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Doctoral Student RESEARCH BRIEFS

VOLUME 1

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► RESEARCH BRIEF NO. 1

Conceptualizations of Learning and the Every Student Succeeds Act

WRITTEN BY: **JONAN DONALDSON**, PhD Student

SUPERVISING PROFESSOR: **DR. BRIAN SMITH**

November 2016

ABSTRACT

A chasm appears to have emerged between the conceptualizations of learning held by researchers in education and those held by education policymakers. This may be reflected in and impacted by the language in and around education policy and the conceptual system from which such language arises. This study investigated underlying metaphors in the Every Student Succeeds Act of 2015 and policy documents. Findings reveal this policy to be grounded in the *transfer/acquisition* metaphor of learning and the *business/management* metaphor of education, with no indication of the *construction* metaphor of learning in which much educational research is grounded.

AIM

A problem potentially exists if the metaphors of learning upon which education policies are built are incompatible with the metaphors of learning held by educational researchers. This study investigated the metaphors in the Every Student Succeeds Act of 2015 (ESSA) and the surrounding policy analysis in order to describe the underlying metaphors, and to determine whether a disconnect exists between these metaphors and those held by many educational researchers.

PROBLEM & PURPOSE

The Every Student Succeeds Act of 2015 (ESSA) replaces the No Child Left Behind (NCLB) Act. ESSA was crafted to address dissatisfaction with NCLB. The intended outcomes of ESSA were to ensure that states set high standards, to maintain accountability, to empower local decision-makers, to preserve annual assessments, to expand access to high-quality preschool, and to establish new resources to test and replicate effective strategies. These outcomes were similar to those intended of NCLB, but ESSA shifts authority to states. ESSA retains the NCLB emphasis on standardization and testing.

Many researchers in education and related fields have conceptualizations of learning grounded in a *construction* metaphor of learning: meaning is individually, collaboratively, and collectively constructed (e.g., Kincheloe, Steinberg, & Tippins, 1999). People outside these domains tend to have conceptualizations of learning grounded in a *transfer/acquisition* metaphor of learning which sees learning as the transfer of those knowledge from authoritative sources such as teachers and books into the minds of learners. This metaphor is the dominant metaphor in society today (Hager & Hodkinson, 2009).

Conceptualizations are informed by worldviews and paradigms (Kearney, 1984), as well as metaphors and analogies (Lakoff & Johnson, 1999; Hofstadter & Sander, 2013). For instance, a person with a *transfer/acquisition* metaphor of learning may tend toward learning practices involving lectures, drill-and practice, and tests, and use terminology such as acquire, achievement, assessment, outcomes, evidence, and standards (Hager & Hodkinson, 2009). A person with a *construction* metaphor of learning may tend toward learning practices involving collaboration, project-based learning, and metacognitive practices, and may tend to use terminology such as collaborate, construct, interpret, engagement, and motivation (Kincheloe, Steinberg, & Tippins, 1999).

Analysis of educational policy may reveal metaphors that demonstrate how educational policymakers conceptualize learning.

METHODS

This study used content analysis methodology (Oleinik, 2011; Duriau, Reger, & Pfarrer, 2007), metaphor analysis methodology (Lakoff & Johnson, 1999; Schmitt, 2005; Deignan & Semino, 2010; Low & Todd, 2010), and elements of grounded theory methodology (Corbin & Strauss, 2008; Thornberg, 2012). The text of ESSA and 46 policy resources

were collected. The policy resources came from The American Enterprise Institute, The Brookings Institution, The Heritage Foundation, Cato Institute, Center on Budget and Policy Priorities, The Learning Policy Institute, and policy discussion in various other academic journals and organizations. A word-frequency analysis was conducted using a stop list informed by the literature regarding the two metaphors. Coding was conducted according to categories through open coding. Initial and emergent categories were refined through constant comparison and ongoing literature review.

FINDINGS

The word-frequency analysis revealed high frequency of words related to the *transfer/acquisition* metaphor of learning. The most commonly-used words were standards, system, achievement, requirements, information, improvement, performance, core, assessment, accountability, and similar words.

The metaphor analysis revealed the *transfer/acquisition* metaphor to be the dominant metaphor of learning. Also emergent from the data was a *business/management* metaphor—not a metaphor of learning, but a metaphor of education or schooling. This conceptualization sees education as a business enterprise in which the “product” is test scores, and the goals are efficiency, standardization, growth/improvement, and innovation. This metaphor also emphasizes assessment, accountability, and quality-control. Only one resource indicated the *construction* metaphor.

The most commonly-used words were those which relate to the *business/management* metaphor. Other commonly-used words were those which relate to the *transfer/acquisition* metaphor. No commonly-used words were related to the *construction* metaphor.

DISCUSSION

These findings provide tentative evidence that the *transfer/acquisition* metaphor is indeed dominant as suggested by educational researchers such as Kincheloe, Steinberg, and Tippins (1999). The prominence of a *business/management* metaphor of education is also of concern. Conceptualizations and practices of learning and education embodied the positivist assumption that there is one reality and were grounded in the *transfer/acquisition* metaphor of learning where knowledge is an objective entity external to the learner—articulated and curated by persons and institutions of authority—which must be transferred to the learner (Hager & Hodkinson, 2009; Kincheloe, Steinberg, & Tippins, 1999). The dominance of the *business/management* metaphor of education may be related to the socio-historical moment in which corporate forces have become deeply entrenched in local implementation of policy through delivery of resources such as canned curricula, textbooks, learning management systems, and testing packages.

The findings presented here suggest that current education policy as exemplified by the ESSA marks a continuation of a conceptualization of learning grounded in the *transfer/acquisition* metaphor of learning and the *business/management* metaphor of education. Furthermore, these findings reveal an absence of a conceptualization of learning grounded in the *construction* metaphor of learning.

RESEARCH IMPLICATIONS

This study suggests that education policy both reflects and perpetuates the *transfer/acquisition* metaphor, and that educational research grounded in a *construction* metaphor is being interpreted through policies grounded in an incompatible metaphor. This study investigated a small sample of policy documents, and these findings are limited to a specific context. Despite these limitations, these findings suggest a problem with incompatible conceptualizations of learning between those held by education policymakers and educational researchers, upon whose findings these policies are based. This problem could be of sufficient urgency that more studies investigating the problem and possible solutions are warranted.

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Jonan Donaldson is in the second year of the PhD program. His research focus is at the intersection of learning sciences, creativity, agency, and technology. He is currently investigating conceptualizations of learning, design thinking, and designerly ways of knowing. Prior to coming to Drexel, he was an educator for nearly two decades. The first decade was in Osaka, Japan, and in the second decade he taught technologies for teaching and learning in master's degree programs at Western Oregon University and Oregon State University.

► RESEARCH BRIEF NO. 2

Negotiating Identities through Peripheral Participation

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

SUPERVISING PROFESSOR: **DR. AROUTIS FOSTER**

November 2016

ABSTRACT

The purpose of this brief is to provide research support for the exploration of core and peripheral identities and patterns of engagement in online gaming communities from a situated cognitive perspective. The following brief provides a review of existing literature on peripheral participation, and tentatively suggests a methodological approach for a study examining this issue.

RESEARCH PROBLEM :

Core & Peripheral Participation

There is a need for elucidation and recognition of the unique identities and patterns of engagement among individuals who regularly or habitually engage in online game spaces, particularly so that peripheral versus core participation may be explored, validated, and more precisely defined. Lave and Wenger (1991) described legitimate peripheral participation as learning through the process of engaging on the margins of a community of practice. Core participants, in contrast, are knowledgeable “experts” as defined by members for their alignment with central tenets of practice in the community. From a social network analysis (SNA) perspective, peripheral members of a community are distinguished from core members as receiving less of whatever resources are a) explored in research, b) validated within the community space, and c) defined as distinct and accepted patterns of engagement, as compared to core members (Kadushin, 2012).

Consideration is warranted for the identities of peripheral participation in communities of practice. The issue of learner identity and peripheral participation is twofold: one of marginalization and limited representation, whereby a) some individuals in a community may self-orientate or situate others as peripheral members despite behavior and identity characteristics that suggest core membership, and b) peripheral participants (as defined by SNA) demonstrate patterns of engagement and identity conceptualizations that receive limited recognition within the community or greater society as legitimate.

MARGINALIZATION :

Examining Socially Constructed Identities

The role of identity research in education has proliferated in recent years, as an increasingly important aspect of learners’ development in an ever more globalized and technologically connected society (Kaplan, Sinai, & Flum, 2014). Leander (2002) describes how identity can be conceptualized as “big I,” or the way individuals self-identify and identify each other as members of a community through acting, interacting, feeling, believing, and valuing as a group. Identity can also be conceptualized as “little i”: individual cognitive and developmental shifts in one’s sense of self, or one’s psychological, physiological, and emotional development.

Both big identities and small identities may conflict or align in game spaces, though conflicts between these identities tend to amass for marginalized groups. For example, Shaw (2011) identified how the “gamer” identity may not be inclusive to some players on the basis of gender, race, and sexuality. Interviews with members of such marginalized groups in Shaw’s work indicated different trajectories of identity and gaming, wherein players identify as gamers or non-gamers consistently and at different points, yet ultimately found that this issue “misses the point” by failing to acknowledge the self-affirmed (or self-labeled) identities of such players. While examples exist in research that explored, validated, and defined some identities of marginalized participants in gaming communities, limited research connects identity and membership (either big I or small i) to SNA-mapped core or periphery alignment.

REPRESENTATION :

Exploring Peripheral Participation

Peripheral participation may be explored, defined, and validated by examining identities and patterns of engagement enacted by those situated on the margins of a community. Situated learning theorists conceptualize peripheral participation as apprenticeship to eventual core participation (Brown, Collins, & Duguid, 1989) or a subordinate part of the path to active engagement in communities of practice (Lave & Wenger, 1991).

Work on peripheral identities in educational gaming research has instead sought to emphasize legitimate peripheral participation as an active, dynamic and independent pathway to learning and engagement with games. Gee's (2005) critique of research on communities of practice suggests, for example, that peripheral engagement in these spaces may be both re-occurring and habitual as meets the learner's needs, and may not occur with the specific goal of transitioning to active participation in mind. A developed understanding of the affordances of peripheral participation for learning is key to the representation of those on the periphery as "legitimate," and the design of learning environments to meet their needs. Despite the potential benefits of exploring learning on the periphery, existing research on identities and patterns of engagement that occur among peripheral participants remains limited in scope and detail.

PROPOSED METHODOLOGY & IMPLICATIONS

Constructing a social network analysis of an online gaming space could elucidate core versus peripheral membership based on community resources such as communication with peers, use of multiplayer options, the number of game elements accessed by players, or other context-specific factors. Selection of participants for interviews and ethnographic data collection could then occur through purposive sampling based on analysis results.

The exploration and validation of core and peripheral identities and engagement patterns might encourage more inclusive core definitions, while further clarifying and legitimizing peripheral participation. Ultimately, new conceptualizations of core and peripheral participation have significant implications for educators using online collaborative spaces for learning in terms of curricular design, implementation, and assessment. While gaming communities serve as unique and powerful settings for the examination of peripheral and core participation, future iterations of this dissertation work could expand on this context to explore core and peripheral participation in other online learning spaces.

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ABOUT THE AUTHOR



Amanda Barany is a graduate student in the Educational Leadership and Learning Technologies program. Her research interests focus on identity, representation, and marginalization in online communities of practice. The aim of her work is to support the development and implementation of games as learning tools for engagement, interest, valuing, and identity development around STEM careers. She is a member of the Games and Learning in Interactive Digital Environments (GLIDE) Lab at Drexel University.

► RESEARCH BRIEF NO. 3

Preparing Special Education Teachers in Low-Incidence Populations — The Teachers' Perspectives

WRITTEN BY: **SHANNON O'NEILL**, EdD Student

SUPERVISING PROFESSOR: **DR. WILLIAM LYNCH**

November 2016

ABSTRACT

A critical issue in the preparation of special education teachers working with students with significant disabilities is the lack of commonality in what preparation programs include in their academic plans of study. This lack of standard may result in some special education teachers entering the workforce unprepared to provide high quality instruction to students. Through this phenomenological study, early career special education teachers working with students with significant disabilities will describe their preparation program and how it influenced their instruction in the classroom. This will provide a framework for how school and district administrators can support the needs of these teachers.

AIM

The purpose of this study is to identify the gaps in knowledge and skills of early career special education teachers working with students with significant disabilities, defined as “an individual who has a severe physical or mental impairment which seriously limits one or more functional capacities” (Rehabilitation Act, 1973, 29 U.S. C. § 705 (21)(A)(i)). By exploring the essential skills needed by special education teachers for the effective instruction of students with significant disabilities, this study seeks to identify components of practice that contribute to the proficiency of early career teachers and the support provided to them by administrators.

PROBLEM

The field of special education continually evolves as the legal interpretation and implementation of the Individuals with Disabilities Education Act (IDEA) becomes more refined. Educating low incidence populations has shown little consistency over the last 45 years due to the varied nature of what students with significant disabilities have been taught (Delano, Keefe, & Perner, 2009). Variation in state certification is also a factor in the content of teacher preparation programs (Geiger, Mickelson, McKeown, Barton, Kleinhammer-Tramill, & Steinbrecher, 2014). The problem is a lack of agreement as to the common elements to be included in academic programs of study preparing special education teachers. As a result, special education teachers may be entering the workforce unprepared to provide high quality instruction to students with significant disabilities.

Insufficient teacher preparation impacts the quality of instruction provided to students once early career teachers enter the workforce. This becomes a needed area of support from the administrator(s) supervising the teacher. Understanding the needs of the teacher and developing a structured method of support is essential in furthering the knowledge and skills necessary for instruction. Without a system of support, an early career teacher may deliver instruction that is not rigorous, he/she may have low job satisfaction, and the workload may become unmanageable. These issues could lead to poor work performance or attrition.

RESEARCH PURPOSE

The researcher seeks to answer two primary research questions. First, what gaps, if any, exist in the content of teacher preparation programs and the needs identified by teachers working with students with significant disabilities? Second, what support do special education teachers need from their administrator to gain the skills necessary to provide high quality instruction to their students? This question becomes the basis of recommendations for school districts seeking to develop programs that support early career teachers.

The conceptual framework that informs this research focuses on three streams of theory, research, and practice. First, the study will explore special education teacher preparation programs. The researcher will seek to identify universal competencies in special educator personnel preparation. Prior to the passage of the Education for All Handicapped Children Act (EHA), students with significant disabilities were educated in segregated settings. It was not until the passage of EHA that all students were afforded the opportunity to receive a public education (Yell, 2016). The early work of Whitten and Westling (1985) demonstrated the establishment of instructional priorities in the field of severe disabilities as outlined in the 1975 IDEA. This research is grounded in the work of Darling, Dukes, and Hall (2016), Lignugaris/Kraft and Harris (2014), Westling et al. (2015), and Whitten and Westling (1985).

Next, the research will identify the evidence-based practices needed by teachers for educating students with significant disabilities based on the work of Browder, Wood, Thompson, and Ribuffo (2014). This research focuses on the shift in educational trends from the 1950's through 2016 as the education system moved from segregation of students with significant disabilities to inclusionary practices. Evidence-based practices should guide programs of study and directly influence what pre-service teachers learn to be prepared to provide high quality instruction to students with disabilities.

The third stream included in this study will seek to explore what support early career special educators need from their administrator during their initial experiences working with students with significant disabilities. The literature reviewed describes various mentoring, coaching, and professional development activities that assist in the development of proficient teaching skills of educators. Other factors include the amount of time teachers have to plan instruction and collaborate with general education teachers as well as complete legally required paperwork often associated with special education. Of importance in this stream is the literature that examines the perspectives of teachers related to their level of preparedness as an early career teacher (Ayres, Meyer, Erevelles, & Park-Lee, 1994; Urbach et al., 2015).

DISCUSSION

In this study of special education personnel preparation, hermeneutic phenomenology will be used to provide a rich description of the experiences of early career teachers. Hermeneutic phenomenology seeks to use the data collected to convey the essence of the phenomenon being studied by allowing the meaning of it to evolve (van Manen, 2014). In this type of study, the researcher must be aware of his/her own beliefs and bracket those from the research so it does not influence the research).

The use of phenomenological methodology in this study will allow the researcher to document the life experiences of the participants. This approach to exploring a single phenomenon will focus on the emotional human experience, thus creating a basis for drawing common conclusions regarding the future practice of special education preparation (Merriam, 2009). Vagel (2014) noted that phenomenology asks, "What is it like to experience this phenomenon?" (p. 58); therefore, this study will allow the researcher to describe the perspectives of the teachers in relation to the topic, reflecting their personal experiences.

RESEARCH IMPLICATIONS & SIGNIFICANCE

This research seeks to identify a common set of skills needed by novice special education teachers working with students with significant disabilities by exploring the perspectives of early career special education teachers and the body of literature in existence. As suggested by Westling, Salzberg, Collins, Morgan, and Knight (2015), this study will help create "an essential body of knowledge" that expands on previous work reflecting current trends and expectations for the academic achievement of low-incidence populations (p. 315). Building on previous work, the study will contribute to the field by exploring teacher perceptions of essential skills needed and how the attainment of, or lack of, those skills contributed to their competency as a teacher.

The results of this research will serve as a professional resource to both school districts and institutions of higher education that have special education teacher preparation programs. By understanding the urgency of the identification of best practices in the field of significant disabilities in special education, program courses of study can focus on those skills needed for high quality teachers. School districts can also be prepared to create individualized professional development plans to support teachers working in the field.

This phenomenological study will focus on the lived experiences of teacher participants within one large, southern school district. The results, while not generalizable, can be replicable for other school districts interested in supporting early career special education teachers working with low incidence populations. Future research could focus on participants representing a larger geographical region, thus creating a larger base of knowledge collected from both teacher participants and IHE.

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ABOUT THE AUTHOR



Shannon O'Neill has worked in the field of special education for 15 years. Having spent several years as a leader in a program for students with significant disabilities, she has come to realize that teacher preparation is crucial for both the educational and functional outcomes of students with the most severe needs. As such, Shannon's research is focused on understanding the needs of early career special education teachers working with low incidence populations and how administrators can support those needs. Shannon is currently in her last quarter of coursework in the EdD. program at Drexel University and looks forward to defending her proposal in the next few months.

► RESEARCH BRIEF NO. 4

Teachers' Perspectives on Failure: Impact on Classroom Interactions

WRITTEN BY: **JESSICA CELLITTI**, PhD Student

SUPERVISING PROFESSOR: **DR. JASON SILVERMAN**

December 2016

ABSTRACT

This colloquium presentation involves a proposed dissertation topic exploring the role of design failure in pre-college engineering research. The aim of this research is to investigate how teachers' views of design failure impact classroom interactions while teaching an engineering unit. In engineering, the ideal perspective of failure includes embracing it as part of the process and developing persistence that allows one to learn from failure. This, however, is not always the perspective that teachers employ in classroom lessons and thus, can impact the way teachers and students discuss failure while teaching engineering units.

AIM

The purpose of this research brief is to provide an overview for a proposed dissertation topic that explores perspectives of failure in pre-college engineering classroom lessons. The study will investigate how both teachers and students view failure and how they deal with failure when working through engineering design challenges.

PROBLEM

Engineering can be viewed as the “missing core discipline” and the *Next Generation Science Standards* (NGSS) have given teachers no choice but to embed engineering principles into their science lessons since they are now included as part of practice (Miaoulis, 2014). STEM literacy is on the forefront of education but creating STEM literate students is not an easy task and can be even harder for K-8 educators due to their lack of specific content knowledge on engineering topics.

Quite often, the reality of K-12 teaching practices eliminates time for engineering and it is often left out of instruction (Miaoulis, 2014). With the increase of standardized testing and teacher accountability based on these test scores, teaching engineering is avoided. There are no state or national standards specific to engineering, and although they are embedded within NGSS, not all states have adopted these standards and teachers need more support in implementing engineering curricula.

Since K-8 classroom teachers may lack content knowledge in engineering, it is important to investigate how they teach engineering in practice. Specifically, this research will look at how K-8 classroom teachers view design failure. Design failure is when students experience frustrations and struggles in the midst of the Engineering Design Process (EDP), as opposed to end failure, which occurs when the design challenge is over and the prototypes fail (Lottero-Perdue, & Parry, 2015). Typically, for teachers, the word “failure” is associated with accountability reporting and is used to discuss students' inability to pass classes, a school's low test scores, and other catastrophic issues that could seriously impact the school and the district. Engineers, however, view failure as a pathway to success (Petroski, 2001). The iterative and cyclical nature of the Engineering Design Process (EDP) accounts for design failure and it should be expected that it will continuously occur.

CURRENT RESEARCH

When engineering is taught in elementary and middle schools, discussions surrounding failure can take on a more traditional “school view” of failure as an endpoint or accountability measure and resist the proactive, “engineering view” of failure as a critical learning element and part of the EDP (Lottero-Perdue, & Parry, 2015). Teaching a proactive approach to design failure will help students persevere through large, open-ended problems, which has the potential to cross disciplines. Since classroom teachers often lack experience with engineering, they may be fearful of teaching curricula that they are unfamiliar with and other times funding or implementation issues prevent engineering from entering these lower grades (Miaoulis, 2014). The proposed research looks to uncover

more information that can help alleviate one or both of these potential issues in urban elementary and middle schools since this study will not only be investigating teachers' views of failure while teaching an engineering unit but it will also be providing teachers with relevant curricular materials.

Current research on the topic is limited so this proposed study design is important to help identify what design failure looks like in a classroom. Specifically, how can teachers pose classroom conversations around design failure to encourage students to persevere? Lottero-Perdue & Parry (2014) have looked at teachers' perspectives on failure and found that even when teachers do see the learning benefits of teaching failure in the classroom, they rarely use the word "fail" or "failure" when speaking directly to the students. Another study found that teachers share their own struggles and come from a perspective where the students should "learn from their mistakes" instead of working strategically to support the students while they experience it for themselves (Barnett, 2005). Furthermore, studies have reported that students can experience extreme frustration and often give up when encountering design failure so it is important for teachers to foster supportive environments (Rutland & Barlex, 2008).

PROPOSED STUDY DESIGN

Research Questions

- (1) What are K-8 teachers views of failure?
- (2) How do these views impact their classroom interactions while teaching an engineering unit?
- (3) In what ways do K-8 students deal with failure while working with the Engineering Design Process?

METHODOLOGY

The participants of this qualitative research study will be Philadelphia public school teachers and their students. The study will begin in the summer with a week-long professional development workshop. First, the teachers will be interviewed in order to identify their views of failure and then the teachers will complete design challenges where they will be recorded working through potential opportunities of design failure independently and in small groups. After the data on teachers is collected, the rest of the professional development session will include information for how the teachers can use the Engineering Design Process (EDP) in their classrooms. By participating in this research, the teachers will receive one two-week engineering unit with accompanying materials developed by Engineering is Elementary (EiE).

This same group of teachers will then be invited to participate in the rest of the study by agreeing to use the EiE unit in their classroom with their students. In each classroom, the teacher will be asked to identify a four-person design team that will be observed for the entirety of the unit. Each group of students will be interviewed independently before

they begin their engineering unit to identify how the students view failure. The specified design team from each classroom will be observed which will include video and audio for analysis. Following the engineering design unit, both the participating teachers and the K-8 students will be interviewed again to identify the ways in which their view of failure has changed.

IMPLICATIONS

Ideally, research on this topic will help identify ways that strategic problem solving processes, such as the Engineering Design Process, lead students to persevere through struggles both inside and outside of the classroom. Since this broad research agenda is beyond the scope of the proposed dissertation, this study will add to the current research on how engineering units in K-8 classrooms help students see failure as positive and productive. By identifying ways teachers' preconceived views impact the way they help students work through failure, teacher educators will be able to use this information to encourage classroom teachers to openly speak about failure just as engineers speak of failure.

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ABOUT THE AUTHOR



Jessica Cellitti is a second year PhD student with research interests focusing on pre-college engineering in urban public schools. Before entering the PhD program at Drexel, she taught math and science in grades K-12 in New Jersey for nearly a decade. She designed STEM elective courses on topics ranging from civil engineering and astrobiology to robotics. Jessica has two Bachelor's degrees in Elementary/Special Education and Psychology. While teaching she also pursued a Master's degree in Science Education as well as a Master's degree in Curriculum and Instruction in STEM Education as part as NASA's Endeavor Fellowship Program.

► RESEARCH BRIEF NO. 5

The Influence of Workplace Spirituality on Work Stress in University Employees

WRITTEN BY: **MELINDA K. JOHNSON**, EdD Student

SUPERVISING PROFESSOR: **DR. KEN MAWRITZ**

December 2016

ABSTRACT

Throughout the 21st century, change has been a predominant theme in the workplace. Increased technology and globalization are two key contributors to the changing landscape. Higher education workforces are grappling with the growing problem of work stress and prior research suggests that it requires a new approach. Spirituality has a longstanding history of being excluded from the workplace, yet recent investigations of workplace stress that fail to incorporate spirituality as a factor are now met with criticism. The primary purpose of this study is to explore the dimensions of workplace spirituality - inner life, meaningful work and community and connectedness - in the management of work stress in university employees. This study utilizes a mixed method approach to explore the experiences, attitudes and practices of university employees that reveal associations between workplace spirituality and work stress.

INTRODUCTION

The problem of work stress is spreading through the academy (Gillespie et al., 2001; Wild et al. 2003; Katsapis 2012). Research shows that spiritual development is one way to handle stressful situations at work (Calicchia & Graham, 2006; Stanley, 2011).

Research on spirituality in the workplace in higher education has largely been exploratory and unrelated to the problems of stress in the academy (Bradley & Kauanui, 2003; Khasawneh 2011). Studies that have examined spirituality in the workplace and work stress have primarily been conducted in the business sector (Kumar & Kumar, 2014; Daniel, 2015). The purpose of this mixed methods study is to explore workplace spirituality as a coping mechanism for reducing occupational stress among university employees.

PROBLEM & PURPOSE

Higher education administrators have been found to face significant challenges associated with work stress. Blix and Lee (1991) conducted a quantitative study of perceived stress in university administrators with deans, associate deans and chairpersons (n=575) and found that the demand on these administrators' time was associated with high levels of stress. Katsapis (2012) determined that role overload was the prevalent source of high stress among university research administrators. Mark and Smith (2012) compared 307 university employees with 120 employees from the general population in a study of work stress. They found significantly higher levels of anxiety, job demands and reports of stress-related illness in university employees, and recommended a paradigm shift in the employee support and care provided by colleges and universities.

There is increasing evidence that a major transformation is occurring in many organizations (Marques, 2008; Karkas, 2010). There is a resurgence of interest in spirituality. Workplace spirituality has been summarized as "the recognition that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community" (Ashmos & Duchon, 2000, p. 137).

Cunningham (2014) emphatically noted that the limited number of studies that have considered spirituality in examinations of work stress constitutes a major oversight. In an empirical study, Daniel (2015) concluded that meaningful work was associated with the experience of less stress. In their study of work stress with deans, Blix and Lee (1991) found that social support, which is akin to community and connectedness in the workplace, was positively correlated with perceived ability to cope with work stress.

THEORETICAL FRAMEWORK

The Revised Model of Stress and Coping (RMSC) introduced by S. Folkman (1997) and the Spiritual Framework for Coping (SFC) developed by Gall et al. (2005) provide the theoretical framework for this study. The RMSC delineates three coping strategies: problem-focused coping, emotion-focused coping and meaning-focused coping. Folkman's (2008) model suggests that when problem-focused coping and emotion-focused coping fail to resolve the stressful situation, meaning-focused coping is initiated. Meaning-focused coping, also referred to as meaning-making, is a process in which individuals use their beliefs to derive meaning from a situation and view it in a larger context. Gall et al.'s (2005) SFC extended Folkman's revised transactional stress theory to include spirituality as a distinct type of meaning-focused coping that could be used to reduce stress.

METHODS

The current study employs a convergent, mixed methods design (Creswell, 2013). Collecting and analyzing qualitative and quantitative data will allow for triangulation of the data which may provide deeper insight (Merriam, 2009) into the process that occurs when workplace spirituality is available and used to mitigate the stress of university employees. The qualitative approach in this study, semi-structured, one-on-one interviews, explores university employees' experiences of workplace spirituality including participation in campus meditation or yoga groups and how this influences work stress levels. Following transcription, apriori codes will be used to code the data. The quantitative approach is designed to determine whether or not engagement in workplace spirituality is significantly associated with lower levels of stress in university employees. Two types of non-probabilistic sampling (e.g., convenience and snowball sampling) will support recruitment of survey respondents. The quantitative aspect of the study incorporates 34 items from Part 1 of Ashmos and Duchon's (2000) Spirituality at Work instrument, its goal to measure the individual construct of workplace spirituality; and the eight-item Stress in General scale (SIG) (Bowling Green State University, 2009) to measure work stress.

SUMMARY

The purpose of this research study is to correlate the effect of workplace spirituality with work stress in university employees. The framework for this examination is the result of an extensive review of empirical studies and scholarly literature reviews.

The use of a convergent mixed-methods study design will support a robust exploration of the two subjective constructs. Gaining knowledge about how university employees manage work stress is significant to supporting and caring for this population.

Recognition of workplace spirituality as a factor in managing work stress can offer critical insight to organizations seeking to support and develop university employees.

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► RESEARCH BRIEF NO. 6

Unveiling Perceptions Held by Community Residents of an Academic Institution in Their Midst

WRITTEN BY: **SHAWNNA THOMAS-EL**, PhD Student

SUPERVISING PROFESSOR: **DR. AYANA ALLEN**

January 2017

ABSTRACT

This colloquium presentation contextualizes the subject of college interest through the perceptions held about a mid-sized, urban university by community residents. The impact of these perceptions are considered in relation to the decisions of local African American students' consideration to apply or attend the institution, situated less than two miles from their residential community. Personal accounts through qualitative methods detailing interactions between long-standing community members and the university provide a historical lens of the environmental landscape that colors the perceptions the students hold of the university, as a means of providing insight into why a disconnect exists between the two entities.

AIM

This study aims to determine how the members of the community perceive the intentions and presence of the university in an effort to provide insight into interests of the residential children to apply to and attend the university.

PROBLEM

Located in a city that reports a 44% African American demographic (Census, 2015), Fourdlet University, an elite, medium-sized, private institution in the eastern United States, reports only 5.5% of the 2015 incoming freshman class as African American. This attendance rate represents African Americans from throughout the country, and by extension, a smaller percentage of the population from the city. Even smaller would be the percentage of students from the community of Greatland, which has an African American population of 88% and is located less than two miles away from the campus. Despite its proximity from their neighborhood, statistics demonstrate that the African American children who reside in Greatland have not made the decision to attend Fourdlet University. Moreover, there is potential for a student who lives in this community to never encounter another individual from Greatland who attends or has attended Fourdlet University. This phenomenon is made even more blistering when considering that the community of Greatland has been designated one of the most impoverished communities in our nation, and the direct impact that education has on the eradication of poverty.

Established as a suburb in the early 1800's, Greatland has always been a residential community. The earliest residents were wealthy landowners who began vacating the area in the late 1950's due to increased gang violence, leaving behind residents who did not possess the financial capability to migrate to other areas of the city. Family incomes have decreased over time, with some residents currently earning salaries below \$9,000 annually, and with the decline of family income and the inability of some residents to maintain their homes, the area has suffered the emergence of abandoned homes and vacant lots that has earned some sections of Greatland the designation as 'blighted'. The labeling of blight carries with it the authorization of corporate or development groups to abscond property through the power of eminent domain. The requirement of this provision, however, is that said spaces must be converted from unsafe, uninhabitable structures or spaces, into public, usable space (Powell, 2006). Sweeping designations of blight left residents with the feeling that they were being pushed out of their homes when instead of creating public spaces, developers converted the spaces into housing to benefit the expansion efforts of Fourdlet University.

The Greatland community residents have viewed this gentrification process (Redfern, 2003) as being sanctioned by the university, and they are contending with the transition from a single family residential area to that of a college town with university students moving further into the community in search of housing no longer available on campus (Gollotti, 2009). Those residents who have been able to remain are left with the sentiments that can be likened to individuals who have been victims of eminent domain; the feeling of loss of the familiarity and security of their community and surroundings and the resultant sense of sadness, fear and anger (Powell, 2006).

These sentiments become embodied in the children, who do not exist in a vacuum, but are affected by the ideas, sentiments, attitudes, behaviors, concerns and beliefs that diffuse (Rogers, 1995) from their immediate caregivers, and it is these elements that help to shape and form their own belief systems (Grusec, 2006); consequently becoming the foundation of the sentiments that they hold regarding the institution.

RESEARCH PURPOSE

The purpose of this research is to provide a response to the question of why an elite institution situated in a low SES residential community which has a demographic composition of 88% African American, does not exemplify the African American students from the community as part of its student body. To that end, members of the affected community are called upon to provide insight into perceptions and beliefs about the university that may impact the mindsets of the community's children. This study utilizes the Ecological Systems Theory in conjunction with Mere Exposure Theory to explore how and why perceptions are formed based upon repetitive, and increased exposure to a subject. Permeating these theories is the theory of Critical Race to support the lens through which this topic is explored in acknowledgement of the dynamics of race in America as well as emphasizing the role of the voices of the members of the community. Community members who have resided in Greatland for twenty years or more possess the ability to give a historical perspective of the presence of the university in the community and the evolutions between the two factions that have occurred over this time period. They are able to offer personal accounts and interactions that they have experienced in relation to the university. The participants of this study satisfy these conditions and have been termed longstanding residents who are able to speak to why despite its close proximity their students do not consider Fourdlet University when considering college options.

The Ecological Systems Theory developed by Uri Bronfenbrenner (1989), holds that the first meaningful exposures for children occur within the first three of the five layers. The microsystem, the first and closest layer to the child, encompasses the most immediate contacts, the family and the classroom. The second layer, the mesosystem, is a broadening of the microsystem but contains an expansion of family and community contacts. The exosystem, the third layer, includes those external elements of the environment that indirectly affect the child such as the local school board, or the parents' employment. It is within these three realms that children will develop their earliest perceptions of the world around them, and for this reason, is necessary to consider when exploring the sentiments of adults within Greatland community towards the presence of Fourdlet University. Getting to the heart of Greatland students' aversion to Fourdlet is critical to improving the relationship between community and institution, and subsequently increasing applications and attendance, and this research seeks to achieve this through understanding the basis of perceptions held about the institution by adults and caregivers who most influence the mindsets of the children. Making transparent the sentiments that residents hold concerning the presence of the university in their community allows for the thoughtful consideration of improving relations between the two groups and advances the potential for increased exposure to higher education opportunities.

FINDINGS

Data from the focus group and interview sessions revealed two overarching themes of 'exposure' and 'welcomeness', and contained in these themes are the two core sentiments 'they don't want' and 'being pushed out'. These two sentiments were expressed by all participants of the study. As a group, they have found the university to be unwelcoming based upon the absence of outreach to the community over the years as well as negative events and interactions that they have experienced in association with the institution. The Mere Exposure Theory states that increased, repetitive exposure to a subject increases its attractiveness because of familiarity when there are positive associations. In the case of Greatland residents, the inverse has also been found to be true in that attraction to Fourdlet University was decreased due to negative occurrences. The core sentiments that emerged support why exposure to the university has reduced the level of interest that potential students from Greatland would have in applying and ultimately attending Fourdlet University.

CORE SENTIMENT

They Don't Want

The phrase "they don't want" was counted as being uttered seventeen times during the course of the focus group session. What followed the three words were any variation of sentiments: "...us to be on the campus, "...us to use things designated for students", "...their students exposed to us", "...any Black kids to go here." One participant revealed the impression that Fourdlet was believed to be,

off limits to us because you never heard anybody speak of Fourdlet, so that was one of the furthest thing from my mind is my kids going to Fourdlet because I didn't know how to go about it.

The interpretation of this sentiment is a pervasive feeling of rejection over time that has been manifest in outward expressions of insult and anger by members of the community. They resent the feeling that the university is attempting to dictate what or how the community should be without including community members in the process, and this anger is often displayed when they are experiencing the second core sentiment of 'being pushed out'.

Being Pushed Out

Residents of the community voiced the greatest amount of anger at the sentiment of 'being pushed out'. Their belief that Fourdlet wants to "take over" their community through what they see as the renovation of older buildings to house the university's students while aiding developers to find their homes uninhabitable in an effort to move them out, has inspired resistance by community members. The anger that they express regarding issues relating to Fourdlet is based upon their familiarity with the institution and how they have been victimized in the past, and anger has stemmed from the feeling of powerlessness that they have over their situation. They are overwhelmingly concerned about their homes as the property values rise in the area despite laws that were passed in recent years to exempt longstanding resident from increases in market rate taxes.

DISCUSSION

With over 4700 colleges and universities in the United States (NCES, 2013), academic institutions situated in communities that coexist with residential communities are an American phenomenon (Gumprecht, 2003). University outreach to area residents is assumed to provide significant assistance as a benefit of its proximity (Livability, 2013) through provisions of continuing education courses, training, counseling and career services, and mentoring and tutoring. Implicit in this assumption is that the mission of all academic institutions so situated, is to extend itself to the community, or that residents who find themselves included in the extended infrastructure of the campus, consider it advantageous to be located therein.

The findings of this research do not support this assumption, rather they suggest that the sentiments that long-standing community residents hold concerning the institution have had a significant impact on the way that younger community members perceive the university, and that while no physical barriers exist in regard to direct access to the campus, there exists a perceived barrier for their students who as a result elect to apply to institutions that are further in distance.

RESEARCH IMPLICATIONS & SIGNIFICANCE

The significance this research is in its contribution to the scholarship on issues of access and equity in higher education. It provides an alternate perspective from the more traditional reasons proffered as explanations for low African American student representation on the campuses of elite institutions. The positioning of the study is intentional in its discounting of deficit reasons (i.e., academics, finance) for low attendance, and instead relies upon the voices of stakeholders of the community to reveal sentiments that address perceptions held about the university which may account for the disinterest on the part of African American students to consider attending institutions categorized as elite, traditionally white (TWI) or predominately white (PWI), and it considers it from the perspective of students who live in communities where institutions such as these are also located.

In the absence of geographical, financial, and academic barriers, there is an implication that students perceive barriers to the institution, which prevent them from considering these spaces a viable choice to further their education. Further, this implication is extended onto the campuses of these institution towards those African American students who originate from low SES, high poverty, segregated communities and is supported by scholarship that demonstrates that African American students raised in segregated communities attending elite institutions, perform at a lower level than their counterparts from more racially diverse communities.

Finally, this research suggests that further inquiry can be made into the roles and responsibilities of academic institutions that are situated in severely poor communities. In considering the level of influence on children that schooling and communities share based upon the Ecological Systems Theory, more extensive research on ways to positively shape the perceptions of the children of these communities would benefit academic institutions that occupy space within low SES, high poverty communities.

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ABOUT THE AUTHOR



Shawna L. Thomas-EL is a second year student in the doctoral program for Educational Leadership and Learning Technologies. Her area of concentration is in Higher Education where she has spent the nearly 30 years working to recruit and counsel students in elite institutions and medical schools. She has a heart for supporting African American students, who have been traditionally underrepresented on these campuses, in realizing their goals of pursuing and receiving higher education, thus her research centers around the identifying obstacles that would deny them the opportunity. Born and raised in West Philadelphia, Shawna was educated in the Philadelphia public schools and Drexel University. She began her professional career 26 years ago as an advocate for African American students in higher education. Drawing upon her experiences at private academic institutions in the areas of admissions and student affairs to support her dissertation research, she will explore the impact of exposing underrepresented African-American students to competitive colleges during their middle school years, on their ability to successfully compete for admission, thrive, and graduate from elite institutions. Creating opportunities for access to higher education for African American students is the driving force behind Shawna's academic endeavors. Recently, her work has taken on more personal significance as she has joined the ranks of parents who are navigating the college investigation process with the oldest of her two daughters.

► RESEARCH BRIEF NO. 7

Factors Positively Influencing Persistence and Program Completion for Nontraditional Students Enrolled at a For-Profit Postsecondary Institution

WRITTEN BY: **KRISTINE MACDONALD**, EdD Student
SUPERVISING PROFESSOR: **DR. JENNIFER ADAMS**

January 2017

ABSTRACT

This dissertation study seeks to explore what nontraditional students attending for-profit postsecondary institutions need to persist to graduation. This mixed-methods, case study with ethnographic qualities will examine the struggles nontraditional students face. For-profit colleges across the United States enroll approximately 73 percent (73%) of nontraditional students (Deming, Goldin, & Katz, 2013); research focusing on non-traditional students at these schools is limited. With for-profit schools facing high attrition rates which then effect school closure rates, learning more about this type of student will benefit both the students themselves and the for-profit industry.

AIM

The research provides an overview for a dissertation study awaiting IRB approval that explores the factors that nontraditional students attending for-profit postsecondary institutions need in order to persist to graduation. The aim of this mixed-methods case study approach with ethnographic qualities is to examine and understand the struggles nontraditional students face and what they feel would or do help them succeed at a for-profit college.

PROBLEM

Non-traditional college students at for-profit post-secondary institutions experience significant challenges that frequently hinder successful program completion and graduation. Although most programs at for-profit schools have a planned curriculum duration of two years or less, on average, non-traditional students take five to six years to complete (Bell, 2012); and according to a “Fast” (2016) report, only 32 percent (32%) of students enrolled graduate within six years. Retaining and graduating students is a serious issue for all sectors of higher education, but more so at for-profit schools because their primary student demographic is adults, who have special circumstances and learning needs (Ross-Gordon, 2011). Typically, these students are: (a) over the age of 24, (b) predominantly female, (c) many are the first in their family to go to college, and (d) frequently are single parents working and juggling the demands of home and school while trying to navigate an academic environment many have not been in for years (“Definitions,” 2016). Many of the challenges these nontraditional students face when trying to complete their programs at for-profit institutions lead them to drop out.

LITERATURE THAT INFORMS THE PLANNED RESEARCH

Several issues have been identified as possible reasons nontraditional students leave for-profit schools before completion. Barton and Donahue (2010) found that feeling unprepared led to attrition. Nontraditional learners have difficulties acclimating to new expectations and rules, are unfamiliar with institutional resources and may be too intimidated to build rapport with teachers and classmates (Lawrence, 2000; Barton & Donahue, 2010). They are less likely to participate in class or ask questions out of fear of being perceived as stupid (Lawrence, 2000). Nontraditional learners also struggle with technology, while integrating computers, online portals or cloud-based learning can be beneficial, depending on the student’s age, background and previous exposure to technology, these avenues may be intimidating for adult learners who not grow up with technology (Gordon, Quick & Lyons., 2009). These issues are exacerbated at for-profit schools with accelerated programs when students are not provided with appropriate transitional or support skills (Higgins, 2010).

For a majority of nontraditional students, the demands of school, work and personal life combined with a real or perceived lack of support can lead these students to believe that dropping out is the easiest solution (Ross-Gordon, 2011). Engle and Tinto (2008) found that most non-traditional students have low self-esteem based on previous failures, limited skills, and prior learning experiences; and are further hampered by negative feelings about their age and how long they have been out of school, and the lack of support systems. It is especially difficult for a nontraditional student to feel supported at home when they are the first in their family to go to college. Studies conducted by Lawrence (2000), Ross-Gordon (2011), O'Neill and Thomson (2013) and Perna (2016) all show a correlation between a nontraditional student's self-esteem and thoughts of dropping out of school. An additional issue contributing to attrition may be the lack of student resources offered by for-profit schools like day care centers, transportation help and teacher office hours as only \$3,000 of all of the school's profits being spent on the students themselves (Rubin, & Kazanjian, 2011; O'Malley, 2012). When all of these issues collide or become overwhelming, nontraditional learners typically leave school.

Informed by prior research, this study will examine and explore non-traditional students' perspectives on the academic and personal challenges that they face, factors that may lead to dropout, faculty importance and influence on students, and most importantly, programs they feel promote retention and graduation at for-profit colleges. According to the current literature, research about nontraditional students regarding struggles, retention and persistence has have primarily been focused on undergraduate and community colleges, thus this research can fill a significant void in the current climate of professional curricular practice at for-profit postsecondary institutions with a range of professional program certifications. When stakeholders can understand their students' needs, struggles, and wants, they will be better positioned to implement changes to enroll, sustain and graduate more students.

PROPOSED STUDY DESIGN

Research Questions

- (1) How do nontraditional students differ from traditional college student populations?
- (2) What personal obstacles do adult-learners at for-profit schools feel compromise their ability to persist to graduation?
- (3) What role, if any, does faculty at a for-profit institution play in a nontraditional student's motivation to stay in school?
- (4) What institutional programs, if any, can for-profit schools offer its students to help them succeed?

METHODOLOGY

Using a mixed methods approach for this case study with ethnographic qualities will allow this researcher to collect data from more subjects who will provide more thorough answers and various perspectives in answering the study's research questions (Russ-Eft, & Preskill, 2009). This is a case study because it concentrates on one population in one location and

this researcher has been immersed in their culture for nearly seven years, which makes this ethnographic as well because the subjects are being studied in their own environment (Creswell, 2006). A quantitative survey tool created from studies conducted by NCES, the University of Colorado, and the National Alliance for Partnerships will be administered to all students (N= 42) participating in a classroom- based practical nursing program at the study site. The survey data will be entered and analyzed using SPSS to keep things organized, utilize various statistical tests and generate graphs. Qualitative interviews will subsequently be conducted with 15 students who volunteer to participate in the interview phase of the study. Interviews will be transcribed and coded based on pre-established and emergent codes associated with college persistence and success. Integration of the quantitative findings and qualitative findings will inform the conclusions of the study.

IMPLICATIONS

Currently there is a significant deficit in understanding the needs of nontraditional students, primarily in a for-profit setting. Because of this deficit, utilizing an exploratory mixed methods design has been chosen. This will allow the researcher to understand the variables utilizing quantitative surveys and then probing further via qualitative interviews. This research has the potential to implement procedures or components to the school to retain students to completion. This benefits the students by obtaining new skills, knowledge, degrees and employment opportunities; can benefit the workforce by hiring nontraditional students who were prepared properly; and can benefit the institution itself by increasing profits which can keep more schools open and help stakeholders funnel profits back into the schools, students and faculty. With so many for-profit postsecondary institutions closing because of revenue losses, this study has the potential to impact more than just those at the study site alone.

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ABOUT THE AUTHOR



Kristine (Kris) MacDonald, a native of Scranton, PA, earned her Masters of Science in Secondary Education from the University of Scranton and her Pennsylvania Teaching Certification in English for grades 7-12 in 2011. She received her Bachelor of Arts in Communications/Journalism specializing in print media from Shippensburg University in 2005. Ms. MacDonald has worked in secondary and higher education since 2011 with a variety of learners and school sectors including

Valley View High School in Archbald, PA; the University of Scranton in Scranton, PA; tutored composition for Chegg.com and Tutor.com; and worked as a general education instructor at Fortis Institute in Scranton, PA since 2011. While pursuing her EdD in Educational Leadership and Management in Higher Education at Drexel University, she has had the opportunity to work with the Philadelphia Educational Research Consortium creating curriculum and assessments to better calibrate pedagogy and methodology for the English Language Learner students in the district's charter school. She is also an intern for the College of Education working to create an open-access online course on Scholarly Writing and APA Style. She has also accepted opportunities to present her research through the PASA Inaugural Education Research Symposium, Drexel University Doctoral Colloquium, at the CARE Conference in Las Vegas, NV, and the INTED 2017 Conference in Spain. She has also edited a published, fictional novel written by a fellow classmate. She has successfully defended her doctoral proposal and is currently awaiting IRB approval. After graduating, she hopes to work in curriculum and instructional design in higher education. In her spare time, she enjoys spending time with her German Shepherd.

► RESEARCH BRIEF NO. 8

A Brain-Targeted Teaching Framework: Modeling The Intended Change In Professional Development

WRITTEN BY: **TARA L. PARR**, EdD Student

SUPERVISING PROFESSOR: **DR. KRISTEN BETTS**

February 2017

ABSTRACT

This study examined a convergence of two important educational concepts: learning sciences research and professional development. Research in the learning sciences continues to evolve with ongoing technological advancements that are allowing for a deeper understanding of brain function. Professional development is designed to aid educators in expanding their practice based on current trends and research. This study examined how a professional development learning session designed to inform educators about brain-based concepts and brain-targeted teaching strategies impacted educator awareness and knowledge of brain-based concepts for teaching and learning, as well as influenced these educators' pedagogy in the classroom.

AIM

Disconnectedness between science and education often exists, creating a barrier to the improvement of pedagogy. Educators' lack of current knowledge and understanding of brain-based learning (BBL) and its implications can stifle the necessary evolution of learning in the classroom. By infusing a professional development learning session with brain-targeted strategies, as guided by the six focus areas of Hardiman's Brain-Targeted Teaching (BTT) Model (2012), it was hypothesized that the educators' experiences would deepen and extend awareness, and ultimately, increase the use of brain-targeted strategies in the classroom.

PROBLEM & PURPOSE

Professional development has long been a cornerstone of teaching and learning. Its purpose is to promote the utilization of effective pedagogy thus stimulating student growth and achievement. Quite simply, research maintains that when educators learn, students learn (Desimone, 2011; Webster-Wright, 2009). Educational theorists and research maintain that to properly prepare for instructing students, educators must first experience the processes of acquiring, interpreting, managing, and applying new knowledge to gain understanding (Stein & Fischer, 2011; Willis, 2010). To that end, and in attempt to bridge the disconnectedness between science and education, a professional development learning session titled "Brain Targeted Teaching", offered as part of this study, was designed with the following goals: (a) to provide educators with brain-based research information with implications for teaching and learning, (b) to afford an opportunity for educators to experience a BTT model as learners, and (c) to model the BTT framework for use in the classroom.

METHODOLOGY

An explanatory sequential mixed methods approach was utilized to explore the impact of a professional development learning session designed to model the change it intended to promote, namely the exploration and application of BBL and BTT concepts and strategies. This mixed methods design allowed for the collection and subsequent analysis of complementary quantitative and qualitative data, capitalizing on the strengths of the two methods, and provided a comprehensive overview of the research. Forty-four K-12 public school educators enrolled in the professional development learning session participated. Data was collected from a pre survey and two post surveys; understanding of this data was augmented by semi-structured one-on-one interviews with five of the participants, and the reflections of the researcher.

RESEARCH FINDINGS

The post session data demonstrated an increase in educator awareness and knowledge of brain based concepts exhibiting gains between 15% and 43% in knowledge and an average increase of 30% in awareness when compared to the pre session data. The data also evidenced an increase in frequency of strategies applied in the classroom. Over 75% or more of the participants reported an increase in the application of each of the BTT strategies as a result of their experiences in the learning session. The application of these strategies appeared to be significant as the 66% of educators that responded to the delayed post survey universally noted increased student engagement following the pedagogical changes they made.

DISCUSSION

This study evidenced that modeling strategies can be a cornerstone in professional development as it provides an observable framework as well as an opportunity for first-hand experience of the intended outcome. The researcher concluded that educators benefit when introduced to learning concepts via experiential learning. The following conclusions emerged from the data:

- Increased awareness and knowledge of research from the learning sciences can guide instructional decisions.
- Modeling BTT strategies in professional development learning sessions increased usage in the classroom.
- Implementation of BBL and BTT concepts for teaching and learning are reported to increase student engagement.

Information from this study provided a greater understanding of the value of professional development learning in the areas of BBL and BTT, as well as the impact research from the learning sciences has on teaching and learning.

RESEARCH IMPLICATIONS

Implications from this study support the recommendation of several educational theorists (Hardiman, 2012; Stein & Fischer, 2011) to strengthen the relationship between learning sciences research and teaching and learning. Professional development should continue to evolve as learning sciences research continues to expand and inform instruction, thus affording educators the opportunity for instances of short and long-term implementation. To that end, the following five recommendations are offered for consideration in educational settings: (1) establish a professional development plan for teachers to gain competency in BBL and BTT; (2) develop a guide for professional development facilitators in modeling elements of BBL and BTT delivery; (3) adopt a framework to build capacity in knowledge of instruction based on research from the learning sciences; (4) create a plan for educating students about the brain; and (5) encourage professional learning as a means to continue exploration of BBL and BTT concepts.

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ABOUT THE AUTHOR



Dr. Tara L. Parr is a recent Drexel graduate, having earned her EdD in December 2016. Her epistemological view of knowledge acquisition aligns with the constructivist theory of making meaning through active participation. She maintains that learners learn-by-doing and, as such, she is very passionate about effective design of professional learning opportunities for K-12 educators. She is also intrigued by research on the learning sciences, and the wealth of information afforded to educators regarding how the brain functions

and learns. A convergence of the two education topics, professional development and Learning Sciences research, seemed a natural progression for her research.

In her full time position, Tara serves as the Technology Integration Curriculum Coordinator in a Pennsylvania K-12 public school district. She is married and spends most of her free time supporting her two children, Maddie (17) and Nicklaus (12), in their activities. She loves to bake and is an avid binge watcher, most recently completing HBO's series *The Wire*.

► RESEARCH BRIEF NO. 9

Mathematics Teachers Professional Development: A Virtual Boundary Encounter

WRITTEN BY: **ANTHONY MATRANGA**, PhD Student

SUPERVISING PROFESSOR: **DR. JASON SILVERMAN**

February 2017

ABSTRACT

This study examined 21 practicing teachers' participation in an online community-based professional development course. This study integrated a web-based assessment environment into the online course. The tool was designed to function as a boundary object and mediate a virtual boundary encounter with the Math Forum.

Teachers' interactions mediated by the tool and the discussion board (DB) was examined. Results indicate that the virtual environments mediated interactions around core mathematical ideas in qualitatively different ways. Conclusions are drawn regarding the potential of the virtual boundary encounter to mediate teachers' development of mathematical knowledge for teaching.

AIM

Research and policy demand ambitious goals for mathematics instruction, which include calls for problem-based learning, peer-to-peer argumentation, and formative assessment practices (NCTM, 2000). Professional development (PD) is crucial for achieving these goals and supporting teachers' instructional change. Community-based PD, in particular, provides context for the collective development of mathematical and pedagogical content knowledge, opportunities for teachers to reimagine their instructional practice, and has shown to support teachers' instructional change (Vescio, Ross, & Adams, 2008). There are shortcomings to school-based communities; for example, it is often difficult for teachers to fit community into their daily schedule and local school districts' norms for instruction typically do not align with those called for by research and policy. Online communities can address these shortcomings as teachers are not constrained to collaborate while at work and norms that emerge in alternative contexts are transferable into teachers' instruction (Van Zoest, Stockero, & Taylor, 2012). There is a lack of research on teachers' participation in online communities. To fill this gap, the following research question was posed: How does the virtual environment facilitate teachers' participation in online community-based PD?

PROBLEM

This study is framed by the conceptual framework communities of practice (Wenger, 1998). This study conceptualizes mathematics teacher PD as participation in boundary encounters, which is an interaction between communities of practicing teachers and teacher educators (Sztajn, Wilson, Edgington, & Myers, 2014). Sztajn et al. (2014) regard this as a boundary encounter because teachers and teacher educators engage qualitatively different practices, particularly when engaging with students' ideas. This study extends this idea and facilitates a *virtual boundary encounter*, which is a boundary encounter mediated by a web-based assessment environment designed to scaffold activities that are consistent with the practices of the Math Forum — a leading group for mathematics education in the United States (Shumar, 2009) — and enhance the process of analyzing student work. The tool supports user's focus on the details of student thinking and grounding their analysis in student thinking. After participants engage these activities they share their analysis with colleagues in the form of feedback. In this way, the assessment environment mediates participants' engagement in collective mathematical activity. These activities are also consistent with the Math Forum's practice of assessing student thinking. Thus, the tool is designed to simulate an encounter with the Math Forum because working with the tool is consistent with engaging activity with the Math Forum.

METHODS

This study investigates 21 practicing teachers' participation in an online PD course. The content-based course engages teachers in reasoning about functions. The assessment environment was integrated into this course to mediate participants' interactions around their mathematics work. The tool has features that enhance the process of assessing student thinking as it allows users to highlight aspects of students' work, make comments on these highlights, and categorize students' work into folders. The DB also facilitated teachers' mathematics work. A grounded theory approach was applied through axial coding procedures and the iterative analysis of themes (Glaser & Strauss, 1999). This study is part of a larger study that conducted an analysis of norms. In such analyses, certain types of evidence are acceptable for documenting the emergence of norms, such as the *explicit discussion* of mathematical activity and instances of challenge between participants (Dean, 2005). Analyses focused on these types of interactions.

FINDINGS

Findings from this study indicate that teachers interacted around core mathematical ideas mediated by the web-based tool and DB in qualitatively different ways. Mediated by the web-based tool, participants frequently challenged one another to engage mathematical reasoning that focuses on quantities and relationships to explain why graphs have particular visual features. Mediated by the DB, participants explicitly discussed their mathematical activity and collectively reflected on the core mathematical ideas in the course. Table 1 provides an overview of the analysis. The reader will notice that in interactions mediated by the DB there were no challenges, while there were 52 challenges in those mediated by the web-based tool. Conversely, there were 20 explicit discussions in the DB and zero in the assessment environment.

► TABLE 1: SUMMARY OF CODING

WEEK	DB		ASSESSMENT ENVIRONMENT	
	EXPLICIT DISCUSSIONS	CHALLENGES	EXPLICIT DISCUSSIONS	CHALLENGES
3	6	0	0	7
4	4	0	0	13
5	2	0	0	13
6	8	6	0	19

Mediated by the web-based tool, participants critiqued colleagues' mathematics work. In week four, participants were tasked with explaining the behavior of the function $y=\sin(x^2)$. Cindy reviewed Summer's¹ work and challenged her to refine her mathematical explanation in a particular way. Cindy highlighted the following from Summer's work: "As the x-values get farther away from the origin the graph waves get close and closer together;" and then Cindy provided the following feedback: "I wondered if you can explain this using the relationship between the underlying quantities instead of just describing what the graph looks like." In this way, Cindy questions Summer's approach and pushes her to explain why the graph has particular visual features. This is a representative example of the way in which participants challenged one another to engage mathematics explanations in ways that align with course goals.

Mediated by the DB, participants collectively reflected on their mathematical activity. For example, Paul initiated one of these conversations: "I am gaining a greater appreciation as to why we are focusing so heavily on the relationship between quantities — the fact that we need to talk about these relationships in order to be able to get at the 'why.'" In response to Paul's post, Chloe says, "I am also gaining a greater appreciation for these ideas because prior to these activities, I would only be able to explain the different properties of the sine function and not why these properties are true." In this way, Chloe agrees with Paul and relates this idea to the more specific case of trigonometry and sine functions. Taken together, this interaction initiated a shift in the class's discourse and contributed to the reification of their mathematical activity.

CONCLUSION

The virtual boundary encounter impacted teachers' norms for collaboration and mathematical discourse. Typical patterns in teachers' collaboration include sharing and comparing ideas while keeping differences in perspectives private (Grossman, Wineburg, & Woolworth, 2001; Zhang, Liu, Chen, Wang, & Huang, 2017). Silverman (2012), on the other hand, found that teachers who questioned and challenged colleagues to engage mathematics in specific ways were more likely to show significant gains in Mathematical Knowledge for Teaching (MKT) than mathematics correlated to pedagogical content knowledge (Shulman, 1986). This study illustrated that the virtual boundary encounter supported teachers frequently questioning and challenging colleagues, thus breaking down norms of agreement and creating an environment where teachers were more likely to have gains in MKT. Future research is needed to understand how the web-based tool supported occasions of challenge between teachers.

¹ All names are pseudonyms to protect the identity of the participants

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ABOUT THE AUTHOR



Anthony is a 4th year PhD student in the school of education. His background is in mathematics and mathematics teaching and learning. Prior to entering the PhD program, Anthony taught high school mathematics for five years in an urban school district in New Jersey. Anthony's research explores the ways which online community-based professional development and technology impact mathematics teacher learning and instructional change. In particular, his work concentrates on how technology mediates the emergence of online communities of teachers, teachers' persistent engagement in online communities, and the role of informal leaders in online communities.

► RESEARCH BRIEF NO. 10

An Expansive Learning Model to Explore Teachers' Collaboration for Student Success

WRITTEN BY: **MOLLIE A. GAMBONE**, PhD Student
SUPERVISING PROFESSOR: **DR. KRISTY KELLY**

March 2017

ABSTRACT

This brief uses Engeström's (2015) theory of expansive learning as a theoretical model for understanding how educators use collaboration as a site for practicing progressive pedagogy. This study illuminates how teachers at a small, progressive urban high school understand their learning. They believe that learning leads to *artisanal teaching*, which they define as: 1) having ownership of teaching, curriculum, and thinking; 2) mobilizing progressive pedagogy for authenticity in teaching and learning; 3) meeting students' needs; and 4) promoting an environment for themselves and their students to develop trusting, asset-based, critical, and analytical thinking.

AIM

The aim of this brief is to position Engeström's (2015) theory of expansive learning as a theoretical model for understanding how educators use collaboration as a process for practicing their progressive pedagogy.

PROBLEM

Progressive pedagogy weaves together a commitment to social justice within a democratic school environment that recognizes the distinctive needs and interests of each student as they operate within the whole school community (Little & Ellison, 2015). Creating a student-centered environment is the central notion of progressive pedagogy, and due to the individuality of each learner, is difficult to enact. Every student comes to school with a unique combination of strengths, weaknesses, interests, and experiences. Progressive educators work to understand these factors for each student, while simultaneously creating a sense of community where individual students learn to balance their own strengths and needs with the strengths and needs of others.

BACKGROUND

This brief focuses on the role of teachers as collaborative learners as they design environments where students can achieve success that is measured by setting and achieving personal goals. Situated within a yearlong ethnographic study of a small, progressive, private, urban high school, Castanea's (pseudonym) administrators schedule the school week with specific time set aside for students to set goals and for teachers to collaborate with one another to help students achieve those goals. This is done through an advisory system. Each teacher is an advisor for 6-10 students. Advisories meet together for 25 minutes each day. During this time, advisors and students set and monitor educational and behavioral goals.

Additionally, the advisors participate in Support Team and Feedback Meetings. The Director of Learning Support (DLS) has a regular, rotating schedule of Feedback Meetings every week with each of the different teams of teachers at the school. Each week, the Feedback Meetings focus on the students in a different set of advisories. During these meetings, teachers report on the academics, behavior, participation, and emotional state of each student in that week's agenda of advisories.

The DLS takes the Feedback Meeting data and presents it to the respective advisor during individual Support Team Meetings. Through this process, the DLS and the advisor, with help from the clinical social work team, collaborate to understand how each advisee is progressing with his or her goals, and how they can continue to grow. The DLS's goal is to facilitate a productive discussion about each student, both as an individual and as a member of the school community, in order to equitably provide support for the unique issues that each student is dealing with in a way that does not disrupt the classroom climate of decency and trust.

METHODS

For my dissertation, I conducted over 40 hours of participant observation in Feedback and Support Team Meetings. Additionally, I observed classes and advisories and conducted individual and focus group interviews with teachers and administrators. Through my analysis I sought to understand the nature of learning that occurred among Castanea faculty during these meetings. It became clear that the teachers, advisors and the DLS saw their main objective was to create an individualized plan for each student to meet their educational goals.

Engeström (2011) explains that, “in expansive learning, learners learn something that is not there yet. In other words, the learners construct a new object and concept in practice” (p. 87). Everyone involved in the advisory system works to help students set and achieve goals. The nature of goal setting is to push students to achieve something they had not been able to do previously, in other words – something that does not exist. Thus, a goal-setting objective can be seen as an expansive learning objective. Therefore, this theory is useful to understand how educators learn collaboratively to help students reach their goals. In this model, learning occurs as a subject (in this case, the advisor) navigates conflicts with others, with existing rules and practices, with the workload and division of labor, with the non-human objects they work with, and within one’s self.

The main conflicts that I observed were the advisor interacting with the rules, the community, the division of labor, and internally as they balanced their roles as teacher and advisor. These conflicts are explained pictorially in Figure 1. Castanea faculty must constantly negotiate their roles as teachers and as advisors. In doing so, they have to collaborate through the advisory system to monitor student improvement. The iterative nature of this process can be seen through the expansive learning model, and the subsequent learning can be studied as teachers work through conflicts in other nodes in the system.

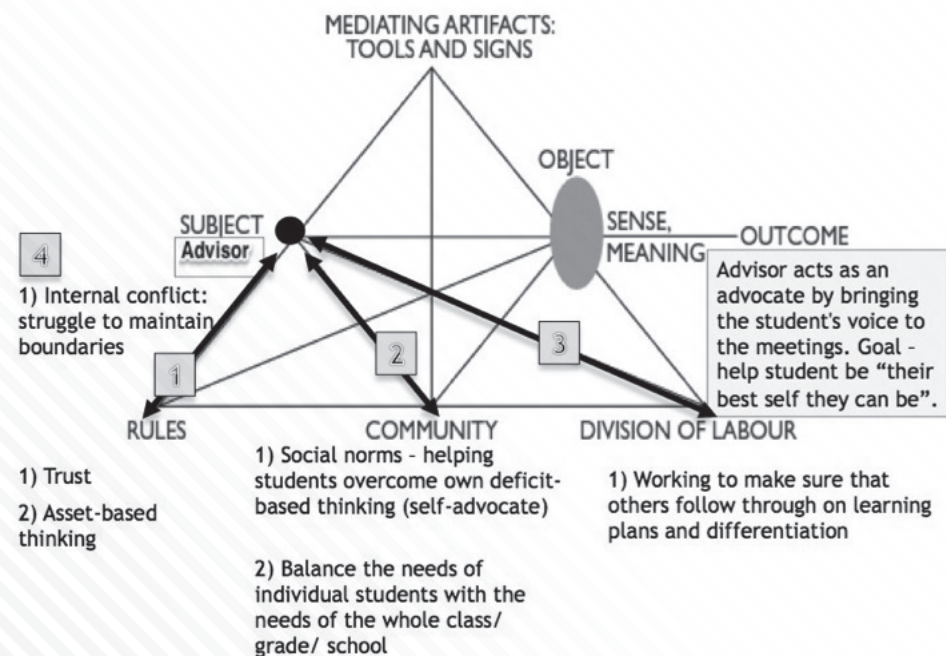


Figure 1. Common conflicts that advisor negotiate in the advisory activity system. Adapted from "The Structure of a Human Activity System (Engeström, 2009, p. 55).

DISCUSSION

As Castanea educators navigate their professional roles as advisor and teacher, they are constantly expanding the boundaries of their progressive practice. The conflicts they negotiate with the advisory rules, the community, their division of labor, and within their own teaching push them to regularly consider the role they play in providing democratic, socially-just education that is both student-centered and mindful of the school community. Castanea teachers feel that this open and ongoing skill development encourages them be “artisanal teachers.” They define artisanal teaching as: 1) having ownership of teaching, curriculum, thinking; 2) mobilizing progressive pedagogy for authenticity in teaching and learning; 3) meeting students’ needs; and 4) promoting an environment for themselves and their students to develop trusting, asset-based, critical, and analytical thinking.

IMPLICATIONS

A natural progression for the implications of studying teacher collaborative learning is to understand the systems and processes of progressive educators at other schools to further test the connection between teachers’ expansive learning, progressive pedagogy, and artisanal teaching.

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ABOUT THE AUTHOR



Mollie Gambone is a fourth year PhD candidate in the Educational Leadership Development concentration. Her dissertation is an ethnographic study of a small, progressive, private, urban school. In it, she focuses on the role that teachers and teacher collaboration plays in sustaining progressive reform by creating an atmosphere of community at the school. Apart from conducting her own research, Mollie also serves as the Graduate Assistant for the School of Education’s Critical Conversations in Urban Education (CCUE). Previously,

Mollie served as the Assistant Capstone Coordinator. In both 2014 and 2015 Mollie won the School of Education’s Student Leadership and Service award.

Before coming to studying at Drexel, Mollie earned her Master’s from SUNY Buffalo, a graduate certificate in teaching ESOL from Juniata University, and a BA in English and Secondary Teaching Certification from Shippensburg University. She has 12 years experience as a K-12 English language and literature teacher in the United States, Ecuador, Turkey, Bangladesh, and Honduras. When Mollie has free time, she enjoys traveling, scuba diving, reading, and having picnics.

► RESEARCH BRIEF NO. 11

Web-Based Technology Integration and Student Engagement in a Fully Online Graduate Program

WRITTEN BY: **LINDA GAINES**, EdD Student

SUPERVISING PROFESSOR: **DR. KRISTEN BETTS**

March 2017

ABSTRACT

Higher education learning management systems (LMS) incorporate web technologies into online courses to support student engagement with course content, the instructor, and peers. However, these technologies are often not optimized. This study examined how online faculty use web technologies and how the utilization of these technologies within a fully online master's program affects student engagement within courses. The study found that a limited number of technologies within the LMS were utilized for asynchronous student-instructor and student-student interactions. Second, professional development and ongoing support is important for faculty who integrate technology into their courses. Third, synchronous student-instructor and student-student interactions occurred through video-conferencing technologies. Finally, usage of web technologies supports student engagement and asynchronous student-instructor and student-student interactions.

AIM

Optimizing LMS web technologies or integrating web technologies into online higher education courses is a complex issue. Research has shown that the inception of web technologies has created opportunities for faculty to implement technology in online courses to enhance student engagement and learning dynamics (Diaz, 2008; O'Connor, 2012). Web technologies encourage interactive learning for students by helping them focus on social connectivity, including student-student and student-faculty interactions, which translates into interactive and collaborative student learning (Chiou, 2011; Diaz, 2008; Reid, 2014).

PROBLEM & PURPOSE

Utilizing web technologies has been shown to engage students with course content and empower them to participate, communicate, create knowledge, and have more control over the learning process in a 21st-century learner-centered online learning environment (O'Connor, 2012). Given the increase in online enrollments, Title IV institutions must ensure their distance education courses align with the DOE's (2014) definition of distance education, which in part states, "education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously" (para. 2).

Technology use within and outside of the LMS provides faculty with tools to support interaction. Therefore, research was needed to explore how technology was being used in one online graduate program to ensure student-student and student-to-faculty interaction in compliance with the DOE's requirements for distance education and Title IV funding. The purpose of this study was to understand how online faculty used web technologies in courses within a fully online master's program and how these technologies affected student engagement within those courses.

METHODOLOGY

This study employed a sequential explanatory mixed-methods study utilizing a quantitative survey distributed to 92 students in courses within a fully online master's program. Additionally, semi-structured interviews were conducted with four full-time faculty who taught in the same online program. The researcher developed a multifaceted representation of the problem by including both quantitative and qualitative methods in the study. Using both methods provided a more robust picture of the research problem than using one method alone would have (Creswell, 2015). Additionally, these two methods consisted of combining, connecting, building, and embedding all the data collected to offer answers to the research questions.

RESEARCH FINDINGS

The following eight findings emerged from analysis of the quantitative data: (1) fewer than half the technologies within the LMS were utilized to support asynchronous student-instructor interactions; (2) students were satisfied with the technologies they utilized within the LMS and found them to be useful in supporting asynchronous student-instructor interactions; (3) fewer than a quarter of technologies within the LMS were utilized to support asynchronous student-student interactions; (4) students were moderately satisfied with the technologies they utilized within the LMS and found them to be useful in supporting asynchronous student-student interactions; (5) the majority of students used Google Docs technology outside the LMS to support their asynchronous interactions with their instructor and their peers; (6) students were satisfied with Google Docs and found it to be useful in supporting their asynchronous interactions with instructors and peers; (7) students used Blackboard Collaborate more than any other technology to support their synchronous interactions with their instructor and their peers; and (8) students were more satisfied with Blackboard Collaborate and found it more useful than any other technology for supporting synchronous interactions with their instructors. However, they found Google Hangout and Skype more satisfying and useful for synchronous student-student interactions.

The following four findings emerged from the analysis of the qualitative interview data: (1) online faculty used web technologies within the LMS to disseminate course information; (2) using web technologies within the LMS helped faculty support students to learn and apply material; (3) web technologies outside the LMS supported collaboration between faculty and students; and (4) technology support was necessary for students as they learn and apply web technologies in their courses.

The qualitative findings supplemented the quantitative findings by showing that online faculty who were interviewed used web technologies both within and outside the LMS to support student learning and application of course material, interaction with each other, and conveyance of course information. However, it was noted that students needed support to use technologies unfamiliar to them. This study showed that only a few of the available web technologies were utilized to support student engagement in online courses. Therefore, institutions must consider how faculty is engaging students in online courses.

DISCUSSION

These findings provide evidence consistent with research from Ajjan and Hartshorne (2008), Reid (2014), and Buchanan, Sainter, and Saunders (2013), which posited faculty utilized a limited number of web technologies within the online courses they taught. The dependability and complexity of technology, faculty self-efficacy, faculty support, professional development type/format and effectiveness, and faculty experience with technology are all potential issues within the broad scope of “instructional technology adoption” (Reid, 2014, p. 398).

Additionally, supported by research by Ahadiat (2005) and Reid (2014), this study demonstrated that different support systems need to be in place as the faculty learn new technologies. Workshops and appropriate training are helpful in assisting faculty to be savvier with technology; thus, it should be continued and enhanced. Finally, consistent with research by Venugopal and Jain (2015) and Chen, Lambert, and Guidry (2010), this study found that using web technologies supports student-instructor and student-student interactions, as well as student engagement within courses. One example is to use the scaffolding technique to integrate web technologies into lectures, discussion boards, and assignments helps develop students’ technology skills and engagement in courses.

RESEARCH IMPLICATIONS

Student engagement plays a critical role in online education. Student-student and student-instructor interaction is required in order for an institution to receive Title IV funding. This study showed that only a few of the available web technologies were utilized to support student engagement in online courses. Therefore, institutions must consider how faculty are engaging students in online courses. Higher education institutions should annually survey faculty and students about which technologies are being used to support both interaction and engagement within online courses. This information will benefit higher education institutions when making future licensing decisions regarding their LMS.

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Dr. Linda L. Gaines is a recent Drexel graduate, having earned her EdD in December 2016. She became intrigued by online education when she completed her Bachelor's degree in a hybrid format from Marist College, and then went on to receive her Master's degree from Drexel in a fully online format. It was a natural progression to work towards and complete her doctoral degree from Drexel completely online and have her dissertation focus on online education.

Linda teaches online for Marist College in the School of Professional Programs and on campus at Dutchess Community College in the Behavioral Sciences department. She also is a senior level Academic Coach and assists underprepared students to achieve their goals at DCC. She recently was invited to be a part of the Achieving the Dream initiative at DCC, which helps community college students complete their college education and have more opportunity for economic success. She is married and has two sons, Daniel (24) and Jacob (15). She loves to hike, geocache, and cook. Even though she lives in New York, she and her husband travel to Philadelphia often as it is one of her favorite places to hike.

► RESEARCH BRIEF NO. 12

Transdisciplinary Approach to Transfer of Learning

WRITTEN BY: **TAMARA GALOYAN**, PhD Student

SUPERVISING PROFESSORS: **DR. KRISTEN BETTS**
& **DR. PENNY HAMMICH**

April 2017

ABSTRACT

Transfer of learning forms the basis of thinking, learning, and problem solving and is often considered to be the ultimate goal of education. It is of crucial importance to understand what learning experiences can lead to successful transfer across multiple contexts. This research combines findings from education, psychology, neuroscience, and business to develop a new comprehensive transdisciplinary model to examine and evaluate adult learners' skills to transfer learning across different contexts and assist educators and instructional designers in developing effective instructional strategies for enhancing transfer in online and blended learning environments.

AIM

The purpose of this research study is to define the various factors affecting students' abilities and skills to transfer learning. The study seeks to develop a model that could be useful for (a) researchers, by providing a lens to understand the complex nature of transfer and the multiple dimensions at play; and (b) educators and instructional designers, by suggesting specific instructional strategies that can assist them in enhancing students' transfer skills in online and blended learning environments.

PROBLEM

In instructional and cognitive psychology, generally, and particularly adult education, transfer of learning has been a topic of research since the early 1900s, when E. L. Thorndike conducted his first studies to measure the degree to which people transfer learning (Woodworth & Thorndike, 1901). A major problem with transfer is that it is a rather controversial phenomenon and has proven to be hard to define or investigate (Barnett & Ceci, 2002). One possible reason for the controversy might be the fact that there is little agreement in scholarly research as to what constitutes transfer, what its underlying mechanisms are, and to what extent transfer occurs (Barnett & Ceci, 2002). Next, what constitutes as evidence for successful transfer still remains unclear. In their book entitled *Transfer on Trial*, Detterman and Sternberg (1993) provided analysis of research on transfer by concluding that most studies on transfer had failed to find evidence for it.

Another major issue with transfer is the lack of knowledge of specific instructional methodologies that could be used to enhance adult learners' skills to transfer learning in online and blended learning environments. This often results in students' inability to apply knowledge acquired in a learning context to the practical problems they encounter in their everyday lives and workplaces. As noted by Hung (2013), adult learners' employees are often required to be critical thinkers, independent problem solvers, and lifelong learners to be able to stay competitive in the job market. Therefore, it is important that college students or workplace trainees acquire the skills of applying and transferring knowledge across different settings.

Research Questions

This study aims to explore the following research questions:

- (1) What are the existing conceptualizations of learning transfer across four disciplines: psychology, education, neuroscience, and business?
- (2) How can adult learners' transfer skills be facilitated and evaluated in online and blended learning environments?

PROPOSED METHODS

This proposal acknowledges the multidimensionality of the transfer phenomenon and adopts a transdisciplinary approach to studying it. This approach emphasizes the importance of multidisciplinary research in solving a complex real-world issue (Knox, 2016). As noted by Samuels (2009), "What connects transdisciplinary participants is not a common theoretical perspective or methodology or epistemology, but a common issue to which all apply their own particular expertise with the goal of reaching a holistic understanding of an issue" (p. 49). With this in mind, this research combines findings from psychology, education, neuroscience, and business to study the transfer phenomenon. Adoption of a transdisciplinary approach assumes that the researcher is flexible and open toward multiple perspectives, interpretations, and assumptions while conducting research.

A multiphase mixed method research design, involving a combination of qualitative and quantitative studies, is proposed in order to be able to investigate the complex and multidimensional phenomenon of transfer. The three research phases are (1) developing a model; (2) testing the model; and (3) refining the model based on the findings.

Phase One of the study will involve developing a new comprehensive model of transfer based on an integrative literature review and surveys with faculty in four different colleges and schools at Drexel University: the College of Business, the College of Arts and Sciences, the School of Education, and the School of Biomedical Engineering, Sciences and Health Systems. The integrative literature review will be conducted across four different disciplines, namely psychology, education, neuroscience, and business. The main goal of the literature review will be to explore how learning transfer is characterized across different disciplines, while revealing the similarities and differences among the different approaches, theories, and definitions of the transfer phenomenon.

The next step in Phase One will involve designing an exploratory sequential mixed methods study involving semi-structured interviews and a survey to collect both qualitative and quantitative data on how the faculty across different colleges at Drexel characterize transfer of learning, as well as to explore the specific instructional strategies that they use to enhance their students' transfer skills. The qualitative data collected from the interviews will then be analyzed using an open coding technique, which will help to identify the emerging themes. Next, the findings from the qualitative data will be used to design a survey for instructors across the four colleges and schools at Drexel University. Descriptive and correlational analysis will be used to analyze the quantitative data collected through the survey.

Finally, the findings from both the extensive literature review and the exploratory sequential mixed methods study will be used to develop a new multidimensional model of learning transfer. The model will define the various factors affecting transfer and include specific pedagogical practices to facilitate students' transfer skills in online and blended environments.

Phase Two of this research study will include testing the model to examine the relationships among the factors across the different dimensions in the new model, such as pedagogical dimension, personal dimension, context dimension, and content dimension. Phase Three will involve refining the model based on the results of the data analysis in Phase Two.

RESEARCH IMPLICATIONS

The proposed model seeks to advance understanding of the transfer phenomenon by combining multiple approaches, methodologies, and levels of analysis. The new model will support and guide design and implementation practices for instructors across disciplines geared toward teaching for transfer. Concurrently, the new model will support learners with making connections across disciplines, between their personal lives, and at school or in a workplace. The ultimate goal is to be able to make a contribution to the process of repurposing education; shifting away from traditionalist views of what it means to be a successful learner, worker, or citizen.

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Tamara Galoyan is a doctoral student, enrolled in the Educational Leadership Development and Learning Technologies program in the School of Education at Drexel University. Tamara holds a Master's degree in TEFL (Teaching English as a Foreign Language) from the American University of Armenia and a Master's degree in Linguistics from the Yerevan State Linguistic University, Armenia. Her research interests focus on the neurocognitive, behavioral, and social factors affecting acquisition, retention, and transfer of learning in online and blended learning environments. Tamara has nearly a decade of experience in teaching English as a Foreign Language to learners of diverse backgrounds in Armenia and the US. She has also been involved in online, blended, and onsite course development, assessment, testing, curriculum design, training, and mentoring.

► RESEARCH BRIEF NO. 13

Barriers to Substance Abuse Treatment For Nurses

WRITTEN BY: **CAROL STANFORD**, EdD Student

SUPERVISING PROFESSOR: **DR. KATHY GELLER**

April 2017

ABSTRACT

One of the major public health concerns in the United States is prescription medication abuse & alcoholism. Nurses and other health professionals with substance use disorders are part of this concern. The primary purpose of this study is to address the current epidemic of drug misuse and abuse, including prescription drug abuse among the nursing population. It is to bring attention to how substance use disorders within the nursing profession endanger the public. Data was synthesized from existing literature to explain why prevalence of nurses that participate in treatment in general is lower than the prevalence of the general public's participation in treatment. Recommendations and methods are presented in the research that can be used to increase awareness in nursing education programs and within the nursing profession to remove obstacles to treatment. This could significantly impact the number of student nurses and licensed nurses entering treatment early in their nursing careers; thereby, providing greater public protection.

AIM

The aim of this meta-analysis study is to address the current epidemic of drug misuse and abuse, including prescription drug abuse among the nursing population. It will bring attention to how substance use disorders, that occur in the nursing profession, affect the profession and endanger the public. This study will explain why the prevalence for substance abuse treatment for nurses is less than it is for the general public and identify the barriers that exist that prevent nurses from entering into treatment.

PROBLEM OR ISSUE

Nurses comprise one of the largest segments of the U.S. workforce and are the nation's largest healthcare profession (U.S. Bureau of Labor Statistics, 2014). They have consistently been rated as the most trusted profession in society and are steadily thought of as understanding and caring (Horton-Deutsch, McNelis, & O'Haver Day, 2011). However, studies reveal that substance abuse and addiction are serious concerns within the nursing profession. These studies indicate that anywhere from 10-20 percent of nurses are impacted by substance abuse. This is approximately the same, or higher than the general public (National Council of State Boards of Nursing [NCSBN], 2011). Substance abuse by nurses can have a significant negative impact on patient care. This is especially disconcerting since there are an estimated 3.1 million RNs nationwide and 2.6 million or 84.8% of these RNs employed in nursing. The impact on nursing using this estimated rate indicates approximately 310,000 to 620,000 nurses within the United States may be affected by substance use disorders. Despite these concerns within the nursing profession, there are several barriers to substance abuse treatment for nurses.

DISCUSSION

The use of illegal substances, the misuse of prescription medications along with alcoholism are major public health concerns. Prescription drug overdoses claim more lives than heroin and cocaine combined (CDC, 2011). Nurses are at risk for developing problems with prescription abuse and addiction for many reasons. These risk factors include family history, work stress, lack of education, and easy access. Research has indicated that treatment does work to address these risks. Treatment is greatly effective when it matches the needs of the individual and is followed with therapeutic support systems. Additionally, according to Monroe, Kenaga, Dietrich, Carter, and Cowan (2013), the nurse population has been identified as receiving less addiction treatment than the general population. There exist several barriers to treatment for nurses. These barriers include lack of resources, public perception, stigma associated with addiction, workplace neglect, lack of education, and inappropriate coping mechanisms (NCSBN, 2011). This study identifies several factors surrounding nurses and substance abuse and recommends areas of prevention and treatment for nurses with substance use disorders.

RESEARCH PURPOSE & SIGNIFICANCE

This is a meta-analysis study that seeks to illuminate the substance abuse and prescription drug epidemic that occurs within society and within the nursing profession. It identifies the risk factors for those nurses who are prone to engage in substance abuse activities and identifies the barriers to treatment that exist against nurses who have substance use disorders. It will add to the body of knowledge related to nursing and substance abuse. This research can be the foundation for future studies related to prevention and treatment of addiction in nurses.

CONCLUSION

Substance abuse is a major concern in society and within the nursing profession. Nurses are susceptible to substance abuse for many reasons. The purpose of this research study was to synthesize data that would identify and address the current epidemic of drug and alcohol abuse, including prescription drug abuse, within the nursing profession. The study identifies risk factors that exist for nurses entering the profession and the barriers to treatment that occurs within society and the healthcare system against nurses with substance abuse issues.

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Dr. Carol Stanford has recently graduated with her EdD from Drexel University. Her concentration is in higher education and her research focuses on registered nurses and addiction. She holds a Master's in Public Health from Drexel University. She was the specialist or program manager of California's comprehensive substance abuse and mental health monitoring program for nurses for over 14 years. She was involved with disciplining nurses for substance abuse and unprofessional conduct for 8 years prior. She was a part of the Substance Abuse Committee that wrote the Substance Use Disorder in Nursing manual for National Council State Boards of Nursing and has instructed nurse educators and administrators throughout her career about substance use disorders and mental illness in registered nurses.

► RESEARCH BRIEF NO. 14

Examining Pedagogical Beliefs About Teaching for Creativity: Converting STEM to STEAM Classrooms

WRITTEN BY: **ELAINE PERIGNAT**, PhD Student

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

May 2017

ABSTRACT

This research brief describes a proposed research study on STEAM teachers' creative mindsets and the implications for teaching creativity in the classroom. This research brief includes a review of existing literature on STEAM education and creative mindsets, and introduces a proposed mixed methods design to examine the relationships among teachers' creative mindsets, pedagogical methods, and learning environments in STEAM classrooms.

AIM

The purpose of this research brief is to provide an overview of a proposed research study on the implications of teachers' creative mindsets on pedagogical approaches to teaching in STEAM classrooms. The study will examine the relationships among STEAM teachers' creative mindsets and the methods employed in the classroom to teach creativity and develop a creative learning environment.

BACKGROUND & PROBLEM

With global competition rising, educators have been expected to increase student interest in science, technology, engineering, and mathematics careers, as well as develop necessary 21st century skills like creative problem solving and critical thinking (National Academies of Sciences, Engineering, and Medicine, 2016; Partnership for 21st Century Learning, 2011). As a result, a new pedagogy has developed that aims to integrate the arts with science disciplines, introducing a new acronym known as STEAM (science, technology, engineering, ARTS, and mathematics) (Daugherty, 2013). Although some STEAM programs have shown to be successful in areas of student engagement, interest, and some 21st century skills, this ambiguous term has led to a variety of interpretations and a wide range of frameworks, structures, pedagogies, and learning goals (Liao, 2016).

Van Driel, Bulte, and Verloop (2007) explain that teachers' pedagogical beliefs impact their interpretations of curriculum, teaching methods, learning goals, and subsequent actions in practice. Established pedagogical beliefs do not change easily or quickly, resulting in many ineffective professional development trainings that introduce innovative teaching methods, theories, or new curricular designs (Van Driel, et al., 2007). Therefore, it should be no surprise that the introduction of the STEAM concept has propagated a variety of interpretations (Liao, 2016).

Contributing to the confusion is the concept of creativity as both a teaching methodology and a learning outcome of STEAM education (Jeffrey & Craft, 2004; Liao, 2016). Jeffrey and Craft (2004) explain that there are distinctions between teaching creatively (using materials and approaches to engage students) and teaching for creativity (developing students' own creative thinking abilities through interactions). While the methods are not dichotomous, teaching for creativity is directly linked to developing student creativity by allowing the students to model the teacher's creative behavior in the classroom (Jeffrey & Craft, 2004; O'Brien, 2012). Teachers' behaviors are connected to their pedagogical beliefs about the process of learning, approaches to teaching, and development of a supportive learning environment (O'Brien, 2012). Therefore, in order to encourage and support student creativity in the classroom, teachers must be self-aware of their pedagogical beliefs about creativity.

STEAM is in its early stages of development with much confusion and disagreement over terminology and meaning of its intended design (Liao, 2016). Extant research explores creative mindsets, teaching for creativity, developing creative learning environments, and developing creativity through the arts; however, there is limited research that examines these combined concepts in STEAM education (Herro & Quigley, 2016). New research is needed to explore and identify teachers' interpretations of the STEAM approach, and understand the ways in which teachers' pedagogical beliefs are impacting the development of students' creativity and other 21st Century skills.

METHODOLOGY

Research Questions

- (1) What is the relationship between STEAM Teachers' creative mindsets and their pedagogical approaches to teaching creativity?
- (2) How do STEAM Teachers' creative mindsets impact the creative learning environment?
- (3) How do STEAM Teachers' creative mindsets influence students' creative mindsets?

DESIGN

This proposed study will use a convergent mixed methods design in order to merge and interpret results from both quantitative and qualitative data (Creswell, 2015). A convenience sample of STEAM teachers will complete the Beliefs about Creativity Survey (BACS) in order to obtain scores on four factors: creative self-efficacy, creative identity, mindset about creativity, and desirability of creativity for academic and workplace success (Hass, Katz-Buonincontro, & Reiter-Palmon, 2016). A convenience sample of students will also complete the BACS, and appropriate statistical analyses and comparisons will be conducted (Creswell, 2015).

Qualitative data will be collected through classroom observations, semi-structured interviews with select STEAM teachers, and student focus groups from select STEAM classrooms (Creswell, 2015). The data will be coded and analyzed to determine the types of pedagogical approaches used in STEAM classrooms and structure of the learning environment.

The quantitative and qualitative analyses will be merged (Curry & Nunez-Smith, 2015) in order to understand the impact of teachers' pedagogical beliefs about creativity on STEAM teaching methods and learning environments.

SIGNIFICANCE

In order for STEAM to evolve, research must explore the current interpretations of STEAM education, current teaching methods, and intended learning outcomes (Liao, 2012). As part of the process of growth, research is necessary in order to advance the quality of education in our schools. This study will provide the insight necessary to understand the impact of teachers' pedagogical beliefs on teaching creativity, the learning environment, and students' creative mindsets in STEAM classrooms. Further, this study will contribute to the limited research on STEAM, and begin to address the misconceptions of teaching creativity in STEAM classrooms.

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Elaine Perignat is a second-year doctoral student in the Educational Leadership Development and Learning Technologies program with a concentration in STEM education. Her research interests explore creative cognition and critical thinking, teaching for creativity, and pedagogical methods in STEAM education. She has recently completed a critical book review on STEAM instruction (in press) for the Arts Education Policy Review.

► RESEARCH BRIEF NO. 15

Supporting Nurses to Speak Up For Patient Safety

WRITTEN BY: **NICOLE HALL**, EdD Student

SUPERVISING PROFESSOR: **DR. VALERIE KLEIN**

May 2017

ABSTRACT

A recent calculation by healthcare industry researchers identified medical error as the third leading cause of death in the United States. Having nurses speak up when they have a patient care concern is recognized as a means of preventing medical error. Yet studies show nurses are hesitant to do so. This mixed methods study sought to understand the challenges the phenomenon of verbalizing a patient care concern has, and identify factors that hospitals can use to better support nurses to speak up.

AIM

The research brief addresses the role that nurses' speaking up has on preventing medical error and communicates the findings of this dissertation study which focused on helping hospitals better support nurses in speaking up. A recent calculation by healthcare industry researchers has identified that medical error is the third leading cause of death in the United States, ranking it just below heart disease and cancer (Makary & Daniel, 2016). It is widely accepted that communication is a key element lessening the occurrence of medical error, and speaking up, a subset of communication, is similarly recognized as a means to improve patient safety, yet studies have shown that nurses are hesitant to do so (Kaufman & McCaughan, 2013; Maxfield, Grenny, Lavandero, & Groah, 2010). The topic of speaking up was selected as the focus for this study to further understand the experience of speaking up and answer the central question, how can hospital leadership and management better support nurses in speaking up?

METHODOLOGY

A mixed methods approach with an explanatory sequential design was used, where quantitative analysis occurs first and then qualitative analysis is employed to elaborate on the quantitative findings. In the quantitative phase, hospital staff (n=321) responses from seven inpatient nursing units at ABC Hospital were used to calculate Spearman's correlations for 63 items on an Employee Engagement (EE) survey. In doing so, 21 EE survey items were found to strongly link with a nurse's willingness to speak up. These strongly linked items were then grouped into topics and quality/process improvement and safety were selected for additional exploration in the qualitative phase because both topics were represented multiple times in the strongly linked Spearman's correlations, seven and four respectively. The third focus was on perceptions of staff-physician relationships because this survey item had the weakest link effecting a nurse's willingness to speak up. This focus was selected because the literature review indicated that these staff-physician relationships have been found to be important for speaking up.

Five individual interviews were then conducted with nurses from ABC Hospital, two filled leadership positions and three practiced at the bedside. In coding responses, six major themes emerged with one, Professional Integrity, having seven sub themes. While some themes were previously noted in the literature, new findings were also identified.

RESULTS

This study identified the following five factors not previously addressed in the literature as opportunities for impacting nurse willingness to speak up:

- (1) Nurse's perceiving that the hospital was focused on quality/process improvement.
- (2) A charge nurse's response after a nurse speaks up to him/her, and the charge nurse's willingness to support other nurses when they desire to speak up.
- (3) Having common goals, when organizational/leader goals match a nurse's own goals.
- (4) Nurse perception that their voice is valued by leaders and the organization.
- (5) Whether the nurse believes that rules are upheld and applied in an equitable manner.

It is understood that there are a number of factors that either increase, such as rewarding speaking up, or decrease, such as lack of confidentiality, a nurse's willingness to speak up. This study also found that for some nurses' specific factors are more influential on their decision to speak up because of experiences they have had. For example, one interviewee shared an experience where their confidentiality was breached after speaking up and this theme of feeling that confidentiality will be maintained surfaced more than any other theme for this interviewee. The frequency with which this theme emerged can be interpreted as indicating that the need for confidentiality is more important than any other factor when deciding to speak up. Therefore, leaders must recognize that speaking up is not only complex with multiple factors impacting the nurses' decision, but is also individualized in that nurses may have specific factors they consider most important and will be most effecting when they are deciding whether or not to speak up.

RECOMMENDATIONS FOR FUTURE RESEARCH

Further research into speaking up in nursing is warranted and should be focused on three major areas. First, more data is needed regarding the charge nurse role, and whether this finding generalizes beyond ABC Hospital. Second, this study leaves the question of how speaking up may be effected in vulnerable or minority nurse populations and a cross-cultural study design examining this topic would be beneficial. Lastly, additional research concentrated on events after a nurse speaks up is needed, because even if the practice of speaking up is established its impact will be inadequate if those who need to respond fail to do so.

CONCLUSION

In conclusion, speaking up is recognized as a means to positively impact patient safety but is also known to be a complex phenomenon where an individual considers multiple factors when choosing whether to voice concerns (Lyndon et al., 2012). While this and other studies have identified factors that impact willingness to speak up, further support and intervention is necessary so that the practice of speaking up in nursing can be firmly established.

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