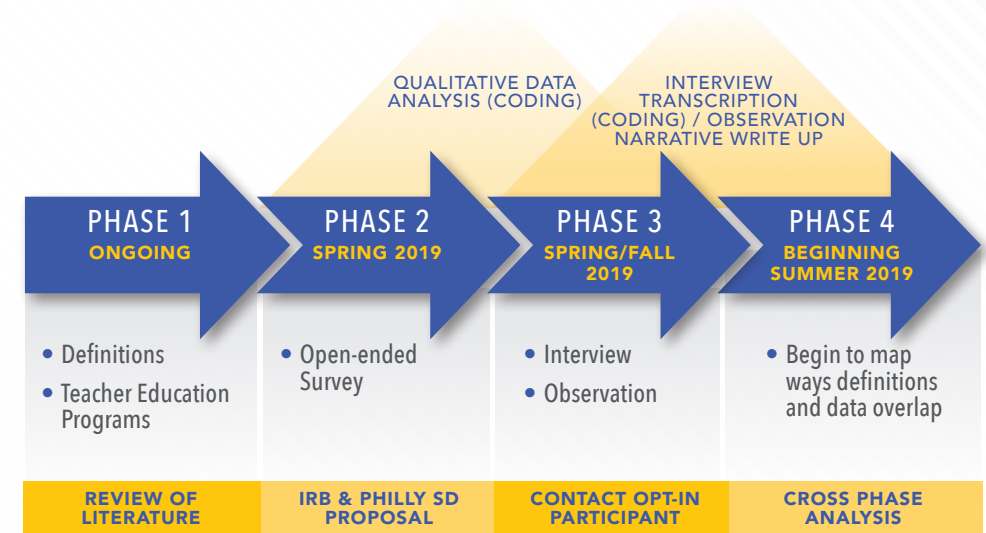
- (1) **How do mathematics teachers define literacy?**
 - (a) In what ways can their definition be described as coming from a reading perspective?
 - (b) In what ways can their definition be described as coming from a mathematics perspective?
- (2) **What are mathematics teachers' thoughts on the importance of reading literacy in the mathematics classroom?**
- (3) **In what ways, if any, do mathematics teachers' see literacy as part of their responsibility?**
- (4) **Do mathematics teachers' stated definitions and descriptions of use match with what is seen in their classrooms?**

STUDY DESIGN

This qualitative study will have four phases (see Figure 1). The first phase is to analyze how these content-area literacies are defined across the literature and how typical teacher education programs for middle and secondary teachers incorporate strategies for developing content area literacy that makes connections from reading to mathematics. The second phase is to collect and analyze qualitative survey data on how mathematics teachers define literacy and its role in their classrooms. During phase two, participants will have the opportunity to opt-in to a third phase. Based on analysis of the survey data, the third phase will include interviews with teachers who opt-in to this portion of the study to follow up on emergent themes from the analysis. It will

also include observations in their classrooms to get a sense of the potential for and the role of literacy strategies in their classroom. The fourth phase, which is an analysis phase, will look at the way the interviews and observations further inform the survey data results. Ideally, this overall analysis will allow for a map of the ways that reading and mathematics literacies overlap and how teachers could be served by understanding connections between the two and reveal potential ways to support teachers to develop these skills.

► **FIGURE 1: STUDY DESIGN. THIS FIGURE ILLUSTRATES THE DESIGN OF THIS STUDY INCLUDING PHASES, TIME LINE, AND DATA ANALYSIS.**



IMPLICATIONS

This continuing project aims to begin the design of a map of literacy definitions as they are related to mathematics while showing supports for reading in the mathematics class. Ultimately this research will be used to inform mathematics teachers of the relationship between reading and mathematics literacy and may be used to design supplemental curriculum that can be used to enhance mathematics coursework.

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ABOUT THE AUTHOR



Amanda Reinsburrow received a Bachelor of Mathematics from Carlow University in Pittsburgh. During and after which she did some computer programming for US Steel's EDI department before starting her career in Education. She taught 8th grade at a small, rural school in California for a year before moving to Florida where she spent the next 12 years. While in Florida, Amanda taught middle school and high school, ran an after-school program, and tutored numerous students individually. It was during her time teaching high school that she

pursued a master's degree in Mathematics Learning and Teaching at Drexel University. Amanda is now in her 2nd year of the PhD program and is excited to continue her work on Mathematics and Literacy connections.

► RESEARCH BRIEF NO. 6

How Journalism and Mass Communication Schools Prepare and Support Instructors to Teach Online: A Multiple Case Study

WRITTEN BY: **BRIAN DELANEY**, PhD Student

SUPERVISING PROFESSOR: **DR. KRISTEN BETTS**

February 2019

ABSTRACT

Little research has been conducted into journalism and mass communications (JMC) programs delivered in online or blended environments. This multiple case study sought to explore processes implemented by JMC programs to train and support instructors to teach in online degree programs. Cross-case analysis revealed collaborative efforts involving instructors and instructional designers to design, deliver, support, and evaluate courses. Instructional designers also played a key role in the training and support of instructors, adding their pedagogical and technological knowledge to the content knowledge of the instructor. The findings have important implications for JMC schools who are offering, or planning to offer, online degree programs, and for journalism educators who may not understand the various roles of instructional designers.

PROBLEM

The extant literature from two distinct fields within higher education — online teaching and learning, and journalism education — is robust. Online teaching and learning researchers have explored important questions on technology, asynchronous learning, massively open online courses (MOOCs), learning outcomes, pedagogy, instructional design, and more. Less research exists in this area specific to journalism and mass communications (JMC) schools. Castaneda (2011) found that 62% of accredited JMC schools surveyed were offering, or planning to offer, online courses, and 13% of those schools were offering, or planning to offer, online degree programs. Blankenship and Gibson (2016) examined community within closed-cohort structures for online graduate programs in a mass communication school. Henson (2012) reflected about the different perspectives that non-traditional journalism students can bring to the industry.

Within online teaching and learning, the roles of instructional design and instructional design units have emerged as a common theme in the literature. Instructors developing online courses are encouraged to collaborate with instructional designers. Instructional design “is a systemic process used to develop effective educational sessions and tools” (Turner, 2016, p. 478), and instructional designers are trained to utilize verified learning strategies that make “the acquisition of knowledge and skill more efficient, effective, and appealing” (Merrill et al., 1966, p. 6). Instructional designers can marry their pedagogical and technological knowledge and training with the content knowledge of the instructor (Bailey, Vaduganathan, Henry, Lavaerdiere, & Pugliese, 2018). Drawing upon expertise from those three areas is an evidence-backed approach to teaching with technology called the Technological Pedagogical Content Knowledge framework, or TPACK (Mishra & Koehler, 2006). Recent research infers, however, that 75% of higher education instructors are not collaborating with instructional designers when developing an online or blended course. Of the instructors who did collaborate with instructional designers, 93% reported a positive experience (Jaschik & Lederman, 2018).

Professional development is critical for instructors to refine and improve their teaching craft. Betts et al. (under review) found that professional development is a predictor for awareness of evidence-based instructional practices. A Delphi study by Mohr and Shelton (2017) identified 68 themes for professional development programs for online instructors. Because teaching in classrooms is a different experience than teaching online, targeted professional development and training resources can help instructors adapt best practices for online instruction. This applies to journalism and mass communication faculty, who are in a constant state of adaptation. Journalism scholars are addressing critical issues related to the Fake News era, the rise and impact of social media, the First Amendment, and immersive technologies. However, there has been little research studying the intersection of these two fields (Castañeda, 2011), despite the continued growth of online learning (Seaman, Allen, & Seaman, 2018).

This study sought to explore processes implemented by JMC programs to train and support instructors, both full-time and part-time, to teach in online degree programs. A multiple case study approach was utilized to analyze three schools’ individual processes. Individual case reports were constructed, and then a cross-case analysis was conducted to address two research questions:

RQ1: In what ways do JMC schools prepare and support full-time and adjunct instructors to teach online courses?

RQ2: How do instructional designers impact the processes of course development, course delivery, and course assessment in online courses at JMC schools?

METHODS

Description of Cases

Three JMC schools at large, four-year public universities were selected for the multiple case study utilizing purposive sampling. Each JMC school was accredited by the ACEJMC and offered at least one fully online degree program. A case screening procedure (Yin, 2005) helped identify one full-time instructor, one adjunct instructor, and one journalism-oriented instructional designer at each school for interviews. Consent was obtained from all interview participants. The inclusion criterion to be interviewed was that each individual had to have taught or worked on online journalism courses at their institution for at least one academic year. Semi-structured conference call interviews were conducted with each individual. Documents and virtual professional development resources were sourced, observed and catalogued for analysis of the instructor training and support programs provided by each college or institution.

Data Analysis

Interviews were transcribed and coded using the First and Second Cycle Coding method (Saldaña, 2013). The first cycle was conducted with open coding. The second cycle analyzed the open codes for thematic patterns. Lastly, the thematic patterns were compared to the five stages of the Online Human Touch framework (Betts, 2009) for training and supporting faculty to teach online. Case reports were written for each individual case, before cross-case analysis was conducted and synthesized in a cross-case report.

FINDINGS

To answer the first research question, data analysis was conducted across the three cases. Several commonalities were found in how JMC schools train and support instructors to teach online:

- The JMC schools did not require instructors to engage in training. In certain cases, instructors were strongly encouraged, but not required.
- Tutorials on each school's learning management system were readily available to instructors.
- Schools encouraged instructors to enroll in online mini-courses covering online pedagogy. The instructors served as students, and the instructional designers taught these mini-courses.
- JMC schools utilized analytics to improve teaching and course and program delivery.
- Instructional design units were active at each school. An instructional designer was assigned specifically to each JMC school to work with instructors.

The second question sought to explore the role of instructional designers in course development, course delivery, and course assessment. Instructional designers played a significant role in course development, working directly with instructors and managing the course development timeline with update, review, and strategy meetings. At Case Study 1 and 2, this process was protocol. At Case Study 3, the instructional designer recruited instructors to work with her like they "were my clients." The role of instructional designers changed during course delivery, offering just-in-time support. They contributed analytical analysis when necessary and assisted on an evaluative course debrief process when a new course finished its initial run.

IMPLICATIONS

This research sought to explore the processes of JMC schools toward training and supporting instructors to teach in online degree programs. Because little to no literature is available on these processes at JMC schools, this multiple case study was intentionally designed to offer insight and theoretical backing without rendering judgment. This study's findings may (a) inform processes at other JMC schools who are offering, or planning to offer, online degree programs; (b) inform instructors of the different roles held by instructional designers, and how those roles contribute to online course delivery and evaluation; and (c) encourage JMC scholars to conduct additional research of journalism education delivered in online and blended spaces.

CONCLUSION

This multiple case study explored the processes of training and supporting instructors to teach online by three JMC schools at large, public universities. Journalism educators have been inundated with curricular change over the past two decades. As online learning continues to grow, JMC educators should consider collaborative opportunities with instructional design units to strengthen technology-based pedagogies, online course development, course delivery, and course evaluation.

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Brian Delaney is a doctoral student in Educational Leadership and Learning Technologies, on the leadership track, and a Research Assistant in Drexel University's School of Education. His research foci include journalism and mass communication education, online learning, educational technologies, the learning sciences (specifically Mind, Brain, and Education science), and instructional design. In February 2018, Delaney was selected Co-Editor of the Emerging Voices in Education Journal for a two-year term. He earned a Master's degree in Higher Education Administration with a concentration in e-Learning Technologies and Instructional Design from Drexel in 2016. His thesis, titled "Assessing the Compatibility Between Experiential Journalism and Online Education," explored how a journalism school at a four-year, public institution of higher education built experiential learning opportunities into its online program. Brian earned a bachelor's degree in Journalism from Ithaca College in 2004 and was an award-winning journalist in newspapers and radio over a career of 16 years. He spent five years as an adjunct lecturer at the Ithaca College Park School of Communications, teaching intro to journalism, news reporting and writing, and investigative journalism, and hosting workshops on interview strategies and leadership for student media organizations.

► RESEARCH BRIEF NO. 7

The Voices of Leaders: A Qualitative Examination of Urban Principals' Perspectives Regarding the Reintegrating of Students with an Emotional Disturbance Back into the School Community

WRITTEN BY: **CHARLOTTE BRICKHOUSE**, EdD Student

SUPERVISING PROFESSOR: **DR. CONSTANCE LYTTLE**

March 2019

ABSTRACT

The purpose of this study is to understand the perceptions and lived experiences of principals as it relates to the reintegration of students with an emotional disturbance from an alternative placement back to their neighborhood school. Reintegrating students back into their school communities have always been a major challenge for schools. As a result, students face significant challenges when they return; thus the study examined how participants' perceptions influenced planning or the lack thereof, and support for students that return. The study also identified current practices and essential components for the development of a transition program. Findings revealed that participants felt that adequate resources, additional teachers and training are needed from central office to appropriately support students with an ED that return.

AIM

The aim of this research brief is to provide insight into the perceptions of high school principals related to the reintegration of students with an emotional disturbance. The study sought to understand and identify effective practices for inclusive reintegration, and barriers to transition planning for returning students in order to create a transition program and implement best practices in an urban setting.

PROBLEM OR ISSUE

Students with an emotional disturbance (ED) who return to their neighborhood school from an alternative placement such as approved private schools, juvenile facilities, or residential treatment facilities are more likely than their peers to experience significant challenges that result in severe academic and behavior regression (Trout, Tyler, Stewart, & Epstein, 2012). These challenges include limited emotional or mental health support at the receiving school, insufficient or no transition plan, and inadequate academic knowledge and skills (Trout et al., 2012). These students also have approximately 75% higher rate of suspension or expulsion, poor attendance, recidivism, and dropping out (Wagner, Kutash, Duthnowski, Epstein, and Sumi, 2006).

A study in urban districts found that students with emotional disabilities are more likely to be minorities, and are overrepresented in school discipline (Losen & Martinez, 2013; Losen & Gillespe, 2012). In addition, the recidivist rate is 4.5 times higher for this population (Losen, 2012). Research also shows that these challenges have long lasting effects that span beyond the school walls. According to Courtney & Dworsky (2006), ED students have an increased chance of involvement in the criminal justice system. They also have higher rates of unemployment and economic challenges (Bernstein, 2000; Courtney & Dworsky, 2006). Despite these dismal and alarming facts, schools do not plan for students' transition back to their neighborhood school. It is imperative that school districts seek out and implement best practices or specific programs to help students successfully reintegrate back into a less restrictive environment.

QUESTIONS/ METHODS

Data for this study was collected through one-on-one semi-structured interviews, reflective journals, and observations. The interviews allowed the participants to provide invaluable insight and share their experiences and perspectives of reintegrating students with an emotional disturbance back into the school community. Observation through field notes allowed the researcher to record non-verbal communication that was not noted during the interview. In addition, the principals recorded their experiences as it relates to the reintegration of students ED from an alternative placement in a reflective journal. The study was comprised of six principals from an urban district that participated in an interview and completed a journal. The phenomenological research design allowed the researcher to gain a deeper understanding into the lived experiences of the principals as students with an emotional disturbance reintegrate back into their schools.

The research questions that guided this study are:

- (1) What factors (i.e events, circumstances and conditions) influence school principals' willingness to accept and support students with an emotional disturbance, who have returned to school from an alternative placement?
- (2) How do principals provide support for students with an emotional disturbance when they return from an alternative placement to a less restrictive environment?
- (3) What are the challenges and barriers that principals identify as a hindrance to support students with an emotional disturbance when they return?
- (4) What supports do principals identify as essential to successfully reintegrate students with emotional disturbance upon their return from an alternative placement?
- (5) What supports do principals believe are necessary to help them feel confident in developing and implementing a transition program at an urban school district?

CONCLUSION/ DISCUSSION

The study uncovered four themes: (a) administrative challenges impacting student reintegration, (b) needed district support, (c) school-based internal support, and (d) program development for successful reintegration. During the interviews, participants explained that there are factors that influence their willingness to accept and support students with an emotional disturbance that return to their school. These factors include: support from central office, lack of resources, lack of training, and additional staff. The research also revealed that internal supports are in place in their schools, but they would like to improve such systems with mental health and therapeutic supports and a de-escalation space. They also identified essential supports to successful reintegration as: improved communication between central office and the receiving school, a formal transition process, mandatory and scheduled intake meetings, and a step-down transition program to help students slowly transition back into a regular education setting. Lastly, principals felt that they would feel more confident supporting students with an emotional disturbance that return if appropriate supports were available, and specific emotional support and trauma informed care training was provided to support the students.

RESEARCH IMPLICATIONS

Based on the findings and themes that emerged from this study, in order to improve practices and ensure success for students with an emotional disturbance that reintegrate back into the school community school districts and schools should 1) establish a formal transition process with a specific protocol to implement when students transition back from an alternative placement, 2) provide students with additional mental health and therapeutic supports on-site, 3) create a short term transition program to help students slowly re-acclimate to a less restrictive environment, 4) provide additional teacher training that specifically address supporting ED students that transition from alternative placements.

In the future, it would be beneficial to understand the perceptions and lived experiences of students with an emotional disturbance that transition back to their neighborhood schools. Giving the students a voice to share their perceptions and recommendations would help to further advance the development of a sound transition program that would increase student buy-in and improve student success. Additionally, it will also be important to conduct a comparative case study to examine student achievement and progress with and without transition supports.

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ABOUT THE AUTHOR



Charlotte Brickhouse is a Special Education Director in the School District of Philadelphia. In this role she has had the opportunity to work with administrators, special education directors, and school teams to improve special education programs for students with disabilities. More recently she has spearheaded a new specialized full-time emotional support program in the district with a therapeutic focus. She has also served as Special Education Discipline Coordinator and a Special Education Liaison for a number of years where she established a co-teaching program and a transition workshop for parents to assist families in post-secondary planning. As a special educator, she taught students with special needs for over a decade. Charlotte has also taught student teachers at Lincoln University. She holds two master degrees in Instructional Leadership, and Special Education. Currently, she is pursuing a Doctorate degree in Educational Leadership and Management at Drexel University in the Urban Special Education Leaders of Tomorrow program (USELT).

► RESEARCH BRIEF NO. 8

Pragmatic Competence of Bilinguals: An Interface of Educational, Computational, and Neuro Linguistics

WRITTEN BY: **SHADI DINI**, PhD Student

SUPERVISING PROFESSOR: **DR. PENNY L. HAMMRICH**

March 2019

ABSTRACT

This study uses a different lens to describe the concept of pragmatic competence in bilinguals. Focusing on Persian-English bilinguals in virtual reality environments, this mixed- method, ethnographic research brings together three areas of educational, neuro, and computational linguistics and discusses how they all shape, and are shaped by, the concept of pragmatic competence in bilinguals. A review of the literature in all these areas reveals a clear need for more research on Persian language and a noticeable gap in the research beyond the level of syntax and semantics, which is the level of discourse and pragmatic competence. In order to address these needs, this study aims at exploring the possibilities and challenges in virtual reality environments to enhance Persian-English bilinguals' pragmatic and metapragmatic knowledge. It also investigates what brain regions are activated, and if there are cross-linguistic differences, when participants are involved in tasks which require processing pragmatics. Finally, the study discusses the implications for the type of deep learning techniques used in the research on machine identity and machine to machine/machine to human interactions.

AIM

This is a dissertation proposal for a multidisciplinary research which aims at observing and exploring pragmatic competence of Persian-English bilinguals, in face to face and Virtual Reality (VR) environments, examining neural correlates of this information in a bilingual brain, and discussing its implications for educational, computational, and neuro linguistics. Pragmatic competence in the context of this study is defined as the participants' ability to produce and respond to appropriate "speech acts" in their conversations. Speech acts under investigation in this study are requests, refusals, complements, and complement responses.

PROBLEM

This proposal is motivated by the lack of transdisciplinary research which studies the overlapping areas of educational, computational, and neuro linguistics. Computational and neuro linguistics are the two main disciplines in linguistics which are significantly influenced, in the past few decades, by the recent research and findings in the field of Artificial Intelligence (AI).

Natural Language Processing (NLP) is a branch of AI which gives machines the ability to *read* and *understand* human *languages*. Most of the current research in NLP is tied to three key words in definition of NLP: read, understand, and languages. As far as reading is concerned, there has been many studies investigating machines' ability to "decode" the morphological and lexical units in a sentence. Although more studies are still needed in this area before generalizations can be made, at least literature can confidently claim that machines are able to "read".

However, if machines are "understanding" what they are reading, and what "languages" they are, or should be able to read and understand are still unanswered questions in the literature. Understanding a language is beyond the level of syntax and semantics, and there is clear lack of cross-linguistic research at the more complicated level of discourse and pragmatics in the overlapping areas of computational linguistics and NLP.

Another branch of AI which, like NLP, has transformed the field of neurolinguistics is Deep Learning (DL). The goal of research on DL is to enable machines to mimic the neuron activities in human brain. The machine "learns" to recognize patterns in digital representations of sounds, images, and other data". This concept is closely related to the distinction that DL makes between supervised and unsupervised machine learning. "Unsupervised learning is the ability to find patterns in a stream of input, without requiring a human to label the inputs first. Supervised learning, on the other hand, includes both classification and numerical regression, which requires a human to label the input data first".

Therefore, pattern recognition is based on unsupervised learning, and unsupervised learning is informed by the exact imitation of neuron activities in human brain. This clearly implies the need for more studies, and more accurate information, about what regions of brain are activated during certain linguistic activities. Similar to the gap in research on NLP, very few studies have focused on the neuron activities at discourse and pragmatics level, and there are even fewer studies focusing on cross linguistic differences, or less commonly taught languages including Persian.

Motivated by these gaps in the two disciplines of computational and neuro linguistics, and due to the need, in the field of educational linguistics, for more research on pragmatic competence of bilinguals and the affordances of Virtual Reality (VR) technology for teaching and learning pragmatics, this study, which is a three-phase mixed-methods research, seeks to investigate how bilinguals process pragmatic information, what are the possible effects of instruction on enhancing bilinguals pragmatic and metapragmatic knowledge, what areas of the brain are involved when processing information at pragmatics level, and finally what the implications are for the field of computational linguistics.

These are the main research questions which will be addressed in the three Phases of data collection in this study:

Phase 1

- What is the level of pragmatic and metapragmatic knowledge of Persian-English bilinguals in virtual and face to face environments?
- How do explicit and implicit instructions impact Persian-English bilinguals' pragmatic competence?

Phase 2

- What areas of the bilingual brain are activated when processing speech acts?
- Are there any differences in the neural correlates of pragmatic processing in explicitly and implicitly instructed adult bilinguals?

Phase 3

- How does the findings of Phases 1 and 2 contribute to the research on Deep Learning?

METHODS

This study is a three-phase design research which aims at observing and exploring pragmatic competence of Persian-English bilinguals and testing the effects of instruction, in face to face and VR environments (Phase 1). It will also examine neural correlates of pragmatic processing in a bilingual brain (Phase 2) and discuss the implications for computational linguistics (Phase 3). Figure 1 below indicates the three main phases of this study.

► **FIGURE 1. THREE PHASES OF THE STUDY**

PHASE 1	PHASE 2	PHASE 3
EDUCATIONAL	NEURO LINGUISTICS	COMPUTATIONAL LINGUISTICS
<ul style="list-style-type: none"> • Initial observations/evaluations • Virtual and F/F groups • Interviews • Instructions • Re-evaluations 	<ul style="list-style-type: none"> • Neuro-imaging data • Interviews • Member-checking 	<ul style="list-style-type: none"> • Meta analysis of DL and NLP techniques • Implications of Phases 1 and 2 for computational classical of Speech Acts

Phase 1: Educational Linguistics

The first research question of the study will be addressed in this phase. The focus will be on exploring pragmatic competence of the participants in real versus virtual environments and how it might be influencing, or influenced by, their metapragmatic knowledge. Also, the effects of explicit versus implicit instruction methods on raising metapragmatic awareness of the participants and improving their pragmatic competence is tested in this phase.

In the first stage of this phase, which is “initial observation and evaluation” stage, a written discourse completion test will be given to the participants in order to test their initial level of pragmatic competence. This DCT tests the participants' knowledge of four speech acts, requests, refusals, complements, and complement responses, in both Persian and English.

In the second stage, the participants will be randomly assigned into two groups of virtual and face-to-face. In the virtual group, the participants will be involved in authentic conversations with other users in a virtual environment, both in English and Persian. They will meet twice a week for three weeks, each meeting will take 30 minutes, and participants are provided with a conversation theme and instructions to follow. In order to rule out the possible effects of test environment and elicit more authentic responses, in the first two meetings the participants will be involved in conversations not related to the purpose of the research. In meetings three to six, they will be exposed to pragmatically appropriate and inappropriate utterances in their conversations. The researcher's field notes and observations about participants' responses to different speech acts in the conversation will be recorded.

Interview and member-checking are the focus of the third stage of phase one. The purpose of this stage is to gain a deeper understanding of the participants' responses and reactions in the first two stages. The participants will be involved in highly structured interviews which will uncover the participants' level of metapragmatic knowledge in both Persian and English.

In stage four, the participants will be divided into two groups of implicit and explicit instruction. The purpose of this stage is to test the efficiency of two types of instruction on enhancing English pragmatic competence of the participants. For three reasons, it is hypothesized that the bilingual participants in this study need instruction to improve their English, versus Persian, pragmatic competence. First, Persian is their dominant language. Second, although they have received formal instruction in English, that instruction has rarely been on pragmatic aspects of English language. Third, there are culture-specific differences in speech act realizations, which will not be learned by exposure only (Rose, 2005; Rose and Kasper, 2006).

And finally, in stage five, which is the “re-evaluation stage,” the DCT and group activities of phases 1 and 2 will be repeated and compared with the findings in the initial iteration of data collection and the possible effects of instruction will be tested.

Phase 2: Neuro Linguistics

The second research question of the study will be addressed in this phase. A functional near-infrared spectroscopy, i.e. FNIRS, neuroimaging technique will be employed to investigate what brain regions are activated, and if there are cross-linguistic differences, during speech act processing in bilingual speakers of Persian and English. Also, the data will be examined to test if there are any differences in the neural correlates of pragmatic processing in explicitly and implicitly instructed adult bilinguals.

The participant will take part in two sessions of data collection. In the first session, the FNIR data is collected while the participants are taking a Discourse Completion Test. The DCTs are the English as well as Persian version of the tests used in previous studies on interlanguage pragmatics (Eslami, et. al., 2015, Beeb, et. al., 1990). To rule out any potential effects of reading and writing skills on the participants' DCT performance, the oral version of the DCT is given to the participants.

In the second session, each participant will be interviewed with the purpose of gathering more in-depth interpretation of their responses. This is a structured interview with specific focus on exploring the participants' metapragmatic knowledge. The interviews will be conducted in the participants' dominant language which is Persian to ensure their answers are not affected by their language proficiency. They will listen to their recorded answers to DCT items and be asked to explain their answers in terms of what alternatives they would have and why they would choose to answer each item in a certain way.

Phase 3: Computational Linguistics

The third research question of the study will be addressed in this phase. A meta-analysis of Deep Learning and Natural Language Processing techniques will be done with a focus on Persian language. Implications of the findings in phases 1 and 2 for computational linguistics will be discussed in here.

IMPLICATIONS

This study will have implications for

- Persian as a foreign language learners, teachers, and curriculum developers,
- Educators/researchers in the fields of bilingualism, learning technologies, educational linguistics and neurolinguistics, and also
- Computational linguists and researchers/scholars in the field of Artificial Intelligence: machine-machine and machine-human interactions, bilingual machines, and machine identity.

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ABOUT THE AUTHOR



Shadi Dini is a second-year doctoral student in the PhD in Education program with a concentration on STEM education. She has a PhD in Applied Linguistics and joined Drexel School of Education in 2015 as a visiting faculty. She has done research on technology in language education, instruction and evaluation of second language pragmatics, and bilingualism in her previous positions as a Fulbright Scholar at the University of Pennsylvania and visiting research scholar at Texas A&M University.

► RESEARCH BRIEF NO. 9

Evaluating the Impact of Economic Disadvantage on Specific Learning Disability Identification in Elementary School Students: A Grounded Theory Study

WRITTEN BY: **DR. ANGEL ROYAL**, *Former EdD Student*

SUPERVISING PROFESSOR: **DR. JANET SLOAND**

April 2019

ABSTRACT

When a student in a public school is suspected of having a Specific Learning Disability (SLD), the Individuals with Disabilities Education Act (IDEA) mandates teams to consider whether a student's learning challenges are primarily the result of economic disadvantage. This mandate is of growing importance as more children living in poverty are disproportionately identified as having an SLD. The purpose of this study was to examine how school psychologists evaluate the impact of economic disadvantage when identifying a student with SLD. Results found that school psychologists lack explicit policies or procedures for ascertaining the negative impact economic disadvantage may have on student learning. This study highlights the need for improved SLD evaluation procedures and intervening supports for students from economically disadvantaged households.

AIM

The aim of this research was to examine how school psychologists identify the negative impact of economic disadvantage on student learning and to understand how these students are supported to reach their academic potential. Furthermore, the researcher sought to explore school psychologists' practices that are used to distinguish learning difficulties caused by economic disadvantage from those caused by a disabling condition.

PROBLEM OR ISSUE

Students from low income homes make up more than half of the United States public school population. This is of growing importance to educators as research has indicated that poverty has a direct impact on the psychological, emotional, and physical well-being of all individuals; with children especially susceptible to the effects of poverty (Lipina, 2017). During the early developmental years, poverty has been found to compromise the brain functioning needed to acquire skills for further learning as a child matures into adulthood (Hair, Hanson, Wolfe, & Pollak, 2015). Continued exposure to poverty has been identified as leading to increases in negative consequences throughout a child's school career (Hair et al., 2015). Often students who are not making adequate academic progress are then referred for an evaluation to determine eligibility for special education services (Shifrer, Muller, & Callahan, 2011).

However, the Individuals with Disabilities Educational Act (IDEA) requires schools to not associate environmental or economic factors such as poverty with a Specific Learning Disability classification (Shifrer et al., 2011). This is significant as students from low income homes are disproportionately identified to have a learning disability. The disproportionate number of economically disadvantaged students identified as having a learning disability may be an indication that these students are being misidentified.

METHODS

The researcher identifies with a transformative worldview and sought to delve into the complex reality of those who provide educational services for those living in poverty. Those with a transformative worldview have an action agenda (Creswell, 2018). The voice of the participants was critical to the researcher in order to understand current practices and create ways to reform them. The researcher sought to provide tools that can be practically used in the field.

To gain insight into current practices in the field, the study explored how school psychologists who are members of the evaluation team identify the effect of economic disadvantage on student learning when considering if a student has a Specific Learning Disability.

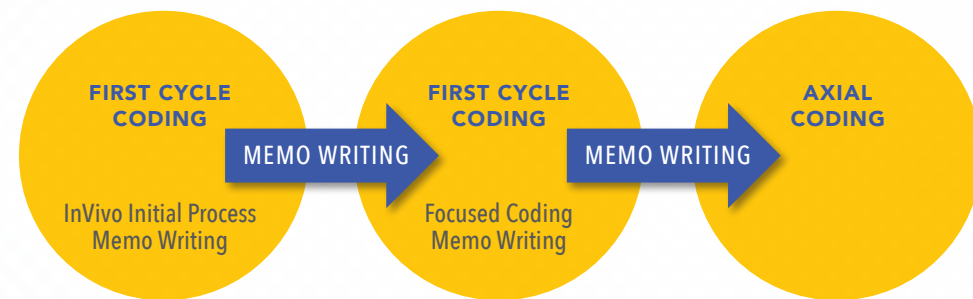
The study consisted of interviewing 5 school psychologists from a large urban school district who work at schools with a high number of students from low income households. The researcher also reviewed statements participants wrote into student evaluation reports regarding the impact of economic disadvantage on learning.

The study used a grounded theory design to explore the following questions:

- (1) How do school psychologists distinguish student deficits in academic achievement that are due to economic disadvantage from those that are caused by a disabling condition?
- (2) In what ways can school psychologists help students from economically disadvantaged backgrounds overcome barriers that may impede their academic performance?
- (3) In what ways are school psychologists taking precautions to limit misrepresentation of economically disadvantaged students as having a Specific Learning Disability when conducting Special Education evaluations?

The semi-structured interviews were transcribed and coded to identify emerging categories and themes to answer the research questions. Figure 1 provides a visual representation of the methods used to analyze the data. The evaluation report statements were analyzed by using memo writing as the transcribed interviews were coded and incorporated with the memo writing.

► FIGURE 1: STAGES OF DATA COLLECTION



CONCLUSION/DISCUSSION

The study revealed concerns regarding the current mandate of IDEA to rule out whether a student's learning challenges are primarily the result of economic disadvantage.

Based on semi-structure interviews with the participants and reviewing evaluation report statements, four themes and six sub-themes emerged from the data:

Theme #1: School psychologists lack established process to identify economic impact on student learning

- *Sub-Theme #1:* Pressure to identify students despite economic disadvantage

Theme #2: School psychologists need to know a child's story

- *Sub-Theme #1:* School psychologists experience barriers to knowing a child's story

Theme #3: Support diverse student needs

- *Sub-Theme #1:* School psychologists experience barriers in supporting diverse student needs

Theme #4: School psychologists need a team

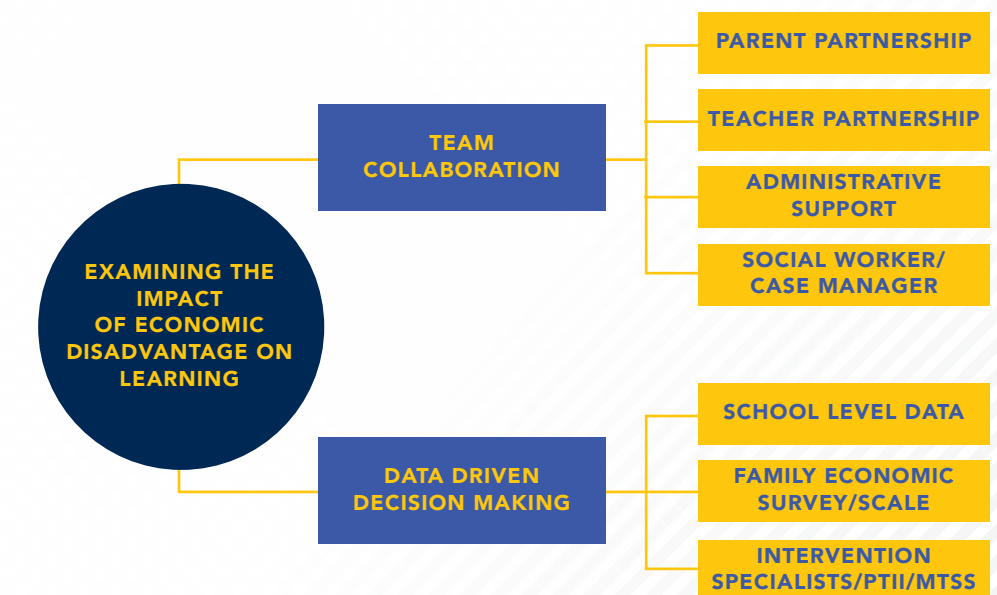
- *Sub-Theme #1:* Working with parents and building trust
- *Sub-Theme #2:* Coaching and working with school staff
- *Sub-Theme #3:* Needing additional support in the evaluation process

Participants consistently expressed that they do not work with an explicit policy to help guide their decision making in identifying whether a student's learning challenges are attributed to economic disadvantage. Participants described using their professional judgment to determine the effect of economic disadvantage on student learning which led to variances in evaluation practices. Although it is a required component in evaluation reports, some participants shared that they do not consider the impact of economic disadvantage on how it may have affected a student's learning. Participants also noted that they often do not have access to enough information to make a defensible decision regarding the impact of economic disadvantage, and that they work in isolation with the decision-making even though it is supposed to be a decision made with the evaluation team. All participants expressed their concern with appropriately supporting students that present with learning deficits caused by economic disadvantage but noted that schools often lack resources and personnel to fully support their diverse academic needs.

RESEARCH IMPLICATIONS

Based on the research findings, school districts appear to be in need of an established policy or procedure to identify the negative impact of economic disadvantage on student learning. Through research findings, a model emerged that may be helpful for school psychologists to use when they examine the impact of economic disadvantage on student learning (See Figure 2). Participants described taking the lead with this topic on evaluation teams but noted that they would appreciate a stronger team approach which is the intent of IDEA. Evaluation teams need to improve on compliance with IDEA to ensure that students receive a comprehensive evaluation with meaningful input from all members of the evaluation team.

► FIGURE 2: MODEL FOR EXAMINING THE IMPACT OF ECONOMIC DISADVANTAGE ON LEARNING



Further research is also needed on this topic as there is growing research on the effects of poverty on student learning and how this fits into the legal definition of a learning disability. Because of the variance in evaluation practices, school psychologists would benefit from pre-service programs that include training and research on this topic to ensure that school psychologists are able to assist evaluation teams in identifying the impact of economic disadvantage. School psychologists would also benefit from a scale or tool to help with decision making or to collect the data need to defensibly identify a student's level of economic disadvantage and how it could affect their learning.

Lastly, improved programming for students from economically disadvantaged households is needed. Often students who have been economically deprived from accessing enriching resources may need schools to accommodate their deficits. Specific academic interventions and resources targeted for students from economically disadvantaged households should be used to help students reach their academic potential and limit disproportionately identifying students from economically disadvantaged households as having a learning disability.

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ABOUT THE AUTHOR



Angel Shelley Royal has a strong commitment to providing superior programming for children with special needs. She passionately advocates for the services that students with special needs require to make life long gains. Angel has worked as a certified school psychologist for over 10 years with the School District of Philadelphia. In this position she works closely with all members of the school community to provide consultation, intervention, and assessment to promote student success, both academically and emotionally. Angel's professional experiences also include

teaching special education and research on topics in urban studies and education.

Through experiences in special education and research, Angel developed a strong interest in inclusion. She believes that each student's unique strengths should be a major force in his or her educational programming. Angel's goal is to continue her career in the field of education to create and implement programs and services that better serve students, parents, and schools in urban communities.

Dr. Royal recently completed her doctorate in Educational Leadership and Management at Drexel University. She obtained a Master of Science degree in School Psychology from Eastern University, Angel earned both a Bachelor of Arts in Psychology and Bachelor of Science in Special Education from Millersville University.

► RESEARCH BRIEF NO. 10

MediaMatters: Examining the Nature of Science in Children's Animated Movies

WRITTEN BY: **RASHEDA LIKELY**, PhD Student

SUPERVISING PROFESSOR:
DR. CHRISTOPHER WRIGHT

April 2019

ABSTRACT

Young people engage with multimedia sources that impact their understanding of what science is, what scientists do, and who scientists are. The purpose of this research is to explore if, and how, Nature of Science principles appear within four children's animated movies that feature a scientist or engineer. Utilizing the Nature of Science principles outlined in Next Generation Science Standards, we found that children's movies can provide opportunities to highlight and discuss what science is and what scientists do. This research seeks to encourage the use of science animated movies that support classroom discussions around scientific practices and concepts.

AIM

Using a summative content analysis (Hsieh, & Shannon, 2005), this research project quantifies scientific language, visuals, and interactions within children's animated movies where a scientist or engineer is the main character. Foregrounding the notion that media plays an integral part in informing children's conceptions about the world around them, children's animated movies were conceptualized as potentially important resources to initiate conversations about the Nature of Science.

PROBLEM

When conducting a Google search on the word "scientist," I found that search results were of mostly white men, people wearing lab coats/glasses/goggles, and in a lab setting. Additionally, only three photos depicted two or more people working together, thus, reinforcing a notion that scientists are loners (Good, Woodzicka, & Wingfield, 2010). According to this Google search, this media points toward a specific nature of science. This anecdotal finding is supported by similar findings in literature from scholars utilizing the "draw-a-scientist test" (Chambers, 1983; Finson, 2002), where children depicted similar images of scientist within their drawings. I argue that these depictions of science and scientists may be even more harmful for young people from historically marginalized communities, as young people as early as seven years of age have racialized and gendered concepts of science and scientists that is partially informed by the media they consume (Walls, 2012).

In 2013, Next Generation Science Standards (NGSS) were introduced and required a strong focus on student inquiry in science and engineering (NGSS Lead States, 2013). Each NGSS statement has a grade-appropriate science and engineering practice (SEP), disciplinary core idea (DCI), and cross cutting concept (CC) (NGSS Lead States, 2013). The NGSS framework was accompanied with Appendix H that listed Nature of Science (NoS) principles. These principles expanded on SEPs as a means to bridge them DCIs through tactics and strategies that reflect use of evidence, ability of interpretation, and construction of explanations.

Combining the need for media representation and the practicality of NoS principles led to the emergence of the research question for this study: *How are the Nature of Science principles expressed in science focused-animated films?*

FINDINGS

Utilizing the cognitive theory of multimedia learning (Mayer, Heiser, & Lonn, 2001) as the framework for this research, the three assumptions proposed are the separate channels (audio and visual) for the uptake of media, a maximum capacity for each channel, and learning is a process of filtering, selecting, and organizing. The four science focused-animated films selected for coding were *Rio*, *Cloudy with a Chance of Meatballs*, *Meet the Robinsons*, and *Big Hero 6*. The movies were identified using three criteria: scientist as a primary character, explicitly identified as a scientist, scientist depicted as a human character. The codebook were the NoS principles as found in Appendix H of NGSS (NGSS Lead States, 2013).

The coders coded the movies separately including the language, visuals, and interactions within the movies using NoS principles as the codebook. Any discrepancies that arose between the coders were resolved through reviewing movie footage. The NoS principles that were most frequent among the four movies were the principle related to scientific models, laws, mechanisms, the principle related to theories explain natural phenomena, and the principle related to science is a human endeavour. The movie that expressed the most NoS principles was *Big Hero 6*. The movie that expressed the least amount of NoS principles was *Rio*.

DISCUSSION/CONCLUSION

Children's animated movies do express Nature of Science principles in language, visuals, and interactions. Science educators could use *Big Hero 6* to provide the most relevant examples of how to bridge NGSS practices and concepts for students. This type of research can be used to inform media used in science education and influence the types of media made for science education.

IMPLICATIONS

Using media literacy as a method of teaching, science educators can engage with children's animated movies as a curricular resource. Media chosen to be used in the classroom should not only be expressive of NGSS NoS principles, but also be critically analyzed. The media should be analyzed with the understanding of three main concepts: 1) media messages have been created within economic, social, political, historical, and aesthetic contexts; 2) media interpretation relies on the interaction of media, culture, and person; 3) media representations play a role in people's understanding of social reality (Aufderheide, 1993). With this media analysis in mind, future research opportunities include exploring the representations of black boys and men and the positionality of women as scientists within science focused-animated films.

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ABOUT THE AUTHOR



Rasheda Likely received her Bachelors of Science and Masters of Science in Biology from the University of North Florida. After working as a medical scientist with the Florida Department of Health, she moved to Philadelphia to pursue a doctorate in STEM Education from Drexel University. As a third year student, she has been a Physiology teacher assistant, research assistant to Drs. Chris Wright, Aroutis Foster, and Nancy Songer, and a member of the Critical Conversations in Urban Education Committee. She has developed and implemented an

after-school science enrichment curriculum called "Everyday Science" with elementary and middle school students throughout Philadelphia. Her research focuses on curriculum development incorporating culturally sustaining pedagogies, Next Generation Science Standards, and the nature of science principles.

► RESEARCH BRIEF NO. 11

The Impact of Response to Intervention/Multi-Tiered System of Supports for Literacy on Student Outcomes in a Pennsylvania Elementary School: A Quasi-Experimental Cohort Study

WRITTEN BY: **LYDIA M. SVETKOVICH**, EdD Candidate
SUPERVISING PROFESSOR: **DR. LORI SEVERINO**

May 2019

ABSTRACT

Response to Intervention/Multi-Tiered System of Supports (RTI/MTSS) for literacy is a tiered instructional framework that tailors reading interventions to students' needs. Students are placed in one of three tiers, or levels, of instruction based on benchmark scores and receive interventions according to their skill deficits and progress over time. This quantitative study compared the end-of-year literacy assessment outcomes between two cohorts of kindergarten through second grade (K-2) students in one rural, public elementary school in Southwestern Pennsylvania. The two cohorts included a pre-RTI/MTSS cohort of K-2 students that was enrolled before RTI/MTSS implementation began and a later cohort of K-2 students that was enrolled during full-RTI/MTSS implementation. Higher mean scores in the foundational skill areas of phonemic awareness and phonics were noted in the full-RTI/MTSS cohort, while there was no difference in mean oral reading fluency scores between cohorts. A large proportion of second grade students in both cohorts showed a need for supplemental reading instruction based on end-of-year tier placement. Given the need for continued interventions in the full-RTI/MTSS cohort, this site should consider evaluating the core curriculum and the fidelity of intervention delivery to further investigate how the needs of non-responders can be met.

RESEARCH AIM

Literacy is the foundation to achieving social and economic success in today's demanding society (National Academy Press, 1998). Persistent reading difficulties can decrease students' motivation and academic success which can lead to increased risk for high school drop out (Ambruster, Lehr, & Osborn, 2001; Feister, 2010). These challenging realities indicate a critical need for high-quality, early literacy instruction for all students, and many schools are turning to tiered instructional frameworks to address this need. Despite the attention RTI/MTSS has received, school-wide outcomes of a fidelity-driven RTI/MTSS framework for literacy continue to remain uncertain. The guidance provided by the Pennsylvania Department of Education (PDE) and other resources regarding RTI/MTSS poses an excellent opportunity for high quality implementation and ongoing program evaluation, which can lead to more meaningful practices in early literacy development.

The purpose of this quasi-experimental study was to examine the potential impact of a state-approved, fidelity-driven RTI/MTSS framework for literacy on student outcomes within one public elementary school in southwestern Pennsylvania. The intention of this study was to add to the existing research on RTI/MTSS while focusing on the implementation of a framework that is aligned to the PDE guidelines. This alignment supports the presence of implementation fidelity while also offering a thorough description of the framework that was studied as a systems-level change. Through the examination of a well-defined RTI/MTSS framework, more informed programmatic decisions can be made.

RESEARCH METHODS

This quantitative study compared end-of-year Dynamic Indicators of Basic Early Literacy Skills (DIBELS) data from two cohorts of K-2 students: those who were enrolled in the school before RTI/MTSS implementation (2013-2014 school year) and those who were enrolled during full implementation (2017-2018 school year). DIBELS are a set of individually administered reading assessments that measure early literacy skills. Independent samples t-tests were conducted to compare the mean end-of-year DIBELS Composite and Subscale Scores between the two cohorts at each of the designated grade levels. The study also examined end-of-year tier placement at each grade level. Chi-square analyses examined potential differences between the cohorts in the proportions of students categorized in Tiers I, II, or III based on end-of-year DIBELS scores. Tier placement specifies the needed level of instructional support, with Tier III signifying a need for the most intensive interventions.

RESEARCH FINDINGS

Quantitative data analyses yielded diverse findings that were relevant to the purpose of the research.

The study's key findings are offered for review:

- Kindergarten and first grade students in the full-RTI/MTSS cohort had significantly higher mean scores in phonemic awareness and phonics measures compared to the pre-RTI/MTSS cohort.
- No statistically significant differences were found in first and second graders' mean oral reading fluency scores between cohorts.
- While not statistically significant, some differences in the proportions of students placed in Tiers I, II, or III were found. Kindergarten end-of-year tier placement findings were encouraging, with 85% of kindergarteners in the full-RTI/MTSS cohort falling within Tier I compared to 74% in the pre-RTI/MTSS cohort. Tier I placement is indicative of meeting grade-level goals.
- Seventy-six percent of first grade students fell within Tier I in both cohorts.
- Second grade students in both cohorts showed a substantial need for continued, intensive reading interventions, with 66% of the pre-RTI/MTSS cohort and only 55% of the full-RTI/MTSS cohort falling within Tier I based on end-of-year benchmarks.

Additional data analyses for this study are in process to determine how, if at all, RTI/MTSS implementation impacted special education outcomes at this site.

CONCLUSION AND DISCUSSION

This study's findings suggest that kindergarten and first grade students exposed to RTI/MTSS implementation displayed higher foundational literacy assessment scores in the areas of phonemic awareness and phonics than kindergarten and first graders who did not experience RTI/MTSS. However, this positive trend was not sustained in more advanced reading measures, such as in first and second grade students' oral reading fluency of whole passages. Additionally, a large proportion of second grade students in both cohorts were placed in Tier III based on end-of-year scores. This suggests a continued need for intensive interventions regardless of exposure to RTI/MTSS.

RESEARCH IMPLICATIONS

The chosen methodology in this study demonstrates that educators can effectively use existing data to monitor how new, school-wide initiatives are impacting student outcomes. Future evaluation procedures in schools implementing the RTI/MTSS framework should continue to include clear articulation of implementation features to ensure evaluation results yield meaningful conclusions and recommendations.

At this site in particular, while the full-RTI/MTSS cohort showed higher mean scores in beginning literacy skills compared to the pre-RTI/MTSS cohort, this difference did not endure when students were assessed in reading at the passage level. Because students in second grade continued to show a need for intensive interventions, further investigation is needed to examine curricular alignment across grade levels to address any gaps in instructional planning. The fidelity of interventions used with the students with the highest needs should also be examined, particularly in the area of advanced phonics and oral reading fluency. Qualitative methods, such as observations of instruction, document review, and interview procedures, might help provide further insight into the sustainability of RTI/MTSS implementation and to further explain the quantitative findings.

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ABOUT THE AUTHOR



Lydia M. Svetkovich is a doctoral candidate pursuing her EdD in Educational Leadership and Management with a concentration in Educational Administration at Drexel University. She earned her Bachelor of Science in Developmental Psychology at Edinboro University of Pennsylvania followed by a Master of Science with an Educational Specialist degree in School Psychology from California University of Pennsylvania. Lydia is a K-12 School Psychologist in a Pennsylvania school district, where she completes psycho-educational evaluations and

functional behavior assessments, provides consultation for educational programming decisions, and supports the development of school-wide initiatives. Her current professional interests include early literacy development, the use of Response to Intervention (RTI) for identifying students with specific learning disabilities, and the development of social-emotional programming for students with emotional and behavioral needs. Lydia will be completing her dissertation defense in Summer 2019.

RESEARCH BRIEF NO. 12

Learning by Making: Tracking STEM Interest Development through a Play-based Informal Learning Experience

WRITTEN BY: **MARK PETROVICH JR.**, PhD Student
SUPERVISING PROFESSOR: **DR. AROUTIS FOSTER**

May 2019

ABSTRACT

The prospective US workforce currently lacks the requisite STEM career interest to provide a competitive STEM workforce on the global scale. Research concerning making activities, including 3D-printing, laser cutting, and modular electronics, have suggested these approaches as one potential means to cultivate STEM identity and interest. This study aims to understand the extent to which learning by making activities can contribute to students' STEM interest development within an environmental science course. Data analysis was conducted using thematic analysis and a deductive coding process based on the Four Phase Model of Interest Development. Findings illustrate the extent to which maker activities played a role in maintaining and cultivating further interest development by highlighting one participant case.

INTRODUCTION

National projections indicate that the United States will soon face shortages in the supply of qualified STEM labor (Joint Economic Committee, 2012; Kitchen, Sonnert, & Sadler, 2018). US students demonstrate neither the requisite STEM career interest nor academic preparedness to supply an innovative and competitive STEM workforce on the global scale (Bottia, Stearns, Mickelson, Moller, & Parker, 2015). These trends have led to calls for a stronger and more coordinated investment in STEM education programs nationwide. Making activities, including manufacturing technologies (e.g. 3D printers, laser cutters, e- textiles) and traditional activities (i.e. LEGOs, building blocks, arts and crafts), have become incredibly popular in recent years due to their affordances for developing STEM interest and identity (Shah, Petrovich, Foster, Schaar, & Chen, 2019). Despite the influx of research in learning by making, there is a dearth in research targeting how making activities enable interest development over time (Ramey & Stevens, 2018). For the purposes of this study, interest can be characterized by increased attention, effort, and affect experienced in a particular moment (situational interest), as well as an enduring predisposition to re-engage with a particular object or topic over time (individual interest; Hidi, 2006; Hidi & Renninger, 2006). In order to analyze the effect of maker activities on students' interest development in STEM disciplines, the following research question was posed: *To what extent can learning by making influence change in a student's STEM interest over a 4- week environmental science course?*

METHODS

Setting and Participants

This study was conducted at an environmental education center in a Northeastern US city. The center offers programs to school aged children (K-12) all year round through partnerships with local schools, some of which focus broadly on STEM, and some specifically on environmental science. The participants consisted of 18 high school students evenly distributed between male and female. Participants were recruited purposively as they had volunteered to take part in a course surrounding learning by making and environmental science and art. In order to address the research question, data retrieved from one specific case was analyzed: Avi (a pseudonym), a 14-year old male who identifies as Latino.

Data Collection and Analysis

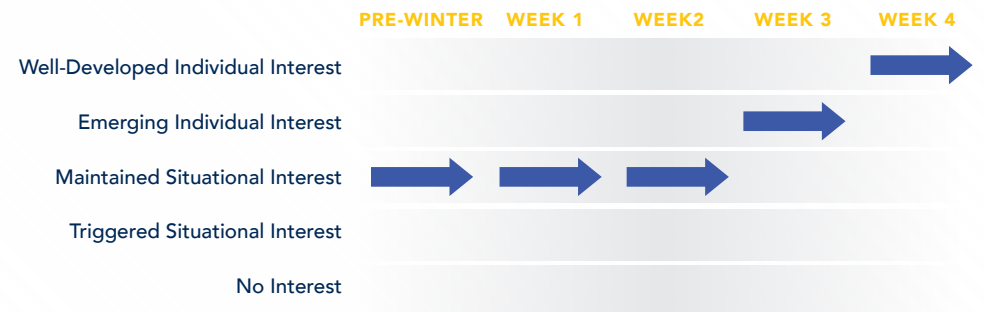
For the purposes of this study, data collection consisted of weekly student journals which prompted reflections across students' knowledge, interest and values, self-perceptions and self-definitions, and self-organization and self-control as it related to environmental science and art (Shah, Foster, & Barany, 2017). Additional data collection methods including student artifacts, such as sketches and design drawings, were utilized along with researcher observation notes and recorded video. Thematic analysis was employed as a means to identify, analyze, and report patterns within the data (Braun & Clarke, 2006; Hsieh & Shannon, 2005). Hidi and Renninger's (2006) Four Phase Model of Interest Development was utilized to aid in the deductive coding process. The model elaborates on situational and individual phases of interest to include: Triggered Situational Interest, Maintained Situational Interest, Emerging Individual Interest, and Well-developed Individual Interest.

Each phase is characterized by varying levels of affect, knowledge, and value. Without continued support, or sufficient interest development, interest can regress to a prior phase or disappear entirely.

RESEARCH FINDINGS

Avi began prior to the intervention and into weeks 1 and 2 at the level of maintained situational interest (Figure 1). Despite this, his week 1 and 2 feedback did not elevate him to subsequent interest phases. While he persisted through frustrations and continued to engage within the classroom, he reported no interest gains in these weeks. In week 3, a week on invasive species management, Avi explicitly stated an interest in the Spotted Lanternfly. In addition, he demonstrated value for environmental science by stating that we could lose the environment if invasive species were allowed to persist unchecked. He also began posing curiosity questions to environmental educators based on the work completed on that day. In week 4, Avi continued to re-engage with maker tools. Following the completion of his project, Avi sought instruction from an environmental educator and began asking questions that fell outside the scope of the environmental science course. He asked to see insects, feathers, and seed samples that were stored in the education center's classroom. In addition, he inquired about additional opportunities to visit and even work at the education center as a summer camp counselor. Avi's growth and actions demonstrate that he ultimately reached the level of well- developed individual interest by the end of the intervention.

► FIGURE 1: AVI'S PROGRESSION THROUGH FOUR PHASE MODEL OF INTEREST DEVELOPMENT



CONCLUSION/DISCUSSION

In addressing the research question, this study highlights several factors. First, based on the case examined it can be determined that interest evolves gradually. That is, no phases were skipped while undergoing continued instruction. Interest also developed as a result of particular stimuli. For Avi, it was the introduction of invasive species such as the Spotted Lanternfly.

Additionally, this study illustrated several contributions provided by learning by making activities. For example, making activities were instrumental in cultivating situational interest when other students explicitly expressed little interest in the study of environmental science. Maker projects also provided opportunities for Avi to maintain his level of interest by re- engaging with content prior to the lesson on the Spotted Lanternfly. Ultimately, making activities were utilized as a means to scaffold students from learning by making towards independent engagement, personal valuing, and reflection on environmental science disciplines.

IMPLICATIONS

This study has provided an opportunity to evaluate how learning by making can be utilized as a tool to foster student interest in STEM disciplines, specifically environmental science. However, the limited scope of the Four Phase Model of Interest Development prevents analysis of minute changes in interest across phases. For example, Avi stagnated for at least two weeks in terms of his interest in the intervention. This is partially true because the Four Phase Model lacks a means to evaluate interest fluctuations within each phase. Alternative interest theories (e.g. Azevedo, 2011) suggest a flow of interest between subjects, as opposed to the content specific interest presented by the Four Phase Model. Future research should target the extent to which students change within and across interest phases and content disciplines.

ACKNOWLEDGEMENTS

The study reported in this paper was supported by the Drexel University School of Education Faculty Research Initiative project *Facilitating 21st century knowledge and skills and motivation to learn through STEAMulating play-based experiences in informal settings*. I'd also like to thank Dr. Aroutis Foster, Dr. Mamta Shah, and Raja Schaar for their contributions and mentorship in making this study possible.

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► RESEARCH BRIEF NO. 13

Child Care Center Directors' Perceptions of their Efforts to Create Inclusive Environments in a Quality Rating and Improvement System (QRIS): A Phenomenological Study

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SUPERVISING PROFESSOR: **DR. CONSTANCE LYTTLE**

May 2019

ABSTRACT

The purpose of this phenomenological study was to explore how child care center directors participating in QRIS perceived the initiative to support inclusive practices for children with delays and disabilities. Child care center directors participating in QRIS in an urban city in the northeastern region of the United States were interviewed regarding their perceptions of inclusion. This study found that child care center directors were implementing elements of inclusion (i.e. access, participation, and supports) and found some components of QRIS to be supportive of inclusive practices (e.g. training opportunities for center leadership, including inclusion in the established indicators of quality care). However, there were themes related to the components of QRIS that directors perceived could be enhanced to further support inclusion. This research has implications for QRIS implementation in early childhood education (ECE) that is supportive of the needs of children with delays and disabilities at the state and federal levels.

AIM

Under the Individuals with Disabilities Education Act of 2004 (IDEA) and the Americans with Disabilities Act (1973) children with delays and disabilities have the right to access similar settings as their typically developing peers to receive care and education which includes participating in community-based child care centers. A significant financial investment made by the federal government through the Child Care and Development Block Grant Act of 2014 (CCDBG) was designed to ensure that child care settings provide quality care for all children, including those with delays and disabilities. The CCDBG triggered the implementation of QRIS in most states (QRIS Compendium, 2016). Therefore, implementation of QRIS as it relates to inclusion was explored to gain an understanding of how child care leaders perceived QRIS to support inclusive practices.

PROBLEM/ISSUE

The federal government has made a large investment through the CCDBG to ensure that all children, including those with delays and disabilities have access to a quality education in early childhood settings. A setting rated as high-quality on observation assessments frequently used to determine QRIS rating tiers is not enough to ensure that effective instruction is provided adequately to meet the individual needs of children with disabilities in early childhood settings (Soukakou, Winton, West, Siders, & Rucker, 2014; Worley, Pauca, Brashers, & Grant, 2000).

Little is known about the components of QRIS that are supportive of inclusive practices. This study explored how child care center directors participating in QRIS perceived inclusion and the components of QRIS those leaders viewed as supportive of inclusion.

PURPOSE

This hermeneutic phenomenological study described the lived experiences of child care center directors participating in QRIS in a large urban city as they engaged in providing quality care for children with disabilities in their settings. Their perceptions related to inclusion and how QRIS supports inclusive practices were explored with a focus on the following central question: How do child care center directors, participating in a quality rating and improvement system (QRIS), perceive inclusion?

The subsequent research questions (RQ) were:

RQ1: How do child care center directors who selected the inclusion indicator on the continuous quality improvement plan (CQIP) perceive inclusion?

RQ2: How do child care center directors who did not select the inclusion indicator on the CQIP perceive inclusion?

RQ3: Based on child care center directors' perceptions, how does QRIS support inclusive practices in child development centers?

PARTICIPANTS

Twelve child care center directors participating in the QRIS were interviewed for this study. Participants were child care center directors purposefully selected based on their responses to the QRIS' continuous quality improvement plan (CQIP) and placed into two categories: a) responders to the inclusion indicator of the state's CQIP, and b) those who did not respond to the inclusion indicator of the CQIP. Data were collected through analysis of semi-structured interviews and coded in effort to find common themes in the experiences of the participants.

Research Findings:

The themes that emerged reflected similarities related to perceptions of inclusive practices; differences related to perceptions of inclusive practices; perceptions of how QRIS supports inclusive practices; and recommended enhancements to QRIS that support inclusive practices (See Table 1).

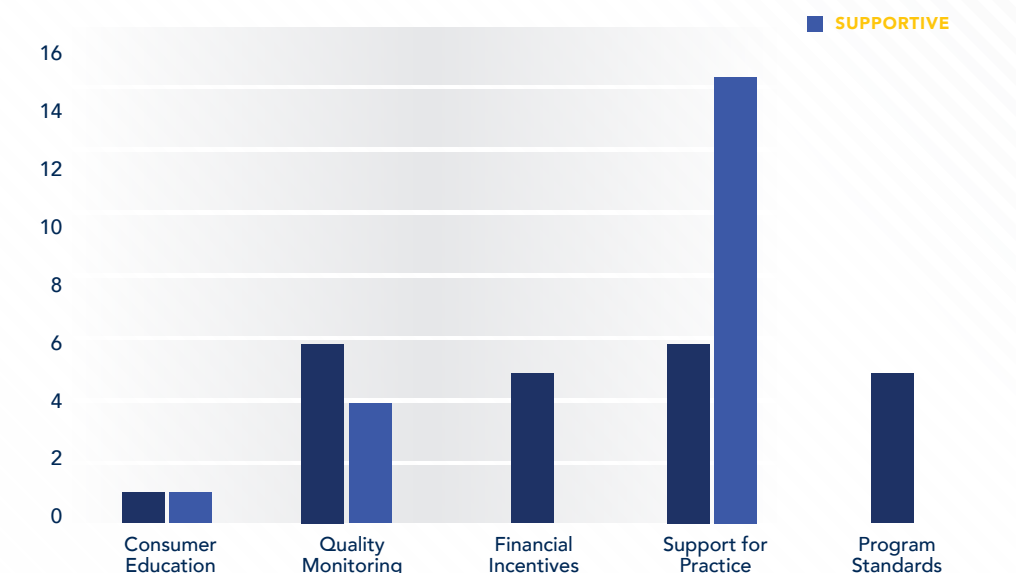
► TABLE 1: THEMES AND SUB-THEMES BASED ON ANALYSIS OF INTERVIEW DATA

	THEME 1	THEME 2	THEME 3	THEME 4
	SIMILARITIES RELATED TO PERCEPTIONS OF INCLUSIVE PRACTICES	DIFFERENCES RELATED TO PERCEPTIONS OF INCLUSIVE PRACTICES	PERCEPTIONS OF HOW QRIS SUPPORTS INCLUSIVE PRACTICES	RECOMMENDED ENHANCEMENTS TO QRIS THAT SUPPORT INCLUSIVE PRACTICES
SUB-THEME 1	Supports for children with delays and disabilities	Participation of children with delays and disabilities in ECE programs	Training opportunities for center directors	More inclusion specific training options for ECE staff
SUB-THEME 2	Benefits of inclusion	Access to ECE programs for children with delays and disabilities	Increased awareness of inclusion due to CQIP	Program standards
SUB-THEME 3	Barriers to inclusion		Consumer education	Financial incentives
SUB-THEME 4				Use of data for quality improvement

The two groups of directors described similarities with how they viewed the QRIS to support inclusion, as well as, some of the barriers they faced with being more inclusive. The groups of participants had differences in views related to the level of participation of children with delays and disabilities in their centers, as well as, how children accessed the programs. This finding likely was related to the education and experience levels between the groups as the directors who had answered the inclusion indicator had more education and/or more experience in special education than the directors who did not respond to the inclusion indicator. Table 2 displays the number of statements participants made related to common elements of QRIS as either supportive of inclusion or needing enhancements to further support the implementation of inclusive practices in child care centers participating in QRIS. Both groups of directors felt the QRIS supported inclusive practices due to the embedded training opportunities, the inclusion indicator in monitoring, and consumer education which related to parents being able to search the features of a child care center and decide if it was a good fit for their child's needs.

On the other hand, both groups of directors felt the QRIS could be enhanced in the following ways: offering staff training on inclusion, selecting program standards that had a stronger emphasis on inclusion, providing financial incentives for caring for children with disabilities, and finally increasing accessibility to data so directors could monitor their quality improvement efforts on the topic.

► FIGURE 1: FREQUENCY OF CENTER DIRECTORS' RESPONSES



► TABLE 2: FREQUENCY OF CENTER DIRECTORS' RESPONSES DISPLAYED IN A BAR GRAPH.

CONCLUSION/DISCUSSION

RQ1 and RQ2:

All child care center directors had foundational knowledge of inclusion as defined by the U.S. Departments of Education and Health and Human Services (2015) which was evidenced by the directors making statements related to *access, participation, and supports*. Directors highlighted the benefits to inclusion, as well as, barriers for inclusion in child care centers. Based on interview data, there was a range of inclusive practices used by child care center directors. All directors described *supports* used in their centers (e.g. parent engagement, accommodations, participating in child find activities). Directors who responded to the inclusion indicator made more statements related to *participation* of children with delays and disabilities in their settings; while directors who did not respond to the inclusion indicator made more statements that related to the access children with delays and disabilities had to their early childhood programs. The researcher concluded that this difference may have been due to higher education levels and more years of experience with children with delays and disabilities the directors that responded to the inclusion indicator had.

RQ3:

Child care center directors who participated in the study elaborated on their experience with implementing inclusive practices in the QRIS. They expressed that some component of the QRIS facilitated the implementation of inclusion practices, while other components of the quality improvement system needed enhancing to increase inclusive practices. The frequency of their statements related to their views of the components of QRIS as being supportive of inclusion or needing enhancements is illustrated in Figure 1. Child care center directors participating in the QRIS appreciated training opportunities but wanted support with staff-level training. They indicated that the CQIP indicator related to inclusion increased awareness of inclusive practices. The directors felt that the QRIS assisted families with program placement, as the public profile for centers could help identify centers that are high-quality and demonstrate some level of expertise with inclusion. Directors described the QRIS increased the overall standard for quality; however, inclusion was not consistently viewed as a focus in quality improvement efforts due to the observation tools used to assign quality ratings to centers (i.e. Classroom Assessment Scoring System). The directors described a lack of funding for supporting children with delays and disabilities in ECE settings and highlighted their local education agency partners were provided supplemental funding for caring for children with delays and disabilities. Lastly, the directors discussed the need for the state education agency to increase the accessibility of quality improvement data so they could review data and make informed decisions for improving the quality of care for children with delays and disabilities.

RECOMMENDATION

Based on the results of this study, recommendations were made for increasing inclusive practices through local and national QRIS implementation.

The local or state level recommendations for QRIS implementation that supports inclusive practices were as follows:

- (1) The state education agency should consider enhancements recommended by child care center directors in the QRIS.
- (2) The state education agency should increase accessibility of quality improvement data for child care center directors.
- (3) The state should align other quality improvement grants/initiatives for early childhood settings with QRIS.
- (4) The state education agency should train center directors on basic concepts related to early intervention and inclusion.

Due to the significant investment in QRIS, it was recommended that the federal government mandate inclusion is incorporated in quality improvement efforts, such as QRIS. Additionally, it was recommended for the federal government to require states to validate their QRIS with outcomes related to children with delays and disabilities.

RESEARCH IMPLICATIONS

The findings of this study have implications for QRIS implementation that supports inclusive practices in child care centers. The following considerations should be made for future practice:

- Child care center directors engage in a range of inclusive practices in their centers. There is foundational knowledge related to inclusion across child care centers and the components of QRIS could be used to further enhance the implementation of inclusive practices.
- Professional characteristics of child care center directors is an indicator for the range of supports for children with delays and disabilities. Directors with more experience with children with delays and disabilities and/or more education in the field of special education are more likely to provide unique supports to children with delays and disabilities in their centers.
- Inclusion is beneficial to children with and without delays, as well as ECE staff as it provides staff members in ECE settings experience with the population that can be generalized with other children.
- Parents were frequently described by child care center directors as barriers to inclusion; therefore, there is a need for training child care center directors on parent engagement strategies, as well as foundational elements of inclusion for consistency across the workforce.
- There is a cost/fiscal impact associated with quality inclusion. Quality inclusion should be linked to any financial incentives provided in QRIS rating tiers. There is also inequity in funding across the ECE sectors (child care vs. school). State education agencies should mitigate this gap in funding to ensure that children with delays and disabilities can access all ECE settings and are not forced to take school options because those settings can afford their care.
- Training opportunities for center directors, having a quality indicator for inclusion, and consumer education were perceived as components of QRIS beneficial to inclusion. States should make considerations for these areas in their QRIS development/enhancement.
- Directors felt QRIS raised the quality of ECE in general; therefore, the framework is perceived as valuable for increasing the quality of care for children.
- Inclusion is considered in QRIS, but not fully engrained into the framework. State agencies implementing QRIS should not rely solely on the standards from commercial assessments but should also include unique standards based on their demographics when creating the quality tiers for QRIS.

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► RESEARCH BRIEF NO. 14

Mentoring and Intersectionality: Exploring Lived Experiences of Successful Minority Women Educational Leaders

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ABSTRACT

There is chronic underrepresentation of minority women in leadership positions across industries. This is especially salient in higher education, where around 10% of professorships and educational leadership positions are held by women of color. Mentoring is a possible tool to address this issue, but the findings are inconsistent as to how mentoring has helped these populations. Moreover, articles do not focus on intersectionality, mentoring, and leadership development in a higher education context. Therefore, positive mentoring outcomes may elude most minority women. The purpose of the current study is to explore the mentoring experiences (types and functions) that helped support minority women's leader and professional development. As part of a larger study, the preliminary results focus on five educational minority women leaders recruited for the study through purposive and snowball sampling for a 60-minute semi-structured interview. The preliminary findings centered on participants' experiences as a mentor and a mentee. They discussed 1) the factors that helped them to develop and sustain high-quality developmental relationships; 2) characteristics they believed mentors should possess; 3) the mentoring activities they engaged in with their mentors that contributed to their career and leader development; and 4) how they currently approach mentoring their own protégés based on these past experiences. Significance of the study and next steps were also discussed.

BACKGROUND & LITERATURE REVIEW

There is a lack of representation of minority women in leadership positions across industries. This is especially salient in higher education, where around 10% of professorships and educational leadership positions in science, technology, engineering, and mathematics (STEM) are held by women of color (Gilmer, Stokes, & Holbrook, 2014). As a result, minority women are not traversing the pipeline into leadership positions, although the workplace is more diverse (Murrell & James, 2002). Drawing from the intersectionality literature, the effects of racism and sexism may be amplified for minority women due to their simultaneous demographic membership. This results in discrimination based on stereotypes (Rosette, Koval, Ma, & Livingston, 2016). This feeds into role incongruity, which posits that society assigns roles based on one's gender, violations of these roles results in negative assessments of the individual (Eagly & Karau, 2002). Ideal leadership characteristics tend to be male: assertive, agentic, authoritarian, etc. Therefore, women in leadership roles are in violation of the ideal leadership stereotype. For instance, Asian women receive poor leadership evaluations because of stereotypes that characterize them as not assertive or agentic (Rosette et al., 2016). This can result in stereotype threat, where the minority woman experiences psychological distress due to a fear of confirming these negative stereotypes (Vial et al., 2016). Taken together, minority women experience glass ceiling effect and/or leaky pipeline effect: their careers either plateau or they leave their institution or discipline altogether because there is no upward mobility and may work in toxic environments (Murrell & James, 2002).

Mentoring can offer minority women much needed support. Through a *traditional mentoring* (a senior organizational member develops a more junior organizational member; Kram, 1985) and *relational mentoring* (partners engage in mutual learning and development regardless of seniority; Ragins, 2016) theoretical frameworks, career support (advocacy, sponsorship, etc.) and psycho-social support (guidance, friendship, etc.), role modeling, and mutual support mentoring activities supports mentees' growth and development as a professional. However, the findings are inconsistent in the extant literature. Some studies argue that minorities/women need more career support, while others suggest they require more psycho-social support (McGuire, 1999; Murrell & James, 2002; Murrell et al., 2008). This leads to the research question, which centers on the exploration of the mentoring experiences (types of mentoring and functions) that helped support minority women leader and professional development:

What mentoring support functions have minority women leaders experienced in their diversified mentoring relationships that inspired them to pursue their leadership interests and helped them to achieve desirable leadership outcomes?

METHODS

For the current study, the researchers employed interpretive phenomenological analysis to construct meaning from the interpretations of the participants lived experiences (Lopez & Willis, 2004). As part of an on-going larger study on the diversified mentoring experiences of minority women educational leaders in STEM, the researchers utilized purposive sampling to recruit current educational leaders in higher education STEM related fields. They then engaged in snowball recruitment to contact other minority women leaders in their professional networks who meet the selection criteria and maybe interested in sharing their stories. For data collection, the researchers used semi-structured interviews via Zoom that lasted no more than 60 minutes. The questions centered on challenges they experienced in their professional careers, their leadership journey, and critical mentoring experiences. The researchers aim to recruit 15 total participants. The current study discusses the preliminary results of five participants.

The data analysis included a four-step process modeled after Smith and Osborn (2008). The researchers engaged in 1) multiple readings and note taking of the transcripts; 2) labeled emerging themes; 3) clustered themes into superordinate themes; and 4) created a code book. After each subsequent analysis, the researchers refined the codebook accordingly.

FINDINGS

The preliminary findings focused on the participants experiences as a mentee and a mentor. The themes that emerged centered on how they developed their relationships with their mentors, characteristics of their ideal mentor, mentoring activities they engaged in with their mentors, and how, based on those experiences, they approach mentoring with their own mentees. These themes were emergent.

Relationship Building

The participants discussed the process whereby they established deep connections with a developer/mentor. They engaged in a *trial and error process* where they continued a relationship because time and the mentor demonstrated their openness, genuineness, and trustworthiness, etc., while they disengaged with an individual they did not perceive the individual as supportive. Moreover, for the relationships to grow and develop, the participants agreed that *trust was necessary*. Trust centered on feeling safe to confide in that other person about the challenges they experienced (either as a professional, minority, or woman), as well as the belief that the critical feedback given by their mentor is genuine with their best interests in mind. The participants also discussed the use of *relational savviness*, which is a tacit ability to discern whether or not to build a relationship with someone or disengage with that individual because it will not be a fruitful or healthy endeavor.

Ideal Mentor Characteristics

As the conversations progressed, the participants described the characteristics of their ideal mentors. Their previous and current mentors tended to hold these characteristics. First, the participants had *gender preferences* with regards to their mentors. Specifically, many participants stated that same gender mentors provided a level of comfort and emotional

connection. They also described the desirable *personality traits of mentors*, such as being compassionate, present, and dedicated. Moreover, others stated they sought *external mentors* (those located outside organization) to confide in and receive advice without fear of reprisal from their fellow organizational members. Finally, the participants discussed the *mentoring support* provided by their mentors, such as career support, advice on work-life balance, guidance, and empathetic listening.

Mentoring Experiences

When asked about their prior mentoring experiences, many of the participants viewed their mentoring relationships as *formal and one-sided*: a senior organizational member developed a more junior member. The mentoring support they received from their mentor focused on career development, such as career advice, sponsorship, critical feedback, and advocacy. They also received psycho-social support from their mentors, such as affirmation and a safe space to vent about micro-aggressions they experienced in their workplace. Additionally, they *role modeled* their mentors' and other successful minority women's behavior and success.

Moreover, participants described their experiences with relational mentoring. Participants *conceptualization of relational mentoring* centered on reciprocity: support and contribute to one another (give and get advice etc.), leverage each other's expertise, and develop shared interests. These *relationships evolved over time* from a traditional to a more mutual friendship partnership. Features of these relationships included *affirmation* (mentor and mentee supported/encouraged one another's expression of their genuine self) and *active/empathetic listening* (reframed from judgment and listened with compassion) where each person engaged mutuality (both members actively learn and grow from the relationship).

Mentoring Approach

Based on their mentoring experiences, the participants described how they approached mentoring with their mentees. First, the reason they mentored others was to pay it forward, pass on knowledge, and increase mentoring opportunities for minority women. Moreover, these approaches often paralleled their mentors. They also naturally participated in relational mentoring and learned from their mentees, such as remaining on top of current events that affected their students. Additionally, they engaged in mentoring episodes (short term mentoring that centered on career advice and support). More importantly, they proactively mentored minorities and women with support tailored to their unique challenges.

CONCLUSION

In conclusion, the key takeaways from the preliminary findings were 1) mentoring relationships required trust developed through trial and error; 2) minority women form mentoring schemas reflective of their unique experiences with mentoring relationships; 3) minority women received and engaged in a variety of mentoring support from different mentors; and 4) mutuality (as explained in relational mentoring) was a trait of long-term relationships.

The findings can fill the research gap on intersectionality and mentoring, as well as address the leaky pipeline and glass ceiling issues by increasing leadership diversity representation in higher education through building stronger/ more effective mentoring relationships for minority women. Thus, minority women gain better access to and use of mentoring/benefits.

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