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Teachers' Experiences That Influence Their Self-efficacy to Foster Student Creativity

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This is to certify that the doctoral study by

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Abstract

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by

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MAT, University of Arkansas at Monticello, 2009

MFA, Kent State University, 2000

BA, Winthrop University, 1992

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Creativity has been included in student learning and model teaching standards with little systematic attention on the preparedness of current practitioners to implement such expectations. This qualitative case study is conducted to discover what knowledge and skills teachers perceived to be necessary to implement practices that foster and develop student creativity with a strong sense of self-efficacy. A purposeful sample of 58 teachers from 4 Arkansas A+ (ARA+) network schools shared their perceptions of how creativity-fostering professional development (PD) influenced their sense of self-efficacy to foster creativity and answer the research questions. Data were collected using questionnaires, individual interviews, and focus groups and analyzed through comparative analysis of open-ended responses. Findings showed that teachers who reported attending ARA+ PD had a positive influence on their sense of self-efficacy to foster creativity through shared applicable ideas and permissible risk taking. Establishing infrastructure for the creative process was determined to be the most salient knowledge and an increase in flexible thinking was the most salient skill. Conclusions drawn from teachers' experiences could provide an opportunity for positive social change through insightful recommendations. Creativity-fostering strategies, such as brainstorming procedures, were recommended for both professional interactions and for classroom instruction. Conclusions and proposed recommendations promote a deeper understanding of how efficacious beliefs towards creativity integration among practitioners could improve systematic efforts to address the imperative call for teachers to develop creativity skills within students.

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Dedication

I wish to dedicate this dissertation to my three life champions: my mother, Cynthia M. Wilson; my sister, Melissa W. Hammett; and my husband, Scott A. Lykens. They are responsible for constantly empowering me with their biased love and admiration of me. With their feet firmly planted on the ground, they have given me the ability to reach for the stars.

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Any singular action is a convergence of countless previous actions. I could not have completed this action without the countless, generous actions of others. I wish to take this opportunity to thank and acknowledge the people responsible for those actions. First, I acknowledge the actions of the heart. Above all, I wish to thank my husband and children who sacrificed the most precious gift of all, time. I am grateful to my entire family who unequivocally communicated their love and support of me, both spoken and unspoken. Finally, I am fortunate to have friends who collegially contributed their wisdom and expertise to many different drafts. That leads to the actions of the mind. In many ways, my completion is the harvest of the combined actions of all faculty and staff of Walden University. I am grateful for every resource, whether it was personal feedback, accessibility to social networking conversations, or guiding documentation. While my growth was certainly fed by many, one was a true cultivator. I am forever in debt to Dr. Sharon Goodvin's patient, persistent, and graceful mentorship.

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Chapter 1: Introduction to the Study

Developing creative students for citizenship in an increasingly changing world has become an institutionalized educational goal (Soulé & Warrick, 2015). Consequently, professional expectations of teachers now include student creativity development (Interstate Teacher Assessment and Support Consortium [InTASC], 2011). Although challenged with the task to develop creative students, it remains unclear how efficacious teachers feel to accomplish this new goal and what they need in order to do so. To date, most creativity research within the context of education has focused on the student (Jeffrey & Craft, 2004; Sawyer, 2015); however, research that considers the teacher as a variable in student creativity development is growing. As part of the research continuum, I explored the experiences of teachers from Arkansas schools that have participated in creativity-fostering professional development (PD). The study was designed to provide the opportunity to investigate teacher perceptions of how creativity-fostering PD influenced their sense of self-efficacy to address student creativity. Findings from this dissertation study might provide a unique contribution to individual teachers, their local school communities, and broader education communities due to two factors, the inclusive scope of participating teachers and the qualitative analysis approach that builds understanding from the practitioners' perspective.

The decisions and actions of teachers are influenced by their beliefs (Cheung & Leung, 2013). Teachers with a sense of self-efficacy, or the belief in one's aptitude to competently execute any given task associated with teaching for all students, experience higher rates of effective instruction (Bandura, 1997; Holzberger, Philipp, & Kunter,

2013; Tschannen-Moran & Hoy, 2001). This belief, however, is a complex construct, one that fluctuates due to more immediate experiences (Dicke et al., 2014) and one that requires more nuanced assessment for the various tasks associated with teaching (Guo, Connor, Yang, Roehrig, & Morrison, 2012). Considering the rate of change in modern society and education over the last 2 decades, it is important that researchers continue to explore how the belief of teacher self-efficacy withstands change, in order to support teachers' needs to maintain a high sense of self-efficacy in new teaching expectations that results in effective instruction for the student.

Creativity, as a concept, is undergoing a pivotal shift in how it is perceived and understood by general society. Regardless of creativity's elusive social history, creativity as a research topic has a limited, contemporary history. Initially, researchers, such as Guilford (1950) and Torrance (1995), were focused on defining creativity as capacity, an ability that was explicable and measurable. As the collection of creativity research has grown, creativity has proven difficult to define (Radclyffe-Thomas, 2015) and continues to produce numerous theories to explain this multifaceted construct (Kaufman & Beghetto, 2013a; Miller, 2012). Among the assemblage of research, creativity, in general, has two definitive features: (a) the result is novel and unique while simultaneously being perceived as socially appropriate and (b) the result is acceptable for the purpose and/or task (Beghetto & Kaufman, 2013a; Runco & Jaeger, 2012). Just as creativity's assemblage of definitions has produced two salient characteristics, so too have the assemblage of creativity development theories produced salient understandings. One of the most important distinctions is the multiplitious nature of creativity development.

Generally, researchers acknowledge four strands of creativity: product, person, process, or press, better known as environmental surroundings (Glăveanu, 2013), which can be developed. No matter if an individual creativity or overall creativity is being developed, researchers acknowledge there are developmental stages of creativity (Kaufman & Beghetto, 2013a; Silvia et al., 2014). Just as the body physically develops, so too does the brain and its creative abilities. As research has developed a universal construct of creativity, universal perspectives of creativity have shifted from enigmatic ability to a human capacity that can be developed (Kaufman & Beghetto, 2009; Torrance & Safter, 1990).

Despite the numerous insights into how creativity develops and consequent new perspectives of creativity as a capacity, the application of creativity research in the classroom has proven to be a challenge. Torrance (1970, 1995) believed creative learning required creative teaching from teachers who believed themselves to be creative professionals. Realistically, educational policy isolated creativity development to Gifted and Talented programs, taught only by the designated teachers for designated students (Flint, 2014). In contemporary research, a greater emphasis has been placed on clarifying professional practices that foster and develop the creative capacity in students (Beghetto & Kaufman, 2013; Brinkman, 2010; Kaufman & Beghetto, 2013b; Lee & Kemple, 2014; Soh, 2015; Starko, 2013). The research reveals that even after decades of reports, books and articles to promote creativity in the classroom, most teachers' practices have not significantly changed to support student creativity development (Davies et al., 2013; Sternberg, 2015). Because societal demands are shifting educational policy to include

creativity development into all classrooms for all students, research that explores the practitioner's perspective of what knowledge and skills are necessary to incorporate practices that foster creativity seems particularly relevant, if not urgent.

The remainder of this chapter is intended to establish the foundational pieces to my study. First, I will explain the contextual background of how creativity development became an educational goal, hence, a new teaching expectation. Further elaboration will connect how new teaching expectations without prior experience with creativity development, either past teacher preparation or current professional development, has created a potential gap, hence a problem that deserves investigation. The investigation into the current phenomenon, undetermined teacher efficacy to fulfill the expectation to develop creativity in students, was explored from a practitioner's perspective. This study focused on a case of practitioners across the state of Arkansas who, as an entire faculty, self-selected to attend creativity fostering professional development. Additional details of this study follow, including research questions, an overview of my conceptual framework and definitions of study-specific terms. Finally, the chapter will conclude with the parameters of the study, identifying targeted population, the limitations, and potential significance of the proposed study. Through Chapter 1, the reader will have an understanding of how I have been informed through research and how I intend to contribute to the research continuum.

Background

Since the turn of the 21st century, there has been increasing demand for public education to develop creativity skills in students in order to prepare them for an ever-

changing contemporary society (Cheung & Leung, 2013; Schleicher, 2012; Samson, 2013). These demands have stemmed from organizations and governments around the world. The Organization for Economic Co-operation and Development (OECD) and others have recognized creativity as a powerful force in modern economies (OECD, 2000, 2014a; United Nations, 2013) to the point of recognizing creativity a necessary skill for modern citizenship (OECD, 2014b). On a national level, Partnership for 21st Century Learning (P21) (2015), a collaboration among education, business, and community leaders, cited creativity as a necessary skill for college and career readiness. Numerous organizations such as Center for Childhood Creativity (2014) and the National Creativity Network (2014) advocated creativity as a vital skill to human development and society. The demand for creativity has been growing in a variety of career fields, therefore, intensifying demands for its inclusion into formal education.

Demand for creativity in education has increased immensely since the turn of the century; however, the importance of integrating creativity in public education is a well-established argument (Beghetto & Kaufman, 2014; Robinson, 2011; Torrance, 1995). For over half a century, the significance of creativity as cognitive ability has been debated (Batey, 2012) and creativity as a predictor of successful citizenship has been tested (Runco, Millar, Acar, & Cramond, 2010). Due to the ambiguity of creativity, it was interpreted as an innate talent (Burkus, 2014), beyond a teacher's control (Kampylis, Berki, & Saariluoma, 2009). In terms of educational policy, creativity development has only been supported within Gifted and Talented (GT) programs (Flint, 2014). Identification of creativity as a 21st century skill, necessary for contemporary careers

(OECD, 2014a; P21, 2015), has shifted the focus to incorporate the ideology of creativity development as a vital component in all classrooms and within all disciplines (Barbot, Besançon, & Lubart, 2015). This shift in creativity ideology has historical implications to classroom practices and professional practices of all teachers, in order to develop creative and innovative students.

Educational practices change along with evolutions in law and societal expectations. With the enactment of *Every Student Succeeds Act* (ESSA) (2015) changes in state educational policies and regulations are expected. As changes in state law occur, the profession will continue to adjust and evolve with those changes. The current pool of practitioners, however, reflect the preceding federal law *No Child Left Behind* (2002), which required all teachers to be highly qualified by having a bachelor's degree, a teaching license, and demonstrating content knowledge of the subject being taught. While this law codified quantifiable requirements, it did not address qualitative components such as course requirements for career preparation and dispositions necessary to be an effective teacher. Recently, the InTASC acknowledged that model teachers possess the knowledge and disposition to develop creative thinking through explicitly stated processes and implied practices (InTASC, 2011). Here too, the standards clearly articulate expected professional behaviors yet do not indicate the education and experiences that might prepare teachers to execute those behaviors effectively. Some states have adopted the *InTASC Model Core Teacher Standards* (2011), creating a change in professional expectations for teachers (see Arkansas Department of Education (ADE), 2012). This study is well timed with the transition from NCLB to ESSA and the

anticipated flexibility in accountability measures, such as quality indicators and measures of growth. Although provided the opportunity to account for new expectations, such as student creativity, it remains unclear how states might address accountability beyond traditional assessments. While expectations for creativity in the classroom may have changed, it is unclear how quickly dispositions, knowledge, and practices of both pre-service and in-service teachers will change or what specific resources and professional development are essential for them to feel prepared to implement the changes effectively.

Researchers have produced complex, interdependent creativity development models that could prove useful to educational practices designed for student creativity development. Such models explain the differences between general creative ability and domain specific creativity (Silvia, Wigert, Reiter-Palmon, & Kaufman, 2012), distinguish phases of creativity development throughout a lifespan (Kaufman & Beghetto, 2009; Silvia et al., 2014) and identify four strands of creativity development (Amabile & Pillemer, 2012; Cropley & Cropley, 2008; Glăveanu, 2013). Student development is dependent upon the teacher, who determines instructional strategies and learning activities that either support creativity or suppress it (Beghetto & Kaufman, 2014; Hong, Hartzell, & Greene, 2009). These models, therefore, have direct implications for student creativity development in the classroom context. Herein exists a problematic gap, for most creativity research has focused on student creativity development, not necessarily on how to develop teachers who incorporate creativity-fostering practices. Therefore, regardless if models of creativity development exist, this gap between effective research-based practices and teacher preparation in creativity has an impact on teachers' views of

their own abilities to foster creativity in students. This gap may result in frustration and feelings of inadequacy in teachers who have previously felt successful in the classroom.

Teachers are as unique as students; therefore, each teacher's individual beliefs contribute to his or her general practices and professional choices. Teacher self-efficacy, or the belief in one's capacity to competently execute any given task associated with teaching for all students (Bandura, 1997), has been correlated to a teacher's willingness to use responsive instructional practices (Guo et al., 2012). Yet, because the responsibilities of teachers are multifaceted, the construct of self-efficacy can fluctuate depending upon which responsibility is measured (Tschannen-Moran & Hoy, 2001). In fact, Holzberger, Philipp, and Kunter (2013) found a teacher's sense of self-efficacy in classroom management could be independent of instructional strategies. Furthermore, it cannot be assumed that the construct is stable based on years of experience or degree earned (Guo et al., 2012), particularly when systematic change in practice is involved (Pyhältö, Pietarinen, & Soini, 2014). Due to the inclusion of creativity in classrooms as a systematic shift in professional practices, this is a note-worthy case. As Collie, Shapka, and Perry (2012) concluded, teacher stress, related to implementation of new teaching strategies, resulted from feelings of skill inadequacy. These findings have significance within the context of creativity in the classroom as a new systematic expectation.

Little is understood about what experiences and prior knowledge teachers need to efficaciously execute practices that foster creativity within students. Overwhelming support from creativity researchers suggests teacher education as a preliminary step to teaching for creativity (Davies et al., 2013; Kaufman & Beghetto, 2013b; Starko, 2014;

Torrance, 1995). It is probable, however, that most teachers have not received foundational experiences with creativity research or theory due to creativity's previous distinction within gifted education (Renzulli, 2011). Previously, creativity was stereotypically interpreted as exceptional and reserved only for GT, therefore, it is probable that most teachers have not received foundational creativity experiences. This void of experience could explain the disconnect between belief and practices. Davies et al. (2013) reported only a small percentage of teachers executed creativity-fostering practices even though the sample overwhelmingly shared the belief that creativity is valuable. If all teachers are to develop students who possess the 21st-century skill to think creatively, it is important to discover and determine what experiences and knowledge teachers need to efficaciously execute that task.

Persistent demands to develop creative students may have resulted in new teaching standards that explicitly and implicitly address creativity development, however, policy changes do not necessarily equate to changes in practices. Even though teachers agree that creativity is a valued skill, teaching practices to develop creativity have not increased (Davies, et al., 2013). How prepared teachers are to change their practices in order to address changes in policy remains questionable. Findings from this study could provide insight from the teacher's perspective on foundational needs for efficacious implementation of the current teaching and learning standards to include practices that develop creative thinking skills and address the broader 21st-century skills learning initiative to foster creative students.

Problem Statement

Teachers have been charged to integrate creativity development in their classrooms because of its identification as a 21st-century skill without much investigation into how efficacious current practitioners feel about being able to execute this new task (Kampylis, 2010; Mullet, Willerson, Lamb, & Kettler, 2016). Inclusion of creativity in general educational policy, standards, and practices have increased over the last decade (Cheung & Leung, 2013; Jia, Oh, Sibuma, LaBanca, & Lorentson, 2016; Liu & Lin, 2014). In the United States, *Model Core Teaching Standards* (InTASC, 2011) explicitly include the ability to engage student creativity as a professional standard and infer the requirement to foster students through the creative process and provide creativity fostering environments. A shared societal value for creativity (Kampylis et al., 2009) may have inadvertently created an assumption that teachers felt competent to execute the new task. On the contrary, research has shown teachers are unsure about incorporating creativity in the classroom (Kampylis, et al., 2009). Schacter, Thum, and Zifkin (2006) recorded an impressive 400 hours of observations among primary teachers and reported "hardly any teaching behaviors that increased student creativity" (p.61). Furthermore, their findings supported Torrance and Safter's (1986) claimed, "that teachers are not equipped to meet the needs of students in terms of creativity because teachers do not appear to know how to initiate, conduct, or evaluate creativity themselves" (p.62), meaning teacher preparation for student creativity development had not changed in over 20 years. In fact, Beghetto and Kaufman (2014) explained many traditional teaching activities intended to support creativity, in actuality, suppress creativity due to teachers'

lack of foundational understanding of creativity. Teachers are responsible for countless decisions, including instructional practices. Sandholtz and Ringstaff (2014) verified that most teachers base their instructional decisions upon previous educational experiences (Cheung & Leung, 2013) and, in turn, educational experiences contribute to teacher self-efficacy (Beghetto, 2014; Sandholtz & Ringstaff, 2014). Considering the historical absence of creativity in general education policy and practice, current practitioners' experiences with creativity and creativity fostering practices would be unpredictable. There is little evidence, therefore, to support that current practitioners would have a strong sense of self-efficacy to develop creativity within students (Davies, 2013; Jia et al., 2016), even though the responsibility to understand the creative process in order to develop the skill in students is a professional standard (InTASC, 2011) for instruction.

Historical trends would suggest teachers' creative learning experiences, or professional development that thoroughly explores creativity research, is inconsistent. In the past, creativity as a subject for teacher preparation has been reserved for GT certification (Flint, 2014). This implies current teaching professionals' exposure to creativity research may be minimal, as well as experience with theoretical practice of the skill. There are no guiding documents outside of GT (National Association for Gifted Students [NAGS], 2013) from the federal level, such as Common Core State Standards (Common Core Standards Initiative [CCSI], 2011a, 2011b) to define student creativity development benchmark goals. Even though publication options flood the market with lesson plans and strategies to assist teachers (Sternberg, 2015), emphasis is placed on the tools, not the importance of understanding the skill or to what creative developmental

purpose it serves. As Sternberg (2015) pointed out, this influx of published information is not changing educational practices. Finally, teachers may have limited models to apply in their own instruction. Personal experiences with and direct instruction in creativity development may be rare due educational policy that reserved such skills to GT curriculum.

What results from the changes in professional expectations with a lack of supportive training is a possible void in professional preparedness among many current practitioners charged with the responsibility to develop creativity skills in all students. A crucial step to understanding if a void exists in professional preparedness is to explore the phenomenon from the perspective of the practitioner, specifically teachers who have sought professional development experiences that promote creativity-fostering practices. This phenomenon of a potential void in teacher preparation to foster creativity validates the need to research the question, "How do teachers think creativity fostering professional development has influenced their self-efficacy for fostering creativity in students?"

Purpose of the Study

The purpose of this study was to discover what knowledge and skills teachers perceive to be necessary in order to efficaciously implement practices that foster and develop student creativity. Recommendations of how to foster creativity from creativity researchers abound (Sternberg, 2015), yet most of creativity research uses quantitative, experimental studies (Long, 2014). Educational communities are often ill matched for experimental research designs (Miles, 2015; Wyatt, 2014; 2015), therefore,

recommendations from experimental studies may be inadvertently fragmentary. Inductive, qualitative research from the practitioner's point of view was a much-needed contribution to the creativity research paradigm.

Most creativity research investigating the relationship between student creativity and teacher and teaching practices have been from the researcher's hypothetical point of view. For example, Lee and Kemple (2014) reported that creativity-fostering practices were significantly more likely from teachers with specific personality traits. These findings provided little guidance to positive social change. It would be unethical to propose educational hiring practices based on personality tests. It was vitally important, therefore, to explore what would influence creativity-fostering instructional practices for all teachers, regardless of personality traits, for the benefit of all students. Some studies have examined the positive impact of specific creativity processes, such as Osborne-Parnes' creative problem solving (CPS) upon teaching practices (Chant, Moes, & Ross, 2009; Gregory & Masters, 2012). Others have studied how student skills are impacted due to the use of CPS (Byrge & Tang, 2015) and DeBono's six hats (1989) (Geissler, Edison, & Wayland, 2012) within classroom instruction. Although these studies did inductively explore impact on teacher actions and beliefs, they continued to sequester the complexity of creativity development into one singular process. Teaching is more than the reliance of a singular process and self-efficacy extends to all aspects of teaching.

Modern creativity research has begun to develop more concrete, rather than theoretical, understanding of what teaching practices actually support and suppress student creativity (Beghetto & Kaufman, 2014). Typical classroom procedures, such as

time constraints on tasks and framing activities as classroom competitions, explained Beghetto and Kaufman (2014), can inadvertently suppress the creative potential in students. Cropley (1997) identified nine principles of creativity-fostering practices, not reliant upon independent variables or isolated processes. The nine principles of creativity fostering practices are,

- Encourage students to learn independently
- Have a cooperative, socially integrative style of teaching
- Motivate their students to master factual knowledge, so that they have a solid base for divergent thinking
- Delay judging students' ideas until they have been thoroughly worked out and clearly formulated
- Encourage flexible thinking in students
- Promote self-evaluation in students
- Take students suggestions and questions seriously
- Offer students opportunities to work with a wide variety of materials and under many different conditions
- Help students to learn to cope with frustration and failure, so that they have the courage to try the new and unusual (Cropley, 1997, p.22).

While studies test what variables might predict creativity-fostering practices (Cheung & Leung, 2013; Rubenstein, McCoach, & Siegle, 2013; Soh, 2015), more research needs to explore what experiences might impact teachers' self-efficacy to implement creativity-fostering practices (Davies, et al., 2013; Kampylis, et al., 2009; Rubenstein et al., 2013).

This study was intended to contribute to positive social change in the efforts to develop creativity in all students by offering recommendations for practitioners from the voices and viewpoints of other practitioners who have self-selected to attend creativity-fostering PD. Researchers have repeatedly recommended PD in creativity (Davies et al., 2014; Hong, Part, & Rowell, 2017; Mullet et al., 2016) and creativity-fostering practices (Soh, 2015) to assist practitioners' implementation efforts. Based on previous recommendations, I conducted a case study featuring practitioners who have attended creativity-fostering PD. A qualitative case study allows for inductive methods of understanding. Findings from this study were driven by insights gleaned from teachers who have attended creativity-fostering PD and how it may have impacted their sense of self-efficacy, specifically to address student creativity development as a professional expectation. Determining what knowledge and skills teachers perceived as most helpful could contribute to the research continuum as well as provide contextually applicable recommendations for positive social change.

Research Questions

Two research questions were designed to guide this study.

1. How do teachers perceive the influence of creativity-fostering PD on their self-efficacy to foster and develop student creativity in the classroom?
2. What do teachers perceive as the most salient knowledge and skills to assist them in developing student creativity?

Conceptual Framework

Of all variables that contribute to student achievement in the system of education, the teacher is undeniably a significant influence (Olivant, 2015). Teachers make countless decisions throughout a school day, relying on professional competency to determine the best option for the specific challenge or task. Believing in one's abilities to perform one's professional responsibilities and successfully complete a task is defined by Bandura (1997) as self-efficacy and serves as the conceptual framework for this study. Although a high sense of self-efficacy does not guarantee effective teaching, it has been correlated to positive classroom management (Dicke et al., 2014), student achievement scores, and adoption of student-centered practices (Guo et al., 2012). Bandura identified experiences, both master or first-hand, and vicarious as primary contributors to the construct. Intertwining self-efficacy theory was important in the context of this study due to the phenomena of potential voids in experiences among current practitioners with creativity development research and practices.

Teacher self-efficacy can fluctuate as changes in professional expectations, such as developing creativity in students, may demand knowledge and skills with which they have no experience. Regardless of policy changes at the federal, state, district, or building-wide level, teachers must adapt their practices to accommodate those changes. According to Bandura's (1997) theory, if the collective experiences (whether master or vicarious) with creativity development among current practitioners' is inconsistent and possibly nonexistent, then self-efficacy levels in 21st teaching standards would be inconsistent or low. Since the inclusion of creativity skill development in educational

practices and policies, there appeared to be very little attention on what experiences current practitioners would need to transition confidently with 21st-century practices.

Creativity is a complex topic of research that has produced multiple theories across a myriad of categories. Kozbelt, Beghetto, and Runco (2010) identified 10 major categories, including cognitive, developmental, and systems, in attempts to organize the various aspects of creativity research. Hennesey and Amabile (2010) articulated the scope of influencers to creativity in seven distinctive levels, from macro level systems approach to the neurological micro level. Due to the unique dynamics of the educational environment, several categories of creativity theory can be applied to the classroom context. Although participant responses could not be predicted, researchers support two broadly applicable creativity theories to educational practices. As an entity, creativity is generally acknowledged as four facets, person, product, process, and press, or environment, also known as the four Ps (Beghetto & Kaufman, 2014; Mullet et al., 2016). In terms of developmental progress, creative ability is divided according to Kaufman and Beghetto's (2009) four stages, mini-, little-, Pro-, and Big-C. While the four C model expands the traditional two stages of little and Big, it provides a nuanced approach to everyday creativity, a more appropriate fit for the classroom setting (Beghetto & Kaufman, 2014). In conclusion, although self-efficacy served as the conceptual framework, this case study necessitated the intertwinement of creativity theories in order to specifically explore teachers' sense of self-efficacy to develop and foster creativity in students.

Nature of the Study

If educational policy continued to demand creativity development in every classroom, it was important to study the phenomenon of teacher preparedness and feelings of self-efficacy regarding the capacity to foster and develop creativity in students. More importantly, it was vital that research featured the voices of teachers, those responsible for the implementation and practical integration of policy change. Qualitative research approaches are best suited for studies committed to understanding participant perceptions because findings are derived directly from the narratives of participants' experiences (Merriam, 2009). Findings constructed from a practitioner's perspective could help inform policy decisions on what might be required to implement policy change with fidelity. In order to explore the problem, in this study I investigated the phenomena of how teacher self-efficacy to develop student creativity develops from a teacher's perspective, specifically from practitioners who have opted to attend creativity-fostering PD.

A qualitative approach was utilized to answer the research questions, featuring a case study design. The purposeful sample comprised of teachers from four public schools, all of whom received PD from Arkansas A+ Schools (ARA+). A not-for-profit, Arkansas Department of Education (ADE)-approved PD provider, ARA+ facilitates whole school faculties to achieve its mission of "engaging school communities in transformative experiences that deepen understanding of the essential commitments required to sustain creative learning" (Arkansas A+ Schools (ARA+), retrieved August 13, 2016). This common experience results in membership to a network or community of

schools and defines a case study design (see Merriam, 2009). Rich thick descriptions of teachers' experiences with creativity fostering PD, collected through questionnaire and interview responses, authentically captured teacher perception and provided qualitative evidence to patterns in professional practice (see Creswell, 2009). A questionnaire containing open-ended questions was sent by email to all attending faculty among all four campuses, approximately 50 teachers in total, to inductively construct themes and patterns. Focus groups and individual teacher interviews provided data triangulation and exploration into both the interpersonal and intrapersonal aspects of self-efficacy for the purpose of discovering what knowledge and skills teachers deem necessary to develop student creativity confidently. Participation in this study was on a volunteer basis; consent was required from both school administrators and individual teachers who ultimately comprised the sample. All participants were treated ethically, with an option to remove themselves from the study at any time, and protected, removing all descriptors that might reveal the location or identity of individual.

As sole researcher for this study, I was independently responsible for all aspects of its completion. I designed all semistructured focus groups and individual interview questions and protocols. I scheduled and conducted all focus groups and individual interviews. Every piece of data was collected by me and stored at my personal residence under lock and key for the duration of the study. Transcription services were contracted for timely completion, and transcription accuracy was verified by member check procedures (see Creswell, 2012). I conducted all phases of qualitative data analysis, beginning with initial coding analysis through NVivo, an assistive software program,

followed with constant comparative analysis as recommend by Creswell (2012) of emerging themes to develop meaningful categories that I used to report final findings.

Definitions

Arkansas A+ Network Schools: A not-for-profit organization that provides whole-school professional development to schools with the purpose to transform professional practices on both a personal and institutional level, based upon the A+ Essentials (Appendix A), Arts, Curriculum, Collaboration, Climate, Multiple Learning Pathways, Experiential Learning, Enriched Assessment, and Infrastructure (Arkansas A+ Schools, 2017).

A+ Fellow: A contractual employee of Arkansas A+ Schools trained and hired to deliver and facilitate ARA+ PD programs, whether offered during summer intensive experiences or brief on-site workshops (E. Calaway, personal communication, May 6, 2015). Each A+ Fellow offered a unique skill set and range of expertise, which ranged from teacher, art teacher, artist, and teaching artist. Fellows were contracted on an as-needed basis and contributed workshops in their area of expertise within the collection of A+ programming, orchestrated by the A+ Program Director (E. Calaway, personal communication, May 6, 2015).

Creativity: A solution that is both novel and unique while appropriate for the task or purpose of the problem. (Beghetto & Kaufman, 2014; Runco & Jaeger, 2012). To clarify, a solution can be either a tangible product or an intangible process or idea. Both qualifiers are subjective to the individual and society in which it exists (Amabile & Pillemer, 2014). For example, a solution may be novel and unique to the individual, yet

not necessarily when objectively compared to all solutions ever presented in the history of mankind. Appropriateness could also be contextually subjective, depending on the culture and condition of the problem (Amabile & Pillemer, 2014). In more pragmatic terms, a solution may be considered unique and innovative, but if it was improbable for any reason, it was not appropriate, and therefore, not creative (Beghetto, 2016).

Creative metacognition: A self-awareness of one's creative capacity in both specific domain knowledge and skill and general personal characteristics combined with the discretion of knowing when, where, how and why to be creative within a given context. (Kaufman & Beghetto, 2013b, p. 160)

Creative self-efficacy: A belief in one's capacity to successfully produce creative solutions, tangible products or intangible ideas and processes, that is appropriate for the task or problem. (Beghetto, Kaufman, & Baxter, 2011; Karwowski, Lebuda, Wisniewska, & Gralewski, 2013; Pretz & McCollum, 2014; Reiter-Palmer, Robinson-Morral, Kaufman, & Santo, 2012).

Creative teacher: A teacher who achieves desired student learning targets through novel or uncommon approaches to commonly understood information (Reilly, Lilly, Bramwell, & Kronish, 2011, p.534)

Creativity-fostering teaching: Behaviors, procedures, and practices that promote individual creative capacity and advanced the creative thinking ability of all students (Hong et al., 2009; Lee & Kemple, 2014; Olivant, 2015).

InTASC Model Core Teaching Standards: A universally designed set of standards, "that outline what teachers should know and be able to do" (InTASC, 2011, p.3) in the context of contemporary education.

Self-efficacy: A psychological construct, a belief that a person has about their own ability to successfully produce the actions necessary to complete a task to the desired level (Bandura, 1997).

Teacher self-efficacy: The general belief in one's aptitude to competently execute any given task associated with teaching for all students. (Bandura, 1997; Holzberger et al., 2013; Skaalvik & Skaalvik, 2014; Wyatt 2014)

Twenty-first century skills: Four broad conceptual abilities most needed for successful participation in future workforce and careers (Soulé & Warrick, 2015). Identified and defined by the Partnership for 21st Century Skills (P21, 2015), a collaboration of education, business, and community leaders, these skills are creativity and innovation, communication, collaboration, and critical thinking and problem solving (Soulé & Warrick, 2015)

Assumptions

There were some assumptions contained within the design of this study. First, it was assumed that the majority of participants included did not attend a creativity course as part of either a traditional preparation program in higher education or in a nontraditional licensure program. Typically, creativity was a specialized course, solely contained within GT certification program.

Additionally, it was assumed that participants had not received any other PD that specifically sought to increase the creative capacity of its participants or the participants' students prior to ARA+ whole school PD experiences. This did not suggest that attendance in PD experiences such as problem-based learning, arts integration, or other strategy-centered experience could not support student creativity development efforts. Because ARA+ was a whole school PD service, it exercised an application and acceptance process. One acceptance requirement was an 85% approval vote to apply from the school's faculty. Therefore, it was assumed that participants positively volunteered to select and attend PD provided by ARA+.

Finally, due to the identification process, only approximately 6-10% of American students participate in GT programs (NAGS, 2015); consequently, it was statistically assumed the majority of sample participants (teachers) were typical K12 students during their own education, not GT students. As typical K12 students, it was assumed that most participants never received direct instruction with the intention to develop their personal creative capacity.

Scope and Delimitations

Teachers, by law, were required to attend PD for the purposes of professional growth by addressing potential gaps. While research had not identified specific preparatory experiences necessary to develop a creativity-fostering teacher, researchers and theorists have clearly suggested the first step. Torrance (1970, 1995) and several other creativity researchers (Beghetto & Kaufman, 2014; Lee & Kemple, 2014; Runco, 2014) have repeatedly insisted that to develop the skill in students, teachers must first

understand the skill. This requirement was consistent with Bandura's (1997) directive that teachers need to be provided experiences with foundational groundwork to address any large-scale educational change in order to maintain a high sense of self-efficacy. By exploring the perceptions of teachers who have attended creativity-fostering PD, findings provided a greater understanding of what foundational groundwork teachers considered necessary to integrate creativity in the classroom.

Due to the identification of PD as a variable, the results of this dissertation study provided insights to the larger educational community. Teachers, by law (Arkansas Department of Education (ADE), 2014), are required to attend PD to maintain certification. The purpose of PD is to promote professional growth, sometimes by addressing potential gaps in knowledge and skills (ADE, 2014). Some PD topics are state mandated, yet only account for a portion of the total number of required PD hours (see ADE, 2014). Teachers are generally given the authority to selectively attend PD based on topics of interest or self-identified need. If participants self-selected ARA+ PD, then they self-determined that ARA+ provided something they needed or wanted to learn. This did not imply that the participants would necessarily have a low self-efficacy towards developing student creativity, but did imply a teacher-identified need or interest. ARA+ PD was unique because it is a whole-school model, therefore, a community of practitioners, not just a singular teacher, identified the need. This phenomenon seemed to support the proposed widespread void in teacher exposure and experience with creativity research and creativity-fostering teaching models. As a result of voluntary, whole-school

participation, compared to an experimental research or administrative-directed PD, the results of the study demonstrated potential for transferability to other teachers.

The boundaries contained within this case study were teachers employed within A+ network schools. Other schools that might have attempted to implement creativity-fostering teaching strategies were not included nor were teachers that may have attended other PD experiences that addressed creativity in the classroom in order to maintain the integrity of a case. The participating schools selected ARA+PD, and are public and have similar faculty and student demographic profiles as other schools across the state. Because participating schools share similar demographics, the influence of creativity-fostering PD could be transferable to other teachers across the state.

Limitations

I was an employee of ARA+, the PD service provider featured in this study. My position within ARA+ was a temporary, grant-funded position and did not present ethical conflicts in my ability to conduct this study. The results of this research project did not impact my employment, the employment of other A+ staff, or the teachers involved. On account of my employment, it was inevitable that prior relationships existed between some participants and myself. Ultimately, the purpose of this study was not to evaluate the program. Rather, it collected teacher perceptions on relevant knowledge and skills that influenced their ability to efficaciously implement creativity development in their classroom practices.

Among all PD opportunities within the state, only ARA+ experiences were examined for impact. And among all schools that had attended ARA+ PD, a limited

sampling was included in this case study. Accepted schools contractually agree to a 3-year implementation process with ARA+. The original case study design featured one school from each implementation year. The singular identification of number of years in the ARA+ implementation process did not signify any degree of proficiency. Each school and its community had a unique combination of challenges and successes that impacted the implementation process that was beyond the control of ARA+. These limitations may have impacted the overall findings of this study (Lodico, Spaulding, & Voegtle, 2010).

Significance

Research focused on issues of creativity has grown in recent decades, possibly in part due to the recently elevated status as a valued life skill (Florida, 2002; OECD, 2014a; P21, 2015). Within the contemporary collection, the topic of student creativity has continued to dominate educational research on the construct. Recommendations can be found for classroom procedures, teaching strategies, and other routine behaviors that would improve student creativity, all of which presumed a teacher's comfort to do so. Researchers insisted that a foundational knowledge of creativity research was vital to the effective integration of creativity in the classroom (Al-Balushi & Al-Abdali, 2015; Beghetto & Kaufman, 2014), yet few studies had examined the impact of it (Davies et al., 2014). Studies that have focused on teacher as responsible creativity agent have focused on the teachers' established beliefs about creativity, not the belief in their ability to effectively enact that responsibility. This study was significant because it focused on a topic that was underrepresented in current creativity research.

In an effort to contribute to the self-efficacy research continuum, this study proposed to focus on teacher as both professional and learner and the relationship between the two roles. Many changes occur in education; the change feature in this study was the expectation to integrate creativity development in classroom curriculums. Changes in professional expectations might imply changes in required knowledge (Bandura, 1997), in turn, a potential shift in teachers' feelings to confidently execute new expectations (Pyhältö et al., 2014). Findings from this study might contribute to both creativity and educational research because it did not presume a teacher's ability or comfort. The focus was on teacher self-efficacy, specifically the feelings on fulfilling the expectation to develop student creativity, and how professional learning influences those feelings. Collecting qualitative data in the form of rich, thick narratives from the teachers themselves were of particular value. The voices of practitioners were amplified on what, new knowledge was beneficial to their self-efficacy to address the specific professional expectation to integrate creativity in the classroom curriculum and achieve the goal of developing student creativity.

Contributions from this study extend the research continuum and have a wide range of positive social changes, ranging from the individual participants to national systems efforts. The findings of this study could impact individual teacher's sense of self-efficacy to address 21st century skills. Teachers who have more experience with creativity research and creativity-fostering practices can provide contextual advice to other teachers. Qualitative studies are often impossible to generalize due to the uniquely personal perspective they capture (Merriam, 2009; Patton, 2015). Some argue, however,

that readers can vicariously place themselves in the similar situations and findings can be considered transferable from the reader's perspective (Turner & Danks, 2014; Yin, 2014). This argument is particularly relevant within the theory of self-efficacy and in context to the potential contributions from this study to educators and the education community. The participants and their classrooms featured in this case study were in many ways like any other typical American classroom, so the stories and narratives may seem familiar and relatable to the reader's environment. Following the rationale of self-efficacy theory, which supports one's beliefs can be developed through vicarious experiences (Bandura, 1997), readers may vicariously place themselves in the narratives of the participants. Readers may be able to imagine themselves or their communities within the stories of the participants and vicariously develop a better understanding of knowledge and skills that would improve their self-efficacy belief to implement creativity-fostering practices.

Some participants within the study developed creative metacognition, knowing when and how to use creativity-fostering practices for what/which instructional purposes (Kaufman & Beghetto, 2013b). Participants became metacognitively aware of change through reflecting upon the changes in their professional practices and identifying the knowledge and skills necessary to efficaciously implement creativity-fostering practices. The findings from this study provided practical and contextually relevant suggestions for professional development organizers. Salient knowledge and skills for efficacious creativity-fostering practices that promote positive social change in a variety of educational communities, within a single school, school district, state, and potentially national level PD experiences.

Finally, this study contributed to the research continuum by addressing several gaps. Creativity research can benefit from more qualitative studies for a balanced and contextual understanding of creativity in real-world situations. Additionally, educational research had just begun to develop a refined understanding of what creativity-fostering practices were, yet little was known in how creativity-fostering teachers developed the confidence to exercise such practices. The need for studies like this one increased the potential for contributing to positive social change, especially as the expectation to develop creative students becomes a pervasive pedagogy.

Summary

A basic introduction to this study has been provided in Chapter 1. Since 2000, growing concerns for the need to improve creativity skills in all people have impacted educational policy, both explicitly with the inclusion of creativity in InTASC's (2011) Model Core Teaching Standards and the overwhelming implicit instructional changes to address 21st-century skills (P21, 2011). Among the efforts to promote creativity in the general classroom for the purpose of developing creative abilities in all students, a key factor may have been overlooked. Very little was known about how prepared current practitioners felt to execute these new professional expectations, such as foster and develop student creativity. The implementation of policy changes relies on the teacher execution, and while teachers share the opinion that creativity is a valuable skill (Davies et al., 2013), there appears to be very little actual change in teaching practices to foster creativity (Davies et al., 2013). This gap between beliefs and actions may be due to a possible void in professional preparedness, or lack of systematic teacher education in

creativity research and creativity-fostering practices. This case study explored the experiences of teachers from four ARA+ network schools, in which entire faculties elected to attend creativity-fostering PD. Through the inductive process of analyzing the shared experiences of practitioners who sought PD to address creativity, findings revealed how this experience influenced their sense of self-efficacy as a 21st century teacher and what salient knowledge and skills they believed necessary to efficaciously meet new professional expectations to foster and develop student creativity in the classroom.

Chapter 2: Literature Review

The following chapter contains a review of literature on the intersection of teacher self-efficacy and creativity development as an educational goal. An exploration of existing research served to illuminate what is already understood about the problem and how PD, designed to foster creativity, addressed teaching skills needed for 21st century teaching and as a result improved self-efficacy in teachers. The express purpose of this study was to explore the influence of creativity fostering PD upon teachers' sense of self-efficacy for teaching creativity to discover what knowledge and skills teachers perceive as most helpful to address student creativity development. Such insights would contribute to both psychological and educational research fields. Among the research on teacher self-efficacy and creativity in the classroom, few have focused on the development of efficacious creativity-fostering teachers. Due to this existing gap, the following literature review highlights what is understood about teacher self-efficacy, the history of creativity development as an educational goal, teachers' perspectives on creativity as an educational goal, and the practical preparedness of teachers to foster student creativity development.

Literature Search Strategy

In preparation of my study, I conducted a literature review consisting of a variety of techniques. My search began in the Walden University Library and academic databases for possible key terms associated with studies focused on teacher self-efficacy, teaching student creativity development and specifically, teacher self-efficacy to teach creativity in the classroom. Search terms included: *creativity*, *creativity development*, *creative self-efficacy*, *creative teaching*, *effective teaching*, *professional development*,

self-efficacy, *student performance*, *teaching*, and *teacher self-efficacy*. These terms were used in a variety of combinations. For example, creativity and self-efficacy resulted in literature primarily focused on student creativity. Yet the combination of creativity and teacher self-efficacy narrowed the results. For each combination of key terms, the following databases were searched: Education Research Complete, Education Source, ERIC, PsychARTICLES, and PsychINFO. As I read, citations of interest were noted and author searches were conducted within Thoreau Multidatabase Search as well as citation chain searches conducted in Google Scholar. Studies regarding teachers' self-efficacy to implement creativity in the classroom and develop creativity in students were limited. Finally, as certain key authors emerged I conducted book reviews and purchased several books unavailable through Walden and other local libraries. Some books were seminal publications and others were collections among contemporary leaders in the field. The literature review provided me a better understanding of the teacher self-efficacy and student creativity development, however, it also revealed the need for research on how teacher self-efficacy to develop student creativity develops.

Conceptual Framework

Self-Efficacy

Schools are a community and in that community is an environment that intertwines theories from many fields of research. One psychological theory that intertwines with the education environment is Bandura's (1997, 2012) self-efficacy theory, the belief in one's ability to complete a given task successfully. Self-efficacy envelops multiple psychological factors and correlates them to actionable behaviors.

According to Bandura, if a person has a high level of self-efficacy, the more likely they believe in their competency to complete the task, therefore, the more likely the individual will be motivated to take actions to complete the task and the task will be effectively completed. Many tasks must be completed in education simultaneously. For example, teachers are expected to differentiate instruction according to individual student needs. This requires not only careful and thoughtful planning prior to the classroom interaction, but near instantaneous analysis and adjustment during the classroom interaction. Quite often, differentiated instruction involves multiple work groups that must be continuously monitored by the singular teacher for engagement and comprehension. Additionally, there are managerial components that must be maintained on a daily basis, such as attendance records, classroom schedules, reports, and school-wide, as well as parental, communication. Because teachers have several different types of tasks associated with teaching, it is of great interest and potential importance to understand how self-efficacy is developed and its impact to the learning environment.

Self-efficacy development. Self-efficacy, as a learning theory, has implications to human development theories, meaning it applies to both students and teachers alike. A person's self-efficacy develops due to four contributing sources: mastery experiences, vicarious experiences, verbal persuasion, and physiological states (Bandura, 1997). Bandura (1997) claimed mastery experiences influence a person's self-efficacy beliefs. For example, if a person has previously experienced a similar situation and experienced success in that situation, the likelihood of success in a future situation seems high, resulting in a high sense of self-efficacy. Conversely, if a previous experience in a similar

situation with a similar task was unsuccessful, likelihood of failure in a future attempt may seem high, resulting in a low sense of self-efficacy. Additionally, a person can observe someone else's success, and believe that they, too, are capable of such behavior (Bandura, 1997). Such vicarious experiences can positively or negatively influence one's self-efficacy belief. One's social environment can also influence the belief (Bandura, 1997). Verbal persuasion, or supportive and encouraging words, communicates others' beliefs that the individual can succeed and will help them achieve the task (Bandura, 1997). Finally, physiological reactions to similar, previously attempted tasks, such as accelerated heart rates and sweat, can create an emotional aversion or hesitancy to attempt similar tasks in the future (Bandura, 1997). Numerous educational studies have focused on Bandura's self-efficacy theory across a range of applications, for both student and teacher.

Self-efficacy and its applications in education. The theory of self-efficacy has gained popularity within educational research and has been explored for a variety of correlations in the student-teacher relationship. Beginning with the seminal research conducted by Rand Corporation (Aloe, Amo, & Shanahan, 2014; Chestnut & Burley, 2015) that significantly correlated two specific self-efficacy questions to student achievement, many following studies have focused on the relationships between student self-efficacy and teaching practices (Aloe, et al., 2014; Chestnut & Burley, 2015). Rolland (2012) recently conducted a meta-analysis that confirmed teachers whose classroom structures included socioemotional and instructional support positively related to student socio-emotional factors, including self-efficacy. The relationship between

teacher behaviors and practices on student self-efficacy has been generally confirmed by research (Rolland, 2012) and research has expanded to examine how teacher behaviors and practices are influenced by their sense of self-efficacy for teaching.

Examining the malleability of teacher self-efficacy is beneficial to the practical need for effective teaching for student achievement. This is especially important to research due to the complexity of teaching and the changes in educational expectations over the last two decades. Bandura (1997) cautioned that self-efficacy is specific to the work of the profession and systematic changes in work expectations may erode one's sense of self-efficacy due to lack of experience and knowledge with new expectations. Few studies have researched the impact of systematic policy changes regarding teaching expectations upon teacher self-efficacy beliefs (Pyhältö et al., 2014; Sandholtz & Ringstaff, 2014). Because student creativity development has been incorporated into the scope of teaching expectations (see InTASC, 2011), it is important to examine how this specific change affects teacher self-efficacy beliefs.

Among teacher self-efficacy research, little have examined teacher self-efficacy beliefs on the expectation to incorporate creativity in the classroom (Rubenstein et al., 2013; Henrickson & Mishra, 2015), which possibly requires new domain knowledge and skills. Many creativity researchers have recommended that teachers need to be taught creativity development theories and the nature of creativity in order to incorporate creativity-fostering practices in the classroom (Beghetto & Kaufman, 2014; Collard & Looney, 2014; Cropley, 1997; Hong et al., 2009). While these recommendations generally align with Bandura's (1997) advice that education systems should provide

professional development to address new knowledge and skills required for new work expectations, it does not align with the key contributors of self-efficacy. According to self-efficacy theory (see Bandura, 1997), teachers need master and vicarious experiences with creativity fostering practices in order to efficaciously execute those practices. Herein lies the conceptual framework for this study (see Figure 1). An examination of teachers' experiences with creativity fostering PD might provide some insight to the research continuum as to how those experiences influenced their sense of self-efficacy to address the new professional expectation to foster and develop student creativity.

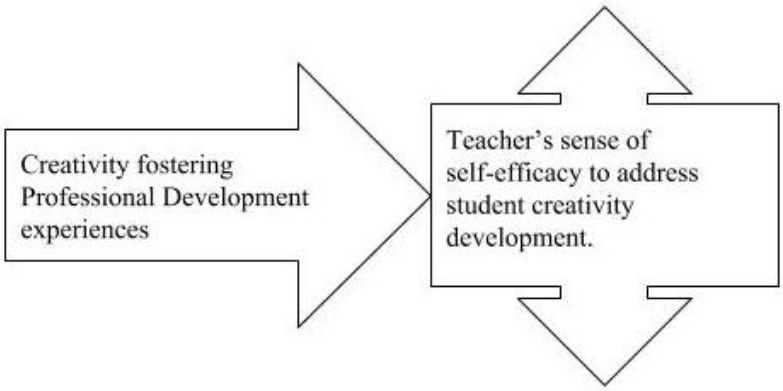

Figure 1. Conceptual framework diagram

Literature Review Related to Key Concepts and Variables

Teacher Self-efficacy

Derived from Bandura's self-efficacy theory (1997, 2012), teacher self-efficacy may be unique in its activities and situational conditions yet developed by the same four factors and potentially predictive of behavioral actions. As a derivation theory, teacher

self-efficacy is defined as the belief in one's aptitude to competently execute any given task associated with teaching for all students (Bandura, 1997; Holzberger et al., 2013; Skaalvik & Skaalvik, 2010; Wyatt 2014). Since the introduction of self-efficacy, researchers have examined the impact of teacher self-efficacy upon student achievement and professional practices in the classroom.

Educational researchers have compiled evidence regarding the predictive nature of teacher self-efficacy upon student achievement, classroom behaviors, and instructional decisions. In a recent meta-analysis of teacher self-efficacy studies, Klassen and Tze (2014) reported teacher self-efficacy was significantly connected with student achievement. Zee and Koomen (2016), however, cautioned that the relationship between teacher self-efficacy and student achievement is weak (Klassen & Tze, 2014) and is evidence of an indirect causal relationship. Student achievement is a by-product of classroom practices and processes. Teachers with experience had the ability to address student needs and used a variety of classroom processes that were student centered (Zee & Koomen, 2016). The complex relationship between teacher self-efficacy and student achievement is encapsulated in a study conducted by Guo et al. (2012), who found that teacher self-efficacy had more of a direct effect on fifth grader performance than years of experience teaching or degree earned. By the same token, teacher self-efficacy predicted student literacy skills associated with student self-efficacy (Guo et al., 2012). The evidence compiled by educational researchers that teacher self-efficacy predicted student achievement is significant, yet weak, and has produced more questions to the complex relationship between professional practices and decision making to student achievement.

Researchers have also provided evidence that supports self-efficacy and its role in professional decision making. For example, studies have correlated teacher self-efficacy with effective teaching methods (Guo et al., 2012), classroom management (Dicke et al., 2014; Pas, Bradshaw, Hershfeldt, & Leaf, 2010), and practices that promoted deep thinking (Cheung & Lai, 2013). Conversely, self-efficacy has been correlated to job stress and satisfaction (Collie, Shapka, & Perry, 2012; Klassen & Chiu, 2010). Teachers with a higher sense of self-efficacy modify their own behaviors to address disruptive behaviors in order to avoid emotional exhaustion (Dicke et al., 2014), whereas teacher with lower self-efficacy may feel extreme helplessness to the point they do not even refer students for assistive services (Pas et al., 2010). If teacher self-efficacy has proven to be an indicator of professional performance, it seems important to understand how it develops and possibly changes over time. The following section reviews the history of how the construct has been measured, the predictive nature of the construct, and how research is continuing to refine the construct.

Measuring the construct. Bandura (1997) explained that self-efficacy cannot be considered a universal belief due to specific skills and knowledge required for specific tasks. To measure the specific skills and knowledge uniquely required for teaching, Bandura and others designed self-rated instruments, specifically to measure teacher self-efficacy (Tschannen-Moran & Woolfolk Hoy, 2001; Wyatt, 2015). Tschannen-Moran and Woolfolk Hoy (2001) created the Ohio State Teacher Self-Efficacy Scales (OSTSES) to further clarify three specific constructs of teaching, classroom management, instructional strategies, and student engagement. These three constructs were confirmed

for reliability among practitioners, regardless of grade or content, and the OSTSES has been widely used in teacher self-efficacy research (Wyatt, 2015).

Regardless of instrument or author, most research on teacher self-efficacy has relied on quantitative data from Likert scale rated items (Wyatt, 2014), argued as an incomplete picture by some researchers (Kass, 2013; Wyatt, 2014, 2015; Yoo, 2016). Wyatt (2014) defended that even in the attempts of researchers to address the complexity of teaching, quantitative measures generalize the work to a degree that dilutes true understanding of which students, what content, and under what conditions teachers feel efficacious. In fact, in a recent literature review by Wyatt (2015), he claimed that qualitative research approaches have been "neglected" (p.117) in the field of teacher self-efficacy research; therefore, more qualitative studies need to be conducted to further promote how the construct develops and evolves. This sentiment repeatedly appeared among recommendations and discussions (Collie et al., 2012; Dicke et al., 2014; Minett, 2015) in teacher self-efficacy articles read.

Teacher self-efficacy development. There are educational practices that align with Bandura's (1997) four contributing factors of self-efficacy and potentially explain how teacher self-efficacy beliefs develop. Traditionally, preservice educators have a practicum experience, or student teaching, which typically features the opportunity to teach in a mentor teacher's classroom (Fackler & Malmberg, 2016; Martins, Costa, & Onofre, 2015; Shanks, Miller, & Rosendale, 2012). Student teaching serves as a standard prerequisite to professional service and has been proven as a source of self-efficacy by Martins, Costa, and Onofre (2015). These experiences provide a mastery experience that

can produce physiological responses that may be referenced upon in similar performance situations in the future (Martins et al., 2015; Shanks et al., 2012). Observing lessons from the mentor teacher or others provides vicarious experiences that preservice teachers can access as models for future teaching (Fackler & Malmberg, 2016; Matins et al., 2015). McQuiggan (2012) found teachers taught from their experiences as students, either mimicking favored teachers or oppositional modeling of unfavored teachers. Verbal persuasion, or post observation feedback received from the mentor teacher, can also serve to strengthen or weaken a student teacher's sense of self-efficacy (Matins et al., 2015). These practices continue to hold true throughout the teaching career. Practitioners may have mastery experiences through professional development (Minett, 2015; Sandholtz & Ringstaff, 2014), observe another practitioners' success and believe, they too, are capable of such behavior (Pyhältö et al., 2014) and supportive principals contribute to a teacher's sense of self-efficacy through verbal persuasion (Fackler & Malmberg, 2016; Lambersky, 2016). Supportive leadership can establish a social environment that impacts teacher self-efficacy (Collie et al., 2012; Kass, 2013). These are just some of the research findings that support Bandura's (1997) self-efficacy theory, specifically in the development of teaching professionals.

Flexible construct. Research continues to help define the scope of teacher self-efficacy. Although Bandura (1997) defined self-efficacy to be a relatively dynamic belief that changes with new gained experiences, susceptible to erosion, current research is beginning to explain how teacher self-efficacy might fluctuate and what might possibly cause it to erode. Holzberger et al. (2013) provided evidence to suggest teacher self-

efficacy and performance were "mutually deterministic" (p.783), meaning the construct remained in flux, impacted by classroom performances and vice versa. Another key distinction was even though general efficacy applies to the general task of teaching and is representative to the holistic perspective of being a teacher, Bandura acknowledged self-efficacy was domain specific and encouraged researchers to ask specific questions in order to accurately correlate self-efficacy with evidenced actions. For example, Dicke et al. (2014) found teacher self-efficacy in classroom management had a causal relationship to teacher burnout. These teachers perceived behaviors as disturbances and the inability to modify and moderate accordingly created emotional exhaustion (Dicke at al., 2014). This causal relationship between low self-efficacy and inability to modify is of particular interest, possibly analogous to organizational changes, such as teaching standards.

Systematic changes and teacher self-efficacy. Bandura (1997) cautioned that self-efficacy could erode with organizational change. He recommended organizations focus on the "efficacious adaptability" (p.448) of its employees. Due to constant change, it was important to provide, "the developmental groundwork" (p.448) for adaptability, which included concerted efforts to learn new knowledge and skills (Bandura, 1997). The educational system, Bandura claimed, rarely established the necessary developmental groundwork. He stated, "officials often mandate school reforms and improvement initiatives but give little attention to the skills, resources, and structural supports needed to successfully implement them" (p.252). Interestingly, research conducted by Pyhältö, Pietarinen, and Sioni (2014) support the notion of efficacious adaptability, specifically in the context of systematic change in education. The data revealed that teachers with a

strong belief in "personal agency" (which encompassed self-efficacy) sought experiences that exercised new skills and viewed themselves and their personal ownership of change as a subjective factor to successful implementation of change (Pyhältö et al., 2014). These teachers were better equipped to cope with the paradigm shifts associated with change than teachers with low personal agency. Teachers with low personal agency perceived change as something thrust upon them as objects (Pyhältö et al., 2014). Given the frequency of educational policy changes in recent history, it seems that efficacious adaptability would be of particular interest to educational research, particularly as it relates to creativity development.

For well over a decade, teachers have been expected to develop 21st century skills in students with inconsistent efforts to address efficacious adaptability among the practitioners responsible for implementation of change. Specifically focused on creativity development, Kampylis, Berki, and Saariluoma (2009) reported that teachers did not feel well trained. According to Beghetto and Kaufman (2014), teachers stated a need for ready-made curriculums that include strategies to address creativity, possibly due to uncertainty of how to implement creativity in the classroom. As a response to the lack of change in teaching practices to match the change in teaching expectations, the Scottish Government employed Davies et al. (2013) to conduct research to identify the skills teachers needed to meet the expected practices to foster creativity. Soulé & Warrick (2015) reported that the Framework for 21st Century Learning (P21, 2015) was developed "to help practitioners integrate 21st century skills in schools and make learning more relevant for students (p. 180)" was prompted by the fact that U.S. students' ability for

high order thinking and 21st century preparedness has been relatively unchanged over the last 10 years. Just recently, Jia, Oh, Sibuma, LaBlanca, and Lorentso (2016) developed a self-reported scale to measure teachers' confidence in teaching 21st century skills. They claimed such an instrument was needed due to a lack of assessments for teachers and educational professionals to identify areas of practice that need support and additional training in 21st century skills (Jia et al., 2016). The reactionary nature of such findings, research, and instrumentation development is evidence that Bandura's (1997) criticism of most educational systems' lack of attention to efficacious adaptability in reform efforts remains valid.

Creativity and Its Role in Education

The call for creativity within the classroom is, in actuality, not a new issue in education but one that has been debated for over 60 years (Abdulla & Cramond, 2017). Impetus for creativity research, in general, can be traced to Guilford's (1950) foundational research and address (Beghetto, 2010; Sternberg, 2006). As Guilford and others developed foundational theories to define creativity within cognitive science, it was Torrance (1970, 1995) who applied the findings of creativity research within the realm of the classroom (Sawyer, 2006). From the seminal work of Torrance, creativity in the classroom existed in relative solitude among GT programs (Flint, 2014; Lin, 2014; Miller, 2012) until creativity was identified as a 21st century skill, by organizations outside of education, which prompted changes within educational expectations (Abdulla & Cramond, 2017; Lin, 2014; Soulé & Warrick, 2015; Turner, 2013). This section

intends to briefly trace the history of creativity in the context of educational goals and the expectations for creative teaching and teaching for creativity.

Creativity as a Skill

Among his large body of contributions, Torrance (1995) is best known for the most influential of all creativity instruments, the Torrance Test for Creative Thinking (TTCT) (Kaufman, Plucker, & Baer, 2008). Originally designed to provide evidence in the debate of intelligence (Kim, 2011), the instrument has been used extensively in education for more than 50 years. The TTCT is a divergent thinking assessment that indicates aptitude for creative thought by measuring mental operations associated with creativity, including fluency, originality, and elaboration, as well as creative strengths, such as emotional expressiveness, richness of imagery, and humor (Runco & Acar, 2012; Zeng, Proctor, & Salvendy, 2011). The results of Torrance and other's work were crucial towards formal inclusion of creativity in education, primarily with the formation of Gifted and Talented programs, now required by law (Flint, 2014).

As an instrument, the TTCT was designed to measure the mental operations associated with creative thought, not define was one's potential for creative thought (Torrance, 1970). Torrance (1970) emphasized the TTCT validated the creative potential in all students, especially if a student directly benefited from teaching for creative development (Torrance & Myers, 1970). Ideally, the instrument would be used to measure the effects of creativity development, capable of providing feedback to facilitator or activity for its ability to foster creative thinking (Zeng et al., 2011). Research has used the instrument accordingly; pre and post data from experimental

creativity research using TTCT and others creativity assessments have provided evidence to substantiate theories that creativity is a learnable skill, not an innate talent (Csikszentmihalyi, 1996; Seelig, 2012). In schools, however, TTCT and other similar creativity assessments, such as "Modes of Thinking in Young Children" (Wallach & Kogan, 1965) and "Creativity Assessment Packet" (Williams, 1980) have been used to determine creatively gifted individuals for inclusion into GT programs (Flint, 2014). How the instrument is used in the theoretical and developmental work of research compared to the educational application possibly provides a clue to perpetual gaps between research and practitioners. For instance, the limited use of TTCT and other creativity assessments, as an identification tool, may have unintentionally perpetuated the implicit belief among some educators that creativity was an elite skill (Blamires & Peterson, 2014; Kampylis et al., 2009). Whatever the reason, creativity research did not transfer into mainstream educational goals and typical classrooms, as hoped by Torrance and others (Sternberg, 2015).

Creativity development as an educational goal. The impetus to elevate creativity, as an educational goal for all students, may have been driven from neither educational research nor creativity research. Repeatedly, Torrance (1970, 1995; Torrance & Myers, 1970; Torrance & Safter, 1990) advocated for the benefits of creativity development for all students, particularly those from disadvantaged situations. According to Torrance (1995), creative thinking was the highest level of thinking and would be the most valuable in the future (Samson, 2013). Now an internationally held sentiment (Cheung & Leung, 2013; Lin, 2014), authors such as Florida (2002) and Pink (2006)

declared the importance of creative thinking in future economies. Creativity was identified as a 21st century skill by P21 (2011), required for contemporary careers in a rapidly changing world. World organizations, such as OECD (2014b) and UN (2013) have identified creative problem solving as a crucial skill for modern citizenship in a globalized economy. Around the world, creativity gained recognition for its value, not only in relationship to career preparation but as a component of human development (Schleicher, 2012). As a result of significant societal value for creativity, creativity became an educational goal.

Educational policy changes communicated the goal to develop creative students, yet with language that lacked clarity for implementation efforts (Cropley, 2014; Jia et al., 2016). Some standards, like the Common Core State Standards (see CCSI, 2011a, 2011b), presented a clear framework of student performance standards, outlining, "what students should know and be able to do" (CCSI, Jan 5, 2017) to be prepared for 21st century college and career readiness, without direction as to the inherent skills and abilities needed to complete them (see CCSI, 2011a, p.6). To assist educators with the elusiveness of 21st century skills in standards expectations, P21 developed its own framework to 21st century learning (see P21, 2011). Other standards have explicitly included creativity as learning standard, such as International Society for Technology in Education's National Education Technology Standards (2017). Specifically, students are to: "demonstrate creative thinking, construct new knowledge, and develop innovative products and processes using technology" (International Society for Technology in Education [ISTE], Jan. 5, 2017), and teachers are to: "facilitate and inspire student

learning and creativity" (ISTE, Jan. 5, 2017). Interestingly, although creativity is not explicitly stated in the standards themselves, the National Coalition for Core Arts Standards (NCCAS) do state that developing the creative capacity of students is a philosophical goal of the standards (NCCAS, 2014). In fact, the President's Committee on the Arts and the Humanities (2011) promoted the investment and advancement of the nation's Fine Arts Education programs as an effective strategy towards student creativity development, possibly perpetuating the notion that creativity is best suited for the arts curriculums (Bolden, Harries, & Newton, 2010; Kampylis et al., 2009; Newton & Beverton, 2012; Turner, 2013). Regardless if student creativity development is implicitly or explicitly stated in standards documents, InTASC connected expected student performance standards with required teaching skills, knowledge, and dispositions in standard five of *InTASC Model Core Teacher Standards* (InTASC, 2011). Standard five, or Application of Content (InTASC, 2011, p.14), reads, "the teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues" (InTASC, 2011, p.14). Clearly, the collection of education standards rhetorically centers creativity as an educational goal. Nevertheless, there remains a gap between the rhetorical support and value for creativity and the professional actions taken, on an individual and systematic level, to actualize the goal of developing student creativity.

Persistent Gaps between Policy and Practice.

Regardless of the rhetoric in education policy and societal promotion of creativity as an educational goal, researchers have provided evidence of little change to make the

goal a reality in practice. The debate as to why this gap exists and persists is as varied as creativity research itself. I have organized the arguments into three categories, gaps within teacher practices, gaps in systemic practices, and gaps in research practices.

In teachers. Initially identified by Makel (2009) as the "creativity gap" (p.38), additional researchers have examined the practices of individual teachers and noted prominent gaps to developing student creativity, such as inconsistent and narrow definitions of creativity (Lin, 2014; Mullet et al., 2016; Turner, 2013). Mullet, Willerson, Lamb, and Kettler (2016) elaborated that research has consistently provided evidence that teachers' held a narrow view of creativity (Davies et al., 2014), rarely acknowledging the appropriate and useful half of the definition or creative behaviors. Kampylis, et al. (2009) claimed that teachers' beliefs of creativity were contradictory. Even though teachers generally agreed that all students could be taught to be more creative, a majority of teachers continued to perceive creativity as an innate skill, a relatively unchanged belief over fifty years (Kampylis, et al., 2009). In fact, the lack of understanding creative behaviors among teachers has materialized through perpetual inability to identify creative students (Beghetto, 2016; Beghetto et al., 2011; Mullet et al., 2016), often mistaken creative behaviors as disruptive or undesirable (Mullet et al., 2016). Myhill and Wilson (2013) found that many teachers reported a discomfort with creative products and the authority to assess them. The perceived lack of authority by teachers has been possibly perpetuated by the absence of standards and tools to assist teachers in the evaluation of creative products, claimed Collard and Looney (2014). Even if teachers were to integrate traditional creativity assessments, criticized Blamires and Peterson (2014), most do not

align with the contemporary and agreed upon definition that includes both originality and appropriateness. Research has clearly provided evidence of severe gaps between policies that advocate for creativity in the classroom and the absence of teaching behaviors and practices required to achieve the goal.

Considering the gaps between knowing what creativity is and how it manifests itself in people, it may be no surprise that research has consistently identified gaps between teachers' beliefs about creativity and actual classroom practices to foster creativity (Aloe et al., 2014; Cheung, 2012; Kampylis et al., 2009; Makel, 2009; Mullet et al., 2016). Liu and Lin (2014) found that primary science teachers' ideas on how to foster scientific creativity were missing key aspects of the construct, even though they reported creativity was valued. Beyond absent constructs Bolden, Harries, and Newton (2010) reported teacher beliefs about creativity were based on stereotypical associations. Regardless if pre-service math teachers indicated a high value of creativity, they perceived the Arts and English as more appropriate subjects to support creativity (Bolden et al., 2010). Furthermore, uninformed teaching practices based on creativity stereotypes are common, according to Beghetto and Kaufman (2014), and can actually have counter-productive results that stifle creativity. On the whole, teachers' reported value of creativity does not reveal how accurately teachers incorporate appropriate practices that foster and develop student creativity.

In the education system. The lack of teaching behaviors and practices to promote student creativity development may be a direct consequence of the gap between policy rhetoric and systematic changes needed to achieve creativity in the classroom.

Educational systems that place value in standardized curriculums and high-stakes testing establish professional environments that are contradictory to creativity fostering goals (Ayob, Hussain, & Majid, 2013; Myhill & Wilson, 2013; Sawyer, 2015; Sternberg, 2015). With professional accountability measured in student test scores, teachers may opt not to focus on creativity fostering practices but rote intelligence skills that are valued by the education system (Kuntz, Presnall, Priola, Tilford, & Ward, 2013; Myhill & Wilson, 2013; Olivant, 2015; Rubenstein et al., 2013; Sternberg, 2015). Other systematic practices, such as large class sizes and lack of resources have been reported by teachers (Bolden et al., 2009; Kampylis, Saariluoma, & Berki, 2011; Mullet et al., 2016) as an obstacle to achieving real change to implement creativity in the classroom. The greatest gap in systematic changes appears to be in the lack of proactive efforts to educate practitioners on the nature of creativity and opportunities to explore how creativity development can be incorporated into classroom practices (Mullet et al., 2016; Sternberg, 2015). The absence of exemplars, guiding documents (Collard & Looney, 2014; Lim, Lee, & Lee, 2014; Newton & Beverton, 2012), and professional development on creativity (Beghetto & Kaufman, 2014; Davies et al., 2014), creativity development (Beghetto & Kaufman, 2014), and creativity fostering practices (Kampylis et al., 2011; Soh, 2015) have been identified by researchers (Mullet et al., 2016) and practitioners alike (Davies et al., 2014) as a gap to systematic, effective incorporation of creativity development into the classroom context. It is not surprising, therefore, that research has found perpetual gaps between the rhetoric for creativity as an educational goal and gaps within systematic and individual practices that achieve the goal.

In research. The perpetual "creativity gap" (Makel, 2009, p.38) is not entirely due to the lack of understanding from the educational practitioners' perspective. As Sawyer (2015) strikingly pointed out, educational institutions and national leaders are seeking assistance from research; however, research does "not yet have a complete understanding of how to…foster the sort of learning that prepares students to use their knowledge in creative thinking and behavior" (p.4). Not all creativity researchers hold this opinion. Sternberg (2015) defended that the market is flooded with publications that describe how creativity can be supported in the classroom and contended that the real problem is held within the reluctance to change. Some researchers, however, have begun to focus on the practitioners' perspective (Kampylis et al., 2009, Kampylis, 2010) in order to develop a complete understanding of the practices required to foster and develop student creativity as an educational goal. A particularly relevant approach according to Cheung (2012); for if student creativity development, as an educational goal, is considered part of educational reform, then "teachers play a crucial role in making educational reform successful" (p. 43). Thus, the remainder of the literature review explores research focused on the practitioner and the relationship to creativity in the classroom implementation.

Teaching Creatively and Teaching for Creativity

Within the research context of creativity in the classroom, a distinction between teaching creatively and teaching for creativity has been made (Bramwell, Reilly, Lilly, Kronish, & Chennabathni, 2011; Brinkman, 2010; Cheung& Leung, 2013; Davies et al., 2014; Orr & Kukner, 2015), in order to provide clarity as it is applied to educational

practices. First referenced by National Advisory Committee on Creative and Cultural Education (Jeffrey & Craft, 2004), Jeffrey and Craft (2004) initially explored the differences and dependencies of the two in practice. In the section that follows, foundational differences of the two are provided and how research continues to explore and explain how the two are related.

Teaching Creatively

Teaching creatively orients the exercise of creative thinking and the production of creative outcomes from the teacher as creative professional frame of reference. Aligned with the two definitive components of creativity, Reilly, Lilly, Bramwell, and Kronish (2012) defined a creative teacher as one who "combines existing knowledge in some novel or unique way or introduces new processes to cultivate cognition to get useful results" (p.534). A creative teacher employs ingenious solutions to make learning more engaging and effective (Ayob et al., 2013; Pishghadam, Ghorbani Nejad, & Shayesteh, 2012). The ability to produce ingenious solutions appears to come from a high level of content knowledge (Benedek, Könen, & Neubauer, 2012), which informs the teacher's impromptu decision-making abilities to address student needs to lesson planning for the class as a whole (Pishghadam et al., 2012). According to Bramwell, Reilly, Lilly, Kranish, and Chennabathni (2011), creative teachers share three characteristics. Creative teachers are resilient, interpersonal, or in tuned to the preferences and needs of others, and motivated to incorporate creativity as value to student independence. Reilly et al., (2012) synthesized research findings thus far on creative teachers and reported creative teachers are creative individuals with an intrinsic motivation for creative work and are

risk takers who are supported in a safe environment, innovative, exercise control, exhibit ownership, and operate under a wide range of values, encompassing different student cultures. Teaching creatively involves several characteristics that empower the individual teacher to produce novel strategies and processes for the purpose of useful results, or effectively instructing students (Reilly et al., 2012). Creative teaching, however, does not necessarily include teaching for student creativity development, therefore, it is important to explore the distinction.

Teaching for Creativity

Unlike creative teaching, teaching for creativity involves teaching strategies, intentional environmental design, and teaching behaviors that foster and develop the creative capacities of students (Ayob et al., 2013; Collard & Looney, 2014; Pishghadam et al., 2012). Studies focused on teaching for creativity have included various teaching strategies, classroom procedures, and teaching methods. Some researchers have reported the benefits to student thinking skills by use of specific strategies, such as DeBono's (1989) thinking hats (Geissler et al., 2012). Others have reported on the benefits of more general teaching methods or approaches to student learning (Doering & Henrickson, 2015). Project-based or problem-based learning has been supported to foster student creativity (Bonnardel & Didier, 2016; Munakata & Vaidya, 2015; Zhou, 2012) as well as integrating the arts into core curriculum instruction (Doyle, Huie Hofstetter, Kendig, & Strick, 2014; Garrett, 2013). Even specific educational programs have been reported to positively impact student creativity (Hu et al., 2013). On one hand, the variety of research may be encouraging to education practitioners, knowing that student creativity can be

developed through numerous strategies and includes flexible options. On the other hand, the variety of options may be discouraging, and possibly overwhelming, due to the lack of cohesion and conciseness. A growing body of research has formed around a more theoretical approach to fostering student creativity development (Lin, 2014), determined by general principles of practice instead of specific strategies and techniques.

Principles of creativity fostering teaching. The distinction of teaching for creativity as a professional expectation, in alignment with the national and statewide teaching and learning standards is relatively new (Soulé & Warrick, 2015). Despite criticisms that educational systems have failed to provide clear definitions of creativity (Abdulla & Cramond, 2017; Mullet et al., 2016) and structural models of creativity in the classroom context (Guo & Woulfin, 2016), researchers have proposed some foundational theories about teaching practices that develop student creativity. As mentioned, the desire to promote teaching practices that fostered student creativity development as an educational goal for all, was referenced in Torrance's life work (Sawyer, 2015; Torrance, 1995). More recently, Cropley (1997) identified nine guiding principles, informed by the seminal work of Torrance and others (Cropley, 1992), as well as empirical evidence from teachers who nurtured and fostered creativity within students. The principles of creativity fostering teaching practices are:

- Encourage students to learn independently
- Have a cooperative, socially integrative style of teaching
- Motivate their students to master factual knowledge, so that they have a solid base for divergent thinking

- Delay judging students' ideas until they have been thoroughly worked out and clearly formulated
- Encourage flexible thinking in students
- Promote self-evaluation in students
- Take students suggestions and questions seriously
- Offer students opportunities to work with a wide variety of materials and under many different conditions
- Help students to learn to cope with frustration and failure, so that they have the courage to try the new and unusual (p.22).

These nine principles have provided a framework for researchers to test and collect evidence for the purpose to better understand how education practitioners can achieve the educational goal to develop student creativity.

Measurement of creativity fostering practices. Emergent research has developed based on Cropley's (1992) creativity fostering teaching principles framework. In response to Cropley's conceptual framework, Soh (2000) developed the Creativity Fostering Teacher Index Scale (CFTI), a self-reported instrument that allows researchers to measure teacher-student interactions that foster student creativity. Previously, teacher self-efficacy instruments vaguely regarded the ability to foster student creativity. For example, the Ohio State Teacher Efficacy Scale, developed by Tschannen-Moran & Woolfolk Hoy (2001), contains one question regarding the ability to foster student creativity, embedded within the construct of efficacy towards student engagement. Soh (2000) and others have since validated the CFTI's ability to generalize Cropley's theory

and its reliability (Soh, 2015). According to Soh's (2015) literature review, the instrument has been used internationally and provided new insights into understanding creativity fostering teachers and their behaviors. Among the studies reviewed, Soh reported that CFTI scores were significantly correlated to subject taught, yet not correlated to gender of geographic location. Years of teaching experience were a variable in two different studies, yet with varying results (Soh, 2015). Such differences among similar studies were proposed to account for cultural differences (Soh, 2015). Overall, the collection of studies revealed a general tendency among teachers to display behaviors associated with Integration, Motivation, and Opportunities categories yet continue to struggle in categories Judgment, Evaluations, Independence. It seemed that teachers had difficulty withholding judgment on student performances, performed evaluations prematurely, and did not provide opportunities for students to exercise independence (Soh, 2015). As Soh argued, the instrument has provided research an effective tool to measure the degree a practitioner exhibits creativity fostering teaching behaviors.

Characteristics of creativity fostering teachers. Some researchers have attempted to explain what variables impact creativity-fostering teachers. Personal traits and characteristics appear to be essential to creativity fostering practices. Lee and Kemple (2014) reported that openness to experience, a Big Five personality trait, significantly and positively correlated to all nine subscales of CFTI. Dikici (2014) found teachers with Type 1 thinking styles, or a proclivity for higher order thinking, predicted creativity fostering behaviors. Hong, Hartzell, and Greene (2009) reported teachers with sophisticated ideas of learning, an orientation to goal setting, and motivation for

challenging work significantly correlated to practices that foster student creativity. Beyond personality traits, creativity-fostering teachers have general patterns in classroom practices. Creativity fostering teachers were comfortable with risk (Rinkevich, 2011) and held a willingness to operate beyond norms (Dikici, 2014), being willing to capitalize of unforeseen creative learning opportunities, ensured periods of incubation time for students to think about creative challenges, and integrate technology for creative learning purposes (Davies et al., 2014;). While a teachers' inclination towards creativity fostering practices can be influenced by both prior positive (Lee & Kemple, 2014) and suppressed creativity (Beghetto, 2006) experiences, a teachers' beliefs profoundly affects a teacher's likelihood for creativity fostering practices (Davies et al., 2014; Hong et al., 2009; Mullet et al., 2016). According to Davies et al. (2014) literature review, teachers who taught for creativity based instructional decisions on the long term developmental needs of each individual student. Chan and Yeun (2014) discovered that creativity fostering teachers considered themselves creative, held a positive attitude, and were intrinsically motivated to incorporate creativity as well as felt a sense of purpose in doing so. Some have argued that a relationship exists between creative teachers and creativity fostering teachers (Lin, 2014; Torrance & Myers, 1970), especially given the similarities between creative teachers and creativity fostering teachers who teach for student creativity development.

Creative teaching as a requisite for teaching for creativity. The argument has been made that creative teaching is required for teaching for creativity (Davies et al., 2014; Jeffrey & Craft, 2004; Lin, 2014). Creative teaching models creative behaviors (Chant et al., 2009; Davies et al., 2014), creative thinking skills (Orr & Kukner, 2015),

the creative process (Davies et al., 2014), and creative problem solving (Brinkman, 2010) for students. In general, creative teaching exemplifies a teacher's belief that creativity is a valued skill. Rubenstein, McCoach, and Siegel (2013) provided a statistical correlation between teachers' personal and professional creative identity and their sense of self-efficacy as an influential factor to foster creativity in students. They report that not only is creative teaching important but that a teacher must perceive themselves as creatively capable in order to teach others to be creative (Rubenstein et al., 2013), a sentiment shared by others (Bolden et al., 2010; Hong et al., 2009). The belief of being capable of creative outcomes is known as creative self-efficacy (Tierney & Farmer, 2011) Considering Rubenstein et al.'s (2013) conclusion, a teacher's sense of creative self-efficacy may be a prerequisite to teaching creatively, which has been argued as a requisite in teaching for creativity within students.

Creative Self-efficacy

Both creativity and self-efficacy researchers have studied the construct of creative self-efficacy in the classroom context, yet the evidence collected so far lacks definitive insights into the link between creative teaching and teaching for creativity. My literature review produced studies primarily focused on student creative self-efficacy. The implications of these studies, however, remain relevant to Rubenstein et al.'s (2013) claim, for a diminished sense of personal creativity might diminish a professional sense of creativity (Karwowski et al., 2013). Current practitioners' creative self-efficacy may be low due their experiences, as a student, with teachers whose practices and classroom climate implicitly communicated a lack of belief in their creative potential (Beghetto,

2006; Chang, Wang, & Lee, 2016; Karwowski, Gralewski, & Szumski, 2015). Teachers whose creative solutions were not properly identified or encouraged in creative endeavors as a student (Beghetto et al., 2011) may not know how to model such behaviors in their own classrooms. Practitioners who were children of well-educated parents could exhibit a higher creative self-efficacy (Karwowski, 2011). Only one study within my literature review specifically studied creative self-efficacy to teachers who exhibit innovative work behaviors (Li, Liu, Liu, & Wang, 2017), which I determined to be parallel to the creativity fostering research. Although creative self-efficacy did not predict innovative work behaviors in teachers, it was a mediating factor (Hsu, Hou, & Fan, 2011; Li et al., 2016). In short, creative teaching as a requisite for teaching for creativity has not been examined thoroughly and lacks evidence, hence remains a persuasive argument. The lack of understanding of what experiences, knowledge, and skills are required to teach for creativity due to lack of research elicits further research needs. If research does not have substantial evidence on what variables are necessary to teach for creativity, it cannot be assumed that the practitioners responsible to execute practices that foster student creativity believe in their ability to do so.

Teacher Self-efficacy to Foster Creativity in Students

While researchers have defined what creativity fostering practices include, how to identify a creativity-fostering teacher, and what personal characteristics creativity fostering teachers share, what remains unknown is how teachers who foster creativity developed the self-efficacy to employ such practices. As Bandura (1997) cautioned, teachers' self-efficacy to foster and develop student creativity may be low because the

professional expectation to foster creativity is new and may require knowledge and skills previously unfamiliar. Kampylis et al. (2009) was one of the first studies to unassumingly ask practitioners about their confidence to address student creativity. They reported similar findings to previous studies, that teachers reportedly valued creativity and almost unanimously agreed that their role as teacher included facilitation of student creativity (Kampylis et al., 2009). What Kampylis et al. revealed, however, was that more than half of the participants did not feel well trained and nearly a quarter did not know if they were well trained (Kampylis et al., 2009). This finding supports the recommendation of creativity researchers that teachers need PD on creativity issues (Beghetto & Kaufman, 2014; Collard & Looney, 2014; Davies et al., 2014; Kampylis et al., 2011; Sternberg, 2015) in order to incorporate practices that address student creativity development.

In the United States, researchers Rubenstein et al. (2013) developed a scale instrument to explore teachers' perceptions of teaching for creativity. Slightly different from Kampylis et al. (2009), Rubenstein et al. determined four constructs of influence, based on previous research. The four pre-determined constructs were: self-efficacy, societal value, student potential, and environmental encouragement. Similar to previous studies, Rubenstein et al. reported that a majority of teachers reported creativity as valuable to society and teachers who perceived themselves as creative held a higher sense of self-efficacy. Contrary to other studies, the participants in their study reported a higher belief that students are capable of creativity and a correlation to teacher self-efficacy; teachers felt capable to develop student creativity (Rubenstein et al., 2013). Only one construct, environmental encouragement, did not correlate with any other construct

(Rubenstein et. al, 2013). This finding, according to the researchers, Although Rubenstein et al. presented a positive outlook that teachers feel confident and capable to develop creativity in students, the findings are limited to what Wyatt (2014) criticizes as participant interpretation. Considering the consistent inaccuracy of teachers' definition of creativity (Lin, 2014; Mullet et al., 2016; Turner, 2013), it is unclear if all teachers interpreted creativity and creative problem solving accurately. As Bandura (1997) warned, self-efficacy cannot replace knowledge and skill. So while participants reported a high sense of self-efficacy to develop creativity in students (Rubenstein et. al, 2013) that belief may be rooted in a stereotypical notion of creativity and may equate to practices that suppress creativity rather than support it (Beghetto & Kaufman, 2014). Finally, even though Rubenstein et al. did provide a valid instrument to measure a practitioner's perceptions of their ability to develop creativity, it does not address how teachers developed the self-efficacy to implement creativity-fostering practices.

The need to explore teachers' perceptions of their ability to address student creativity development is becoming a recognized gap in educational and creativity research (Davies et al., 2014; Kampylis et al., 2009; Mullet et al., 2016). Because research on how teachers develop a sense of self-efficacy to develop student creativity is limited, some have called for research that explores the influence of PD that supports the understanding of creativity fostering practices on current practitioners as a place to start (Davies et al., 2014; Mullet et al., 2016). Davies et al. (2014) claimed that research has overlooked the role of teachers and their PD needs in the campaign to advocate student creativity development as an educational goal. The relationship between teacher

education, training, and teacher perceptions of creativity was cited as the most important potential research to advance the educational goal of student creativity development by Mullet et al. (2016).

Professional development for mastery experiences. While research has not studied what specifically impacts teacher self-efficacy to develop creativity in others, researchers and theorists have clearly suggested the first step. Torrance (1970, 1995) and several other creativity researchers (Beghetto & Kaufman, 2014; Lee & Kemple, 2014; Runco, 2014) insisted that in order to develop the skill in students, teachers must first understand the skill. Consistent with Bandura's (1997) directive to provide teachers foundational groundwork, the best way to understand creativity is through a mastery experience with creativity (Bae, Song, Park, & Kim, 2013; Davies et al., 2014; Minett, 2015) in the form of PD. The intention, or goal, of PD has been to address changes within the profession and to educate practitioners on knowledge and skill that might not exist within their practice (Hirsh, 2013). Educational practitioners, especially K-12 teachers, are in a unique position when attending PD. During PD the teacher transforms into the role of student, yet with the pedagogical knowledge and experience of a professional. Recent trends have shifted away from passive, "sit and get" PD models, to more active professional learning. An experiential approach to PD has also been shown to promote "key features" (Stewart, 2014), such as practical application, authentic dialogue, and opportunity to reflect for meaningful changes to their practice (Burke, 2013; Klein & Riordan, 2011). Experience has proven to be an effective approach to professional learning that influences professional practices (Gegenfurtner, Veermans, & Vauras, 2013;

Sandholtz & Ringstaff, 2014), likewise, professional learning experiences with creative thinking and the creative process might influence creativity-fostering practices.

Creativity-fostering PD. Each state is given autonomy in educational policy; therefore, only certain states have adopted InTASC (2011) teaching standards that require creativity development practices. Among states that have adopted InTASC (2011) teaching standards, only few states have systematically incorporated PD as part of the creativity implementation process (see P21, 2015). In this study, we will focus on the state of Arkansas and explore what PD opportunities exist for schools and teachers to address the expectation to develop student creativity.

Teachers in Arkansas are required to participate in thirty-six hours of ADE-approved professional development each year to maintain certification (ADE, 2014). The majority of ADE-approved professional development is primarily provided through two sources, the regional co-operatives (ADE, 2014) and Arkansas Educational Television Network (AETN) Internet Delivered Education for Arkansas Schools (Ideas). Additional professional development providers, such as conferences, must undergo a formal review process in order to receive ADE approval. Both AETNIdeas and regional cooperatives are designated hosts for sessions facilitated by ADE or sessions on topics required by state law, such as Arkansas teachers code of ethics. Beyond the ADE facilitated or required PD topics, each of the regional cooperatives and AETNIdeas are solely responsible for designing PD options provided to education practitioners throughout the year. There is no state required PD on creativity related issues (ADE, 2014) and PD options on creativity related workshops in the AETNIdeas 2014 catalog were limited

(AETN, 2014). A non-profit organization, ARA+ provides ADE-approved PD to contracted individual schools and districts.

Established in 2009, ARA+ is based on the A+ Schools philosophy. A+ Schools is a school reform model that originally began in North Carolina in 1995 (Noblit, Corbett, Wilson, & McKinney, 2009) and has grown into a four state National Consortium of A+ Schools (NASC) (2015). While each state has a unique approach that addresses the unique culture, people, and places of its state, all commit to the A+ Essentials (National Consortium of A+ Schools [NASC], 2015). The Essentials are: arts, curriculum, enriched assessments, multiple learning pathways, collaboration, infrastructure, climate, and experiential learning (Appendix A). According to Calaway (E. Calaway, personal communication, May 6, 2015), schools that contract ARA+ Schools agree to a 3-year implementation process that includes a three-year PD cycle. Each ARA+ network school attends intensive multiple day conferences in the summer, five days the first year, three days the second, and two days the third. One day, onsite workshops are provided for each school the proceeding Fall and Spring semesters. Supplemental opportunities and support, such as webinars and special guest workshops are also provided throughout the 3-year contract. The implementation process spans over three years, so while all A+ Essentials and creativity are introduced during the initial Summer Institute, deeper investigations continue throughout the remaining three years.

ARA+ attempts to nurture "creativity in every learner" by providing research-based PD that prepares "teachers and principals to think more creatively about how to present their curriculum in collaborative hands-on ways" (ARA+, 2016) as part of the

facilitation process of "supporting the development of creative schools" (NASC, 2015). In context to literature reviewed, ARA+ attempts to develop creative teachers who, in turn, feel more efficacious to implement practices that foster and develop student creativity in an environment that supports creativity-fostering practices. ARA+ Program Director, Calaway (E. Calaway, personal communication, May 6, 2015) explained, the inclusion of creativity in ARA+ PD takes many forms yet includes basic creativity research, creative thinking processes, a variety of creativity challenges, direct instruction in a variety of art forms, and workshops (E. Calaway, personal communication, May 6, 2015). ARA+ PD features instruction on the nature of creativity and the brainstorming process, specifically, as recommended by creativity research (Beghetto & Kaufman, 2014; Collard & Looney, 2014; Kampylis et al., 2011; Sternberg, 2015). Participants of ARA+ PD have first-hand experiences with arts instruction, the subjects teachers most frequently associate with creativity (Bolden et al., 2009; Kampylis et al., 2009; Newton & Beverton, 2012; Turner 2013). Arts experiences provide an authentic experience with the creative process (Beghetto, 2014; Davies et al., 2014; Root-Bernstein & Root-Bernstein, 2013), an essential knowledge according to INTASC Model Core Teacher Standard Five (InTASC, 2011). ARA+ PD further addresses Standard Five with Art Application sessions, or examples of arts integration instruction. Arts integration models interdisciplinary learning in professional practice (Çil, Çelik, Maçin, Demirbas, & Gökçimen, 2014; Root-Bernstein & Root-Bernstein, 2013). In short, ARA+PD may not have been designed upon Cropley's (1997) nine principles, but contains components that model creativity fostering professional practices (see Table 1). Because a concerted effort

Table 1

Cross Reference of ARA+ PD Components as Creativity Fostering Practices

Creativity-fostering Principle	ARA+ PD component
Encourage students to learn independently	Arts 101 sessions and individual classroom planning
Have a cooperative, socially integrative style of teaching	Whole group creativity challenges, promotion of Collaboration Essential. Design thinking approach.
Motivate their students to master factual knowledge, so that they have a solid base for divergent thinking	Arts 101 workshops as a requirement for Arts Application sessions.
Delay judging students' ideas until they have been thoroughly worked out and clearly formulated	Use of Brainstorming process and personal classroom planning. Design thinking approach.
Encourage flexible thinking in students	Creativity challenges, use of art integration as a teaching approach. Design thinking approach.
Promote self-evaluation in students	Participation in arts experiences and reflective debriefing of classroom application attempts.
Take students suggestions and questions seriously	Use of brainstorming process, burning questions and Ahas poster, and debriefing process after each experience.
Offer students opportunities to work with a wide variety of materials and under many different conditions	Numerous arts experiences and models of how to use arts integration in the classroom. Creative materials always included in facilitation.
Help students to learn to cope with frustration and failure, so that they have the courage to try the new and unusual	Design thinking approach. Arts Experiences and arts integration examples for a wide variety of facilitators throughout the 3-year implementation process.

by ADE to offer creativity-related PD did not exist at the time of this study, there were inconsistent state operated PD options to research. It appeared ARA+ workshop sessions aligned with creativity-fostering principled practices that might provide insights into the

relationship between mastery experiences with creativity fostering teaching and the self-efficacy of teachers to implement creativity fostering practices.

Summary and Conclusions

Teacher self-efficacy has been proven to be an influential factor to classroom practices and student achievement; therefore, it is important to deepen our understanding of how teacher self-efficacy changes with new professional expectations, specifically fostering student creativity development. Research, thus far, has primarily focused on the classroom practices and personal characteristics of teachers who successfully foster student creativity. What has become clear to researchers is the lack of foundational knowledge about creativity has a significant impact on numerous teaching practices that attempt to foster creativity in students. As a result of these findings, researchers have promoted the importance to understand what knowledge and skills teachers need to be able to efficaciously foster creativity through appropriate practices. In response to the call for more PD on issues of creativity, Davies et al. (2014) recommended to conduct studies that accurately capture the practitioner's perspective of relevant knowledge and skills to the actual implementation of creativity fostering practices.

Chapter 3: Research Method

The purpose of this qualitative case study was to discover what knowledge and skills teachers perceive to be necessary to efficaciously implement practices to foster and develop student creativity. I sought to determine practical recommendations from current practitioners who had self-selected to attend ARA+ PD, identified for practices that exemplified Cropley's (1992) creativity-fostering teaching practices. If teacher self-efficacy was influenced through the exposure of creativity-fostering PD, then insights into which specific knowledge and skills were most influential to change could be gleaned through rich, thick narratives of the participants' perceptions of their experiences. Valuable insights on how to systematically achieve the professional expectation for teachers to develop and foster student creativity can be found from the voices of fellow practitioners, who share the responsibility but with unique experience that supported their professional capacity to do so.

This chapter will feature the following sections: research design and rationale, role of the researcher, methodology, trustworthiness, and ethical procedures with a summary. In research design and rationale, I will describe the design of the case study and elaborate how the design was best suited for answering the research questions. My specific role within the study design is clarified in role of researcher section, followed by the methodology section that elaborates on participant selection, instrumentation, procedures for recruitment, participation and data collection and data analysis plan. Concerns of research validity and reliability are explained in the trustworthiness section and the ethical treatment of participants and data is discussed in ethical procedures.

Research Design and Rationale

Due to changes in educational expectations, student creativity development should be incorporated into every classroom (Soulé & Warrick, 2015), yet there is little evidence to explain how teachers are professionally trained and apt to incorporate practices that foster student creativity. While the expectation to incorporate creativity has been explicitly stated in Model Core Teacher Standards (InTASC, 2011) and implicitly suggested in professional practices across a variety of education agencies (Perry & Connelly, 2012; President's Commission on the Arts and Humanities, 2011) and publications (Clinton & Hokanson, 2012; Scherer, 2013), less than 20 states were recognized by P21 for exemplary implementation in individual districts and schools of such expectations (Soulé & Warrick, 2015). A shift in professional expectations without providing specifically designed PD suggests a possible void in professional preparedness may have occurred among many current practitioners. According to Bandura's (1997) theory, a void in professional experiences with creativity development may result in a low self-efficacy to meet such professional expectations (Pyhältö et al., 2014). This phenomenon of a potential void of professional experiences for teaching creativity validated the need to research the question: How might professional development designed to foster creativity address teaching skills needed to meet the 21st century skill needs of students, and as a result influence self-efficacy in teachers?

There was a unique network of schools in the state of Arkansas that provide an opportunity to study how a select group of practitioners have addressed this potential void; therefore, a case study design was best suited to explore this study's research

questions. ARA+ PD was a shared experience among only 17 out of 1,062 public schools in the state of Arkansas (ADE Data Center, 2016) at the time of this study, resulting in a case of practitioners bound by those experiences (Creswell, 2012; Yin, 2014). Case studies are designed to understand the how and why of real-world situations (Miles, 2015; Pearson, Albon, & Hubball, 2015; Turner & Danks, 2014; Yin, 2014). All participants within this study were practitioners, individual teachers grappling with the expectation of incorporating creativity in the classroom for all students. As Houghton, Murphy, Shaw, and Casey (2015) explained, case studies are appropriate when exploring how theory constructs itself within the entanglement of variables in settings with limited controls. The expectation to incorporate creativity within a classroom setting is entangled by innumerable variables that the participants do not have full control over. A case study design allowed the researcher to simply focus on the how and why of a particular situation (Patton, 2015; Yin, 2014). By investigating the experiences of the case study participants, I constructed an understanding to research question one; how did teachers perceive the influence of creativity-fostering PD on their self-efficacy to foster and develop student creativity in the classroom?

Through case study methods, it was possible to contribute positive social change to education practitioners as well as the research continuum through insights and new ideas from within the profession. Research Question 2 directly offers insights from the case by asking What did teachers perceive as the most salient knowledge and skills to assist them in developing student creativity? Turner and Danks (2014) claim case studies are the best choice for practitioners “to learn from best practices identified in one work

unit in order to scale up or replicate in another work unit" (p.24). By gleaning the best practices from this case study, other Arkansas teachers and schools might be able to positively replicate similar learning for similar results. Likewise, PD designers in the state of Arkansas and beyond might be able to positively scale the knowledge and skills within other PD experiences for positive social change. Findings from this case study offer insights into the connection between practical knowledge and teacher self-efficacy theory. This connection, Wyatt (2015) claims, is missing from most teacher self-efficacy research to date. A case study approach provided an opportunity to more accurately examine the complexity between teacher self-efficacy beliefs and professional practices.

There are many common characteristics among qualitative methods, yet case study design is best suited for my research. Because the research questions relied on the teachers' perceptions and not the analysis of their actions, an ethnographic methodology was inappropriate as it relies on extensive participant observational data (Yin, 2014). While phenomenological study design does address the unique perceived experiences of the individual (Lodico et al., 2010), the design potentially limits the transferability possible within a case study design. Furthermore, case study design incorporated personal stories of participants but not require the analysis of the narrative, such as narrative inquiry (Patton, 2015). For the inclusive and flexible nature of case study design, it was determined the best suited to answer my research questions.

Due to the flexibility of case study design, any traditional research approach, quantitative, qualitative, and mixed methods, could have contributed insights into the problem, yet a qualitative approach best aligned with the purpose of this study. Among

self-efficacy studies, most are quantitative and feature a Likert scale instrument (Wyatt, 2016). Scale instruments, according to Wyatt (2015), provided limited understanding of self-efficacy due to participant interpretation of the questions and differences in behaviors among the numeric ranking. Qualitative approaches allow the researcher to construct understanding from the participant's lived experiences (Merriam, 2009). According to self-efficacy theory, a shared experience among individuals does not equate to a shared value of the experience (Bandura, 1997; Pyhältö et al., 2014). My research questions were theoretically designed to construct an understanding of the practitioner's perspective, not hypothesize the quantitative impact of the experience. A qualitative approach, therefore, was germane to my desire to understand the phenomenon from a practitioner's perspective, as evidenced in the research questions.

Role of the Researcher

In consideration of numerous factors, observer as participant (Merriam, 2009) was the most appropriate role for me in this case study. Due to the nature of the research questions and purpose of this study, I adopted the role of observer as participant. My adoption of a moderate role was appropriate as either extreme along the role of researcher continuum, true participant or complete observer, was unsuitable. Although an employee of ARA+, I was not an employee at any of the participating schools. And although an interviewer could be hired and trained, which would have allowed me to become an obscured observer, the introduction of a stranger could have intensified observer effect (Bogdan & Biklen, 2007). My preexisting relationship within the ARA+ network promoted feelings of trust and reduced observer effect, or changes in natural interactions

due to being observed (see Bogdan & Biklen, 2007). I had interacted with the participants on various occasions as an ARA+ employee and may have benefited from what Merriam (2009) references as *peripheral membership* (p. 124). This relationship allowed me to enter each school's environment with minimal disruption to normal routines and behaviors. Even though I entered the environment as a member, I only observed the participant's stories. Only the participants articulated and defined the self-perceived influence of their lived experience (Bandura, 1997). In regards to the interview process, peripheral membership yielded comfortable conversation among trusted peers, producing credible accounts. My role of observer as participant honored the participating schools as unique communities, yet leveraged an established professional relationship for the purpose of capturing authentic stories.

As with any role, the advantages of observer as participant were balanced against the potential misuse of power and intrusion of subjectivity and bias (Bogdan & Biklen, 2007; Merriam, 2009, Patton, 2015). Being an employee of ARA+ was the most obvious relationship to clarify for ethical assurances. No portion of this study was funded, requested, or directed by any supervisory employee, community supporter, or financial funder of ARA+. As a result, no one's employment or network school's funding was associated or affected by the results of this study. It is important to recognize that ARA+ is a contracted service. No one within ARA+ has any authoritative powers or supervisory responsibilities within any network schools. My position as virtual professional learning network facilitator was a limited, grant-funded position and was not affected by the results of this study in any way. Primarily, I offered additional implementation support to

individual teachers, or small groups of teachers, in ARA+ network schools through social networking technology. Undeniably, I had a preexisting relationship with participating schools with varying degrees of instructional interaction among faculty. Interaction ranged from working directly with a school's faculty over several days, having inconsistent interaction from hosting specialty workshops where enrollment was voluntary and consisting voluntary enrollment among teachers from several schools, to no direct facilitation with any faculty member from a specific school.

I, acting independently from the ARA+ organization and solely in pursuit of my doctoral degree, generated this study and all design aspects. All communication and documentation with participating schools and teachers fully disclosed my intentions and association with Walden University. As per research protocol, the identity of participating schools and individual teachers were protected through the use of general descriptors and pseudonyms. Findings from this study have been shared with ARA+ and adhere to the same ethical standards as publication standards to protect participant identity.

I believe any subjectivity, as a result of my background and employment, was managed and were outweighed by the positive contributions of my role as researcher. For example, I have foundational knowledge and contextual experiences in teaching, teacher education, and fostering creativity in others which helped me understand the contextual experience of participants (see Turner & Danks, 2014; see Unluer, 2012). Patton (2015) argued that subjectivity is impossible to avoid, just as objectivity is impossible to achieve. Managing subjectivity is the common task for qualitative researchers (Henson-

Dacey, 2015). Furthermore, Patton (2015) defended research driven by personal interest and professional improvement while Harland (2014) suggested that subjectivity reconceptualized as a framework for methodological decisions encourages objectivity during data collection and analysis. Following this rationale, my subjective interests and passions undeniably influenced my study's design and methodology. The same interest that drew me to ARA+ drove my genuine inquiry in ARA+ network schools as a unique case study in the community of Arkansas schools. I reconceptualized my passionate interests as a framework and investigated beyond my experiences in order to understand how teachers develop self-efficacy to foster creativity in others. Only by controlling subjectivity or potential bias was I able to produce reliable findings from a broader collection of teachers for my study's purpose of contributing positive social change to my community.

Methodology

A case study design with qualitative approaches was used to explore the research problem and questions. The methodological decisions described in this section provide a clear plan of how the study was conducted for the purposes of contributing positive social change. In order to achieve that goal, data analysis was a crucial consideration in the design of this case study. Due to the number of schools in the ARA+ network, subsets were individually explored as well as cross analyzed, similar to multiple case (Creswell, 2009; Merriam, 2009; Patton, 2015; Yin, 2014) studies.

Participant Selection

Population. The population for this study was a select group of K-12 practicing educators from the state of Arkansas. The findings on teacher self-efficacy to address student creativity development from this select group have the potential to contribute positive social change, which could be transferable to the greater education population. The experiences of how a few practitioners addressed new, shared expectations, I defend, provide insights to the general education population.

Sampling. Purposeful sampling is inherent to case study methodology (Yin, 2014) and case study methodology was necessary for this study due to the identified gap in concerted PD efforts in creativity development. The sample selected from the state of AR was composed of schools who were members of ARA+, which is a state-approved PD provider whose organizational mission is to "nurture creativity in every learner" (ARA+, 2016), a mission that theoretically aligns with the arguments to develop creativity as a 21st century skill (see Soulé & Warrick, 2015). Schools who attended ARA+ PD created a case that aligned with the purpose of this study. ARA+ PD is a collection of workshops that includes and promotes creativity-fostering practices (see Table 1). Unlike conventional PDs that rely on individual registrations across multiple schools, ARA+ provides whole-school PD (ARA+, 2016). Therefore, investigating an ARA+ case provided a purposeful sample (see Ludico et al., 2010). Teachers in this study were representative of the greater population (see Ludico et al., 2010), who teach different grades, different content, with a variety of backgrounds and experience. In order to achieve a collection of participants that represented the greater population, I originally

proposed that 30 teachers from across three separate campuses would comprise the collective whole of this case study. Investigating the case of ARA+ network schools allowed me to explore how creativity fostering PD might have influence teacher self-efficacy to develop student creativity through purposeful sampling (see Houghton et al., 2015; Yin, 2014).

School participant selection. Further purposeful sampling among the ARA+ case strengthened the overall quality of the study's design. Typically, case studies investigate a singular unit, person, or organization (Creswell, 2012, Merriam, 2009, Patton, 2015, & Yin, 2014). Defining ARA+ schools as a case presented a cumbersome challenge, with an anticipated 17 ARA+ schools eligible to participate in this study. Case study sample sizes can vary according to the researcher's intent (Houghton et al., 2015; Yin, 2014). My intention was to find similarities across ARA+ schools for perceived salient knowledge and skills. Because ARA+ network schools commit to a 3-year implementation process, the entire case was originally categorized into three subsets based on implementation year. Similar to multicase (Yin, 2014) and cross-case (Patton, 2015) study design, this study benefited from investigating the same research questions across three purposefully selected subsets.

Beyond the identification of ARA+ network school, additional sampling parameters were employed for greater credibility. Selection of subset schools were based on three priority factors: consistent principalship, higher percentage of attending faculty, and lower new hire rates across ARA+ implementation. Selection parameters were achieved by accessing ARA+ archival records, such as attendance records of ARA+ PD

and personal organizational memory. Final selection of sample schools was based on availability, feasibility, and best fit, according to the above priority parameters, for overall sample.

Subset 1. Originally, only one school having completed its first implementation year was to be purposefully selected based on priority ranking described above. Full description of final two selected schools is provided in Chapter 4.

Subset 2. One school having completed its second implementation year was purposefully selected based on priority ranking described above. Full description of selected school is provided in Chapter Four.

Subset 3. One school having completed its third and final implementation year was purposefully selected based on priority ranking described above. Full description of selected school is provided in Chapter 4.

Individual participant selection. Beyond purposeful selection of case subsets at the school level, sampling selection occurred on the individual participant level. Each school, or subset, was designed to contribute an anticipated total of 10 teachers whose participation ranged across three instruments: a questionnaire, focus groups, and individual interviews. Any teacher who has attended an ARA+ PD was eligible to participate in the questionnaire. Eligibility was verified through attendance records maintained by ARA+. Questionnaires were distributed and collected electronically through Survey Monkey. The participating school's principal provided emails, yet had no access to participation information or data. Questionnaires were sent and received by me, as sole researcher, to protect the privacy of participants.

Participants for individual interviews were primarily selected from among the submitted questionnaires. Excluding teachers who were hired after ARA+ PD or have never attended ARA+ PD from both questionnaire and individual interview was necessitated by the ability to answer research question one. All submitted questionnaire responses were initially reviewed for responses that might further contribute to the research, if given an in-depth interview. Subsequent invitations for individual interview participation were extended by email. Up to three teachers from each school who agreed to an individual interview comprised the interview participant selection.

Focus group selection. Focus groups were conducted on an open invitation basis. Focus group discussions captured a socially constructed understanding of relevant knowledge and skills required for efficacious implementation of creativity fostering practices. Teachers who may not have attended ARA+ PD will not be excluded because the teacher could provide insights to the discussion by acknowledging what knowledge and skills are exhibited by peers that did attend ARA+ PD or other thoughts that might prompt reflective group discussions. In total, a collection goal of 30 teachers across three subset cases of the cases was determined to thoroughly address the research questions.

Instrumentation

A collection of three qualitative instruments captured a triangulation of narratives for the purpose of this study, to discover what knowledge and skills teachers perceived to be necessary to efficaciously implement practices that foster and develop student creativity. Merriam (2009) claims the most effective way to collect an authentic perspective is through qualitative methods which utilizes rich, thick narratives from the

participants. All instrumentation of this case study relied on written and spoken narratives of the participants. Open interview narratives, however, can drastically vary, making analysis for transferability purposes challenging (Yin, 2014). The potential to discover meaningful understandings about the phenomenon increases with the use of consistent protocols (Houghton et al., 2015; Yin, 2014) for cross analysis. Yin (2014) elaborated that the advantages of using consistent questions across multiple cases "are potentially enormous" (p 185). Structured questions and semi-structured interview protocols provided consistency in narrative responses across the three instruments described below and allowed for cross analysis for reliable and valid reporting.

Questionnaire. A structured questionnaire was used for this study (Appendix B), containing the same open-ended questions for all participating subset cases. The questionnaire contained open-ended questions and captured the broadest picture of the phenomenon for initial coding purposes (see Houghton et al., 2015) and direction for further data collection. Initial coding analysis of questionnaire responses allowed me to finalize interview and focus group protocols to address relevant themes.

Focus group. A focus group of typically five to seven teachers was conducted where participants were interviewed using a semi-structured protocol (Appendix C). As an instrument, focus group discussions are effective in collecting general ideas about a specific topic (see Merriam, 2009; Yin, 2014) from multiple perspectives (Bogdan & Biklen, 2007; Winlow, Simm, Marvell, & Schaaf, 2013). Winlow, Simm, Marvell, and Schaaf (2013) further elaborate that focus groups, "allow for a richer understanding of the issues" (p.293) because of the opportunity for multiple perspectives and promote its use

within purposeful sampling practices to explore common experiences. The focus group helped to explore how self-efficacy to foster student creativity had been 'socially constructed' (see Merriam, 2009, p.93) among each school as a community of practitioners with unique perspectives. All focus group discussions were digitally recorded to ensure accuracy of data.

Interviews. Three individual teachers from each subset case, or participating school, were individually interviewed for an in-depth exploration of the phenomenon. Adopting the semi-structured interview (Appendix D) allowed for focused, participant driven inquiry without compromising researcher reflexivity to unexpected discoveries (see Houghton et al. 2015; Merriam, 2009; see Turner & Danks, 2014; see Yin, 2014). Each interview protocol contained the same core questions with the flexibility to investigate other issues determined by each conversation. All interviews were digitally recorded to ensure accuracy of data.

Collecting evidence and data strictly designed for this study's research problem, purpose, and questions was best served from researcher-developed instruments rather than published scale instrument. Although several published instruments for various self-efficacy concepts existed, such as Tschannen-Moran and Hoy's (2001) OSTES, Tierney and Farmer's (2011) Creative Self-Efficacy Scales, and Rubenstein et al.'s (2013) Teaching for Creativity Scales, none directly investigated the phenomenon of how creativity-fostering PD influences feelings about self-efficacy towards creativity-fostering teaching practices. In terms of accuracy, Wyatt (2014) argued self-efficacy scales inevitably suffer from inconsistent participant interpretation. While one participant

might interpret a question from a universal perspective, they could interpret another question from a specific task experience (Wyatt, 2014). On the other hand, questions designed by the researcher were written directly to the study's research questions in order to adequately explore the problem of this study (see Harland, 2014; Miles, 2015; see Turner & Danks, 2014), ensuring both data validity and sufficiency in case studies. The ingrained combination of structure and flexibility in this case study was best accomplished through researcher-developed instruments.

Several steps were taken to ensure the trustworthiness of both researcher-developed instruments as well as sufficiency of data collected. Per research standards, the credibility of overall design and instrumentation were reviewed by my research committee and approved by Walden University's Institutional Review Board (IRB), study 05-11-17-037586. When needed, I sought counsel with additional advisors, knowledgeable on self-efficacy and creativity development theories, outside of Walden University for a peer-review process. Peer reviews, explained Merriam (2009), are a process of determining similar interpretations from the same data and accounts for research creditability, whether conducted by dissertation committees or peers, regardless of previous knowledge to featured methodology and theories.

Specific collection strategies ensured confirmable and reliable research execution. Triangulation of data is key to valid research (Creswell, 2012; Merriam, 2009; Patton, 2015; Yin, 2014). All audio-recorded data was transcribed by a professional transcriptionist and underwent a member-check. Member-check procedures were offered to all participants to ensure the transcriptions accurately represent their perspectives, thus

substantiating the data's credibility (see Creswell, 2012; see Merriam, 2009; see Patton, 2015; see Yin, 2014). A staggered collection of triangulated data safeguarded sufficient exploration and analysis of the research questions. In total, the triangulation of data sources and research coding procedures collectively established content validity and sufficiently to addressed the research questions of this study.

Procedures for Recruitment, Participation, and Data Collection

There is a unique community of schools I investigated for this case study. The following is a description of how schools and individual participants were recruited for participation, what participation entailed, and how information was collected.

School recruitment. All 17 ARA+ network schools were informed of and invited to participate in the study through a pre-recorded video message, made by me and delivered by email to the school principals. The video message allowed me to inform principals of the purpose of the study, participation requirements, and anticipated benefits without requiring additional travel or projecting any obligatory social pressure. A letter of interest accompanied the introductory email, which principals needed to complete and return to me by email to officially communicate interest in participating. Phone calls, meetings, and additional emails were offered to all principals who needed further clarification to make a decision regarding participation during a consideration period of two weeks. My first step in the selection process was to develop a priority-ranking list among all ARA+ network schools who were interested in participating, based on the best fit parameters, such as consistent leadership and percentage of consistent participation among teachers. Invitations to participate in the study would be extended according to the

priority rankings until three schools were confirmed. Once participation had been confirmed with each selected school's principal, participant recruitment was the next step.

Participant recruitment. A request was made to each school principal for an informational meeting with eligible teachers to explain the purpose of the study, participation requirements, and other ethical considerations as well as provide teachers an opportunity to ask questions. All eligible teachers within each case received a hyperlink to a Survey Monkey survey by email that contains an embedded, electronic informed consent form along with a preliminary questionnaire. Teachers were given one week to respond. Among the submitted questionnaires, responses were reviewed for what Patton (2015) defines as "analytically focused sampling" (p.271). From this sampling, key elements were selected for a deeper exploration within the interview questions. I created a priority ranking based on my initial analysis of responses and the participants' potential to contribute a compelling narrative related to the research. The top three teachers for individual interviews received email invitations with additional informed consent letters. When a teacher declined participation, the invitation process extended to the next teacher according to priority ranking. The process continued until three teachers, at each school, were confirmed for interview participation or the priority list was exhausted. After confirmation, each participant was given a specific interview date and time at the request of the participant.

Originally, it was anticipated that the identification and recruitment for focus groups would be executed with each participating principal's advisement. The plan was to ask a

principal to recommend five to seven teachers who work in a cohesive community for student learning as a focus group. Email invitations were sent to all focus group members with the request to respond privately within three days. Once focus group participation requirements were confirmed, the focus group would be given a specific interview date and time under the direction of the school principal.

Participation and data collection. In case study tradition, data collection occurred in a natural setting, making participation as easy and comfortable as possible for the participants. All data collection occurred on the campus of selected schools in a room that provided privacy. Questionnaires were delivered to participants' email addresses and collected electronically, providing a confirmable and dependable collection process. Participation was considered private information, consequently, neither public lists of study participants nor individual names were disclosed to other study participants. Participants had the freedom to complete the questionnaire at their discretion within the stated timeline. Focus groups and individual interviews were conducted in a protected meeting room, classroom, or administrative space, free from interruptions and distractions. Every interaction that occurred on a case site, whether interview or focus group, were audio-recorded and supplemented by observational notes. Observational notes were created immediately after each interaction, generated from my memory and notations made during focus groups and interviews.

A database was utilized for both anticipated data, such as written responses and transcripts, and undeterminable evidence provided by participants on location. I was prepared to accept other forms of qualitative information from the participants during

focus group and individual interviews, such as photographs or lesson plans. Databases provide reliability assurances, providing an audit trail for confirmable and dependable record keeping (Patton, 2015; Yin, 2014). Consistent questioning across all three cases provided an instrumentation infrastructure to support cross-case analysis yet did not remove my reflexivity to each case and participant.

Appointments for focus groups and interviews were scheduled for approximately 45 minutes to 1 hour. My priority was sufficiency of data without producing participant fatigue, therefore, alterations to this model were necessary to provide enough time to adequately answer all questions and offer unprompted statements. Each participant was required to submit a consent form before participating in this study. All participants were debriefed upon their contributions and expected completion of study participation. For example, questionnaire respondents received a confirmation notice of their submission that included a statement regarding their right to revise and edit responses. Focus group and interview participants were verbally reminded of the member-check procedure as a closing activity. When transcripts were delivered to participants, they were informed of required response times for edits and revision requests. Had the interview data declined below an acceptable percentage due to participant removal, I was prepared to repeat the interview participation, data collection and member checking process until participation goal was achieved or possibilities were exhausted. Once the deadline had passed, another email notification was sent to thank participants for their contribution and anticipated study completion timeline. The anticipated timeline for data collection is detailed in Table 2.

Table 2.

Data Collection Timeline

Month 1	
Week 1, Day 1	Conduct school-wide information session at Subset Case One Email questionnaire with consent form to all eligible teachers Interview Principal for Focus Group participant recommendation Schedule Return week to conduct focus groups and individual interview.
Week 1, Day 3	Conduct school-wide information session at Subset Case One Email questionnaire with consent form to all eligible teachers Interview Principal for Focus Group participant recommendation Schedule Return week to conduct focus groups and individual interview.
Week 1, Day 5	Conduct school-wide information session at Subset Case One Email questionnaire with consent form to all eligible teachers Interview Principal for Focus Group participant recommendation Schedule Return week to conduct focus groups and individual interview.
Week 2	Initial review of questionnaire responses
Week 2, Day 5	Email reminder to all eligible teachers who have not submitted questionnaire.
Week 3	Complete initial review of questionnaires Make any relevant changes to focus group and individual interview protocols.
Week 4, Day 1	Email invitation for individual interview participation with return timeline.
Month 2	
Week 1, Day 1	Focus Group of Subset Case One
Day 2 -5	Interview three teachers from subset case one
Week 2, Day 1	Focus Group of Subset Case Two
Day 2 -5	Interview three teachers from subset case one
Week 1, Day 1	Focus Group of Subset Case One
Day 2 -5	Interview three teachers from subset case one
Month 3	
Week 3, Day 1	Transcripts of focus groups and individual interviews are emailed for member check.
Week 4, Day1	Email reminder of member check corrections deadline.

Data Analysis Plan

Data analysis strategies are key to successful case study design alignment to the study's problem, purpose, and research questions (Houghton et al., 2015; Yin, 2014). Because the research questions were designed to explore perceptions and discover salient knowledge and skills from the practitioner's perspective, triangulated narratives were collected. The questionnaire, interviews, and focus groups were used to gather the qualitative data for my research questions. Not only did the narratives of ARA+ teachers reveal connections between how teachers perceived the influence of how creativity-fostering PD experiences influenced their sense of self-efficacy to foster and develop student creativity in their classroom but also revealed the knowledge and skills they perceived as most important in helping achieve that goal. By strategically focusing on collecting participant narratives and triangulation of narratives, I successfully aligned data with both research questions.

All forms of narratives collected underwent coding procedures outlined by Creswell (2012) for general exploratory analysis. I used the theoretical components of both self-efficacy and creativity development theories for initial coding. Using the theoretical components as a framework was particularly helpful to me as a novice qualitative researcher. Focusing on limited words and ideas within a limited number of questions allowed me to strengthen my coding skills across a large number of similar responses before coding lengthy narratives that contained unique questions and dialogue. A system of constant comparative analysis was conducted to determine themes and patterns that emerge from the narrative data. Multiple comparisons of analysis were

conducted in order to allow a manageable concise set of themes to fully emerge (see Patton, 2015). Originally, I believed a constant comparative analysis was for each subset case to determine findings. Once the findings were determined individually, they were to be compared and analyzed across all subsets to determine overall findings (see Houghton et al., 2015; see Turner & Danks, 2014).

Because a study of this magnitude could be overwhelming to me as a first-time researcher, I utilized two resources. I hired transcription services to expedite the process of typing hours of interviews into word documents. The inclusion of a transcriptionist did not have any input or impact on the analysis of the data. Rather, it was advantageous because of the expeditious return of transcripts to participating teachers for a member check (see Merriam, 2009). Expedient delivery of transcripts improved participant recall during the member-check process, thus improved validity. Due to the amount of narratives collected, I used NVivo software as an assistive tool in the exploration of patterns within the text. As Houghton et al. (2015) explained, the use of qualitative software tools are for management purposes only and cannot replace the analytical role of the researcher. Within the context of this study, NVivo provided efficient search tools, organized storage of identified codes, and effective presentation of data analysis. Software technology promoted expedient processing of information contained within the data, yet continued to require direction from the human programmer. Using technology did not alter or influence the analysis of data (see Patton, 2015) or my responsibility for the valid and reliable completion of this study.

Trustworthiness

Upholding the integrity and validity in all aspects was vitally important for this study's goal of contributing insights for positive social change. Credibility, or internal validity, was maintained through several efforts. Most importantly, triangulation of data, or multiple sources that confirm the same message (Creswell, 2012; Patton, 2015), is particularly important in qualitative studies. Once various forms of narratives were collected and transcribed, participants are asked to review the transcriptions for accuracy, a process known as a member checking (Creswell, 2012; Merriam, 2009; Patton, 2015; Yin, 2014). Although some components were prepared and anticipated, such as interview and focus group protocols, I was also prepared for the unanticipated. Additional visits, interviews, and other evidence were possible and were part of my responsibility to maintain reflexivity (see Yin, 2014) and ensure saturation (see Creswell, 2012). All data, data analysis, and reporting were held to a degree of peer-review as part of the dissertation process, however, if additional counsel was needed, I sought peer-review for any item under question. Validating information collected as credible improved the transferability of the study's findings.

Case studies adequately address issues of transferability, or being able to generalize the findings to a broader population (Creswell, 2012), yet multi case studies have the ability to present powerful findings. Through rich, thick descriptions of individual cases (see Merriam, 2009), the readers can imagine the situation, place themselves in context of the case, and transfer those thoughts to their own situation (see Miles, 2015). This effect of transferability is especially powerful, argued Turner and

Danks (2014), when the study involves multiple cases from the practitioner's point of view. Turner and Danks (2014) defended that details from case studies are easily identified as similar to the reader's perspective and generalized to the reader's own practice. Similarly, this study contained subset cases reflective of most other schools, therefore, the findings could be transferred to a broader set of similar education practitioners.

From a quality assurance standpoint, it was vital that the findings stem from dependable data. A personal Google Drive account served as a password-protected database to store, organize, and manage all data collected (see Yin, 2014). Google Drive is a cloud-based storage system that required a login process that included a password. Additional security measures were added to my Walden Google Drive, specifically the addition of a two-step process that included a phone verification code. Because Google Drive is cloud-based, I instantly stored all collected data pieces within a singular protected database, regardless of location or format. For example, audio recordings and photographs were uploaded at the research location and word documents could have been downloaded directly from email. With proper and effective use of technology, all data collected could be upheld to any research audit and authenticate dependable record keeping.

The combination of effective and flexible technology assisted my ability to address confirmability, or collaborate with others to substantiate or challenge my findings. Google Drive, as a database has password protection features, but as a cloud-based storage could be shared with others. This was particularly helpful within my

committee review because anyone from Walden University's review process can request access to individual pieces without compromising the confidentiality of the whole collection. My process was reviewed for objectivity from data collection through reporting and verified my reflexivity as a researcher. By using the tools of Google Drive, I assured Walden University's research standards were safeguarded throughout this study and produced a valid case study.

Ethical Procedures

The ultimate responsibility to any research study is to protect the ethical and humane treatment of participants. No portion of this study was conducted until explicit permission from Walden University's IRB is given. All participants were provided full disclosure to my study's goal and intentions. Every participant was provided personal copies of an informed consent form, which included an IRB approval code, before each interaction. No one was allowed to participate without submitting a completed consent form. All IRB consensual rules were applied, meaning any participant could decline or withdraw participation at any time. My ethical responsibilities extended to the protection of each participant; information and identity. All records were stored in my private Google Drive and will remain there until completion of my degree at which time all files will be downloaded onto an external hard drive. The hard drive and any physical documentation will be stored in a locked file box for three years and permanently destroyed afterwards. Any publication of this study and its findings will adhere to ethical reporting practices, using accurately descriptive language without disclosing any information that threatens the privacy of the participants.

Summary

There are a few schools in the state of Arkansas that create a unique case. These schools have a shared experience with creativity fostering PD, a foundational recommendation among creativity researchers in developing the efficacy among practitioners to foster and develop student creativity through appropriate practices. The exploration of these schools through case study methodology provided valuable insights to the question, how do teachers think creativity fostering professional development has influenced their self-efficacy for fostering creativity in students? Data featured rich, thick narratives from practitioners among four subset cases. Saturation of data was achieved through questionnaires, in-depth individual interviews, and focus groups across all three subset cases. Chapter four will report on the ethical collection of data and reveal what findings were contained within the data collected.

Chapter 4: Results

This case study explored the experiences of teachers who attended creativity-fostering PD to discover how it influenced their sense of self-efficacy to address student creativity development as a professional expectation. Practitioners from across four subset case schools described their experiences in questionnaires, focus groups, and in-depth interviews to provide insights on the following research questions.

1) How do teachers perceive the influence of creativity fostering PD on their sense of self-efficacy to foster and develop student creativity in the classroom?
2) What do teachers perceive as the most salient knowledge and skill to assist them in developing student creativity?

Chapter 4 is organized according to methodology details and features explanatory descriptions of the case study research execution. A thorough explanation of the constant comparative data analysis process illuminates how themes were identified, followed by an elaboration of each theme. Lastly, I address issues of research integrity and how trustworthiness was maintained. The chapter concludes with a summary of how the participants within this case study uniquely answered the research questions.

Setting

Four schools within the ARA+ network were purposefully selected for this case study because of the voluntary, contractual obligation for the entire school to attend PD services provided by ARA+ during a 3-year implementation process. While ARA+ PD is not identical for each network school, it does consistently align with the principles of

creativity-fostering practices (Cropley, 1997) (see Table 1). Each subset case school was selected for characteristics that, when combined with other subset case schools, provided a wide variety of K-12 public educators. Originally designed to contain three subset case schools, one subset case school was amicably removed due to administrative personnel changes during the participation confirmation process. Because the three confirmed schools were not the same demographics as the original plan, I decided to expand my case study to four to achieve demographic balance. The final collection includes data from two subset case schools having completed 1-year implementation and one subset case school each from 2- and 3-years implementation. Collectively, the case study represents a complete range of K-12 practitioners from different geographical regions of the state, with a range of teaching experience, and serve students of diverse racial and economic populations.

Each subset case school was assigned a code according to its implementation year, as follows SCS1, SCS2, and SCS3. As mentioned, two subset case schools with one complete year of implementation participated and were coded as SCS1a and SCS1b. Following is a brief description of each participating subset case school.

SCS1a – An elementary school serving Grades K-5. It is a smaller school with a student enrollment of 242 and consists of urban and transient military students, 42% identified as low income (Retrieved 2017, Nov 1, ADE Data Center). Participant demographics consisted of 14 females and one male. Among the 15 participants there were two arts educators, three support practitioners, and nine grade-specific educators. Teaching experience of SCS1a participants ranged from 1 year to over 30 years.

SCS1b – A middle and high school campus serving students Grades 7-12. It is also a small school due to its rural location with an enrollment of 332 with 66% of its student population identified as low income (Retrieved 2017, Nov 1, ADE Data Center). Participant demographics consisted of eight females and two males. Among the 10 participants there was one arts educator, and nine nonarts educators. Teaching experience of SCS1b participants ranged from 1- 25 years. This campus experienced a significant faculty turn over at the end of its first-year implementation, with over one third of its ARA+ trained faculty being replaced.

SCS2 – A public charter high school with an arts-focused mission, serving Grades 9-12. It is a small campus with an enrollment of 221, 25% of which are identified as low income (Retrieved 2017, Nov 1, ADE Data Center) from the surrounding suburban communities. Participant demographics consisted of 11 females and three males. There were three arts educators, eight nonarts educators, and two teachers who taught both arts and nonarts courses. Teaching experience among SCS2 participants ranged from 2- 26 years. It is important to note that due to charter status, not all SCS2 practitioners were licensed educators. Professional experience is prioritized over teacher certification in many cases, especially in arts courses. Some SCS2 practitioners have received permission to teach from the Arkansas State Board of Education as part of SCS2's waiver (Retrieved 2017, Nov 1, ADE Data Center).

This campus experienced two major disruptions to their work environment that may inadvertently have caused trauma or skewed the data. First, a major construction project had begun just weeks before data collection. Most teachers spent the first week of

summer break on campus relocating classrooms to mobile units in preparation of demolition and construction. Second, the school district transitioned from a traditional academic year to a year-round schedule, which resulted in a drastic reduction of personal summer vacation time.

SCS3 – A magnet elementary school serving 445 students in Grades K-5 (Retrieved 2017, Nov 1, ADE Data Center). It is located in an urban community and has an arts-focused mission. Because of its magnet status, families within the district have the option to apply to attend across district zoning; however, a majority of the student body comes from the surrounding, primarily high poverty neighborhoods with 85% of its student population identified as low income (Retrieved 2017, Nov 1, ADE Data Center). Participants consisted of 16 females and three males. Among the 19 participants, four were arts educators, seven were support practitioners, and eight were grade specific educators. Teaching experience among participants ranged from 2- 25 years. As a point of reference, because the faculty of SCS3 completed its 3-year implementation, the final ARA+ PD experience provided was over 6 months from the time of data collection.

Data Collection

The data in this case study represents the perceptions of education practitioners through three specific instruments, a questionnaire, semistructured focus groups, and semistructured individual interviews. In all, 58 practitioners across four SCSs participated in this case study yielded a total of 85 pieces of data because of participation within two instruments by selected participants (see Table 3). The questionnaire was intentionally designed for breadth. Consequently, the questionnaire instrument had the broadest scope

of participation with a total of 47 participants (see Table 3). The only eligibility requirement to participate was attendance in at least one ARA+ PD.

Table 3

Participation Breakdown per Subset Case

	Questionnaire	Focus Group	Interviews	Number of participants
SCS1a	7	11	3	15
SCS1b	8	4	2	10
SCS 2	14	8	3	14
SCS 3	18	5	2	19

The second instrument was a semistructured focus group. Eligibility to participate was not dependent upon ARA+ PD attendance as the questions focused on the socially established understanding of creativity and the expectation to foster creativity within the specific SCS culture (see Bandura, 1997, p. 101-103). In other words, the focus group contributed data on how ARA+PD had influenced the social environment of each SCS. Because ARA+ PD attendance was not required, an open invitation was sent to every teacher at each subset case school. This resulted in a random, unbiased selection and participation process. All focus group participants were verified to have completed a consent form previously.

A total of five focus groups were conducted across four subset case schools. All of which were conducted in a secured, private meeting room on each subset case school campus. Focus groups were conducted at an agreed upon time between school principal and participants. In total, there were 11 participants across two separate focus groups at SCS1a, representing 52% of the entire faculty. SCS1b focus group consisted of four

members, representing 13% of entire faculty. Participation at SCS2 featured eight members, representing 44% of entire faculty and SCS3 had five members, representing 17% of the entire faculty. Only one participant from SCS3 had only attended ARA+ PD during on-site PD during the school year only. All other participants had attended summer institutes and on-site PD.

The third and final instrument was individual interviews. All interviewees were purposefully selected by me after careful analysis of questionnaire responses and produced a balanced collection of rich, thick narratives that elaborated on a variety of perspectives. The criteria for invitation was participation in ARA+PD and participant willingness to be interviewed, as indicated on their consent form. Participants were selected on a range of categorical variables that produced a balanced collection of narratives from a variety of perspectives. Interview participants were teachers who taught a variety of subjects from a range of grade levels. Additionally, invitations were extended and accepted to participants whose questionnaire responses were interpreted as positive and neutral for an unbiased and comprehensive data collection. In total, 10 interviews were conducted (see Table 3) with five elementary and five secondary teachers, five arts educators, and five nonarts educators.

Instrument Distribution and Data Collection Procedures

The majority of data collection occurred on each SCS's campus, yet due to electronic recording formats, some data was collected in locations based on participant choice. The questionnaire was generated through my personal Survey Monkey account. A link to the questionnaire was distributed by email so the physical location of participant

completion is indeterminable for every participant but the majority was completed on SCS campuses. Survey Monkey provided security measures to protect participants' identity. Only I had access to the questionnaire results through a login security process. On average, participants completed the questionnaire in 14 minutes. All focus groups were conducted at each SCS's campus in a secured location to protect privacy, and were recorded. On average, focus groups lasted 45 minutes. Interviews were conducted primarily by phone to provide flexibility to the interviewees and recorded through Record-A-Call app with only one interview conducted on a SCS campus. This instrument experienced a wide range of completion times with the average interview completed in 35 minutes.

Variations

School selection. Originally designed for three subset case schools, I decided to expand my case study to include four subset case schools, to insure saturation. Early in the data collection process, the originally selected SCS3 was removed from the case study due to a change in administration in both district- and school-level. This upheaval was having a significant impact on the work environment climate. The out-going SCS3 principal, my committee chair, and I mutually agreed upon the decision to remove the school from the case study. With the removal of a selected school came a change in the overall demographics of participating schools. The SCS3 that eventually became part of this case study was geographically similar to SCS1a and similar in grades taught by participating SCS1a teachers. There remained a clear gap of relevant perspectives because there was no participation from a school in a rural community or middle grade

practitioners. Among all ARA+ network schools, there was one that could address both gaps. Permission to expand the case study was sought and granted from Walden IRB to include the additional SCS1b. Consequently, this decision resulted in a larger and more thorough collection of data for the study than imagined.

Individual Participation. I received support for my research from the SCS principals. As mentioned, three of four participating principals provided reserved PD time and computer lab space to SCS faculty to participate in the questionnaire. This proved to be advantageous as the one school that followed the original recruitment plan of email invitation alone resulted in the lowest number of completed questionnaires.

Data Analysis

I analyzed all questionnaire responses first as a whole case and then explored additional data for triangulation. My decision to use NVivo software proved to be beneficial in the ability to organize such a large amount of data in a cohesive manner during my exploratory, inductive process. Imported data were categorized in numerous ways, by instrument type, subset case school, specific question, and specific participant. Data were initially coded by theoretical alignment with creativity and self-efficacy theories identified in my literature review as originally planned. For example, the 4P construct of creativity, person, product, process and press (environment) is a widely accepted creativity theory (Beghetto & Kaufman, 2014; Mullet et al., 2016) and data were coded according to the theoretical constructs. This preliminary analysis proved helpful in developing a cross-case analysis of the data as well as theoretical understanding in preparation for Chapter 5.

Inductive data analysis answered the problem of how teacher self-efficacy is influenced by creativity fostering PD (see Figure 1). Data were coded for feelings of self-efficacy that were positively influenced, negatively influenced, or not influenced from ARA+ PD. During this process, I began to note similar phrases, such as “outside the box,” and common sentiments that became identified patterns. Identified patterns were outside the box, trying something new, comfort zone, arts/ arts and crafts, taking a risk, fear, statements of self/teacher, statements about students, climate/atmosphere, classroom environment, school as society/community, specific strategies/procedures, relationships, and administrative influence. As part of an inductive process, I used the constant comparative process to further condense the patterns into a smaller list of themes, emotional considerations, applicable ideas, risk-taking, infrastructure for the creative process, and increase in flexible thinking. Next, questionnaire data were analyzed within identified themes, subsequent subthemes were identified. Focus group and interview transcripts were coded according to themes and underwent a constant comparative process to determine if subthemes were substantiated through data triangulation, greater clarification on identified subthemes, and/or if additional themes and subthemes emerged and resulted in the final themes and subthemes. Finally, an analysis of data that were not contained in identified themes was analyzed for significant patterns in discrepant perspectives.

Results

The results of this study yielded insights to both research questions. From the broadest perspective, teachers who attended creativity-fostering PD reported a positive

influence to their sense of self-efficacy to address student creativity development. From the total case study of 58 participants, 84% reported positively and the remaining 16% reported no influence. There were no data that reported a negative influence. More specifically, the exposure to *applicable ideas* and *permissible risk taking* were two themes that emerged as an influence to teachers' sense of self-efficacy as the direct result of attending creativity-fostering PD. Permissible risk taking contained three subthemes, for self, for student, and from administration and peers. Finally, among all experiences described in the data, establishing *infrastructure for the creative process* emerged as the most salient knowledge and an *increase in flexible thinking* was the most salient skill for teachers to efficaciously address student creativity development. Establishing infrastructure contained two subthemes, among professionals and fostering students. Interestingly, the identified themes for both research questions were present in both positive and neutral influence groups, therefore, the results are organized by identified themes and subthemes within each research question, with evidence provided from both the positive and neutral influence groups.

Research Question 1

Research Question 1 asked how do teachers perceive the influence of creativity fostering PD on their sense of self-efficacy to foster and develop student creativity? Teachers reported their feelings of self-efficacy to foster and develop student creativity development as a professional expectation were positively influenced after attending creativity-fostering PD. From the numerous experiences shared, two distinctive themes

emerged as to how creativity-fostering PD influenced their feeling of self-efficacy. Those themes were applicable ideas and permissible risk taking.

Applicable ideas. The sharing of perceived applicable ideas directly influenced a teacher's sense of self-efficacy. *Applicable ideas* were identified as strategies, assessments, activities, or any other modeled idea that PD participants perceived as practical, useful, effective, and relevant to their classroom practices. Repeatedly, participants reported the benefits of shared ideas that influenced their sense of self-efficacy to nurture creativity. As one SCS1b high school teacher claimed:

> Before ARA+ PD, I did not know how to incorporate more creative strategies with a high enough level of rigor and efficacy. ARA+ has shown me strategies that are rigorous, so I don't feel like I'm watering down expectations in order to add creativity.

Similarly, teachers from SCS1a agreed. As one practitioner shared, "I have benefited most from specific examples of how to incorporate the arts in all kinds of lessons. I most appreciate learning how to tie the arts into my literature-based lessons." Applicable ideas developed positive feelings that persisted beyond initial introduction, as evident from an arts teacher at SCS2,

> I really enjoyed using ekphrastic poems with my students because I hoped that they would discover a talent or at least step out of their comfort zone like I did and be creative in a new way in the art room. It was very helpful in teaching the lesson to have my own experience and discomfort and share them as an encouragement. The first time it was because I had to figure out a way to get art

> integrated in there, but it actually worked out so wonderfully that I'm going to do it all the time.

Consistent inclusion of applicable ideas seemed relevant and necessary throughout the implementation process. A grade-level elementary teacher from SCS3 shared, "The ARA+ PD has been very beneficial to me in being something that I could take straight back to the classroom for application no matter the topic." It appeared that experiences perceived as directly applicable to their classrooms resulted in a positive influence to participating teachers' sense of self-efficacy to exercise those same practices.

Conversely, data analysis from participants who reported no influence to their sense of self-efficacy to foster student creativity also referenced applicable ideas. Among this data set, participants reported either a pre-existing exposure to ideas presented by ARA+ or the perceived lack of applicability. Among teachers who cited pre-existing exposure to creativity-fostering ideas, one SCS1b teacher said, "Things I have learned in PD I have already had experience with. So the activities we have done were not new to me." An arts teacher at SCS2 shared the most striking data, "I haven't found too much that has stuck out from ARA+ personally, although I am not dense enough to not see the amazing things it offers to core teachers." A few participants reported no influence due to perceived lack of applicability of modeled practices in ARA+ PD. One SCS2 teacher said, "I still wish that A+ can provide a secondary math example for creativity or arts integration. I have never left a PD with ideas to apply in a math setting." And a grade-level teacher from SCS1a requested, "Would like to see more direct ideas tied into our curriculum or allow teachers to share ideas by having cross-school meetings." The

combined findings from both groups seem to suggest that interpretation of applicable ideas may be dependent upon previous experience with the ideas shared and personal interpretation of applicability.

Applicable ideas emerged as a theme from a large collection of data that contained specific workshops, strategies, and activities experienced. Undeniably, personal bias determined what teachers perceived as applicable, yet certain workshops and resources seemed noteworthy. Curriculum-based reader's theatre (Flynn, 2011), Acting Right (Layne, 2017), brainstorming procedures (see Eberle & Stanish, 1996; see IDEO, 2017), and the integration of movement were cited among both elementary and secondary subset case schools' data. Many other specific workshops and arts integration techniques were mentioned, yet clearly, teachers were influenced by ideas that were classroom experiences designed for direct application.

Permissible risk taking. There was an abundance of data that reported permission for creativity-fostering practices from a variety of contexts. To clarify, risk taking is any action, behavior or decision that is perceived to be out of the norm or the prescribed protocol of the work environment. Prescribed protocols in education could include dictated pacing guides, purchased curriculums, or any other systematically implemented teaching practice within the school and district. In the context of this case study, *Permissible risk taking* is the perceived personal and social acceptance of creative behaviors as relevant professional teaching practices and valuable to the learning process. This theme was codified into three subthemes, the permission for self, for students, and from administration and peers to exercise creativity-fostering teaching practices.

For self. Many participants spoke about how creativity-fostering PD has influenced their personal feelings about permissible teaching practices. This shift in perceived permissible practices seemed to stem from an internal measure of professionalism and expertise. For some, it was the freedom to extend beyond their own expertise, exemplified by one SCS1b teacher, "I have learned that there are different ways to be creative and you don't have to be an artist or art major to be creative." For others, there was a sentiment of permission to develop expertise over time. "Learning that I have the freedom to try different approaches and not worry if it doesn't turn out like I planned the first time," stated a veteran teacher from SCS3. As one teacher from SCS1b elaborated,

> Well, I mean, if I don't like it, I'm probably not going to do it in the classroom. But if I did like it or felt like it would be beneficial, then after having done it, I will take it into the classroom and give it a try for my own. We may fail the first time. But – and every class if different. It may work with one class. With the next one, it's going to be a big flop. You're going to have a big ordeal. We'll end up sitting down and doing an essay for the rest of the class – nature of the beast, but just having the confidence to try means a lot.

Overall, teachers expressed a sense of permission to develop their expertise was not in direct opposition to professionalism, which in turn influenced their sense of self-efficacy to develop expertise with creativity fostering practices.

Repeatedly, participants referenced the feelings of discomfort associated with risk-taking and developing a tolerance for those feeling within their perception of

professionalism. In the words of a SCS1a teacher, “the willingness to think outside the box and step out on the limb and try new things.” An SCS2 teacher explained,

> I enjoyed doing that, because it made me really uncomfortable, and I felt like I could then use that and share it with the students – how even though I’d rather draw about stuff, I made it a point to write about things in a way that it was taught, and it worked.

For some participants within the neutral influence dataset, this discomfort resulted in self-imposed barriers. “There are a lot of activities that I personally would never feel comfortable putting my students through and I myself can be uncomfortable with them,” stated one SCS2 math teacher. As one arts teacher from SCS1a explained,

> A lot of the teachers that I’ve worked with – they’ve got all this wonderful information and all this right-a-way passage to do this creativity in their classroom. But they’re still – even going through the PD with A+, they’re still scared to take it back to their realm. They don’t embrace it readily as they could. I guess what I’m trying to say is that people are afraid of creativity, and they really are.

Seemingly, whether or not teachers are given permission to take risks, personal feelings towards public risk taking is a pre-existing variable to whether or not those experiences influence self-efficacy beliefs.

Ultimately, teachers from both the positive and neutral influence datasets expressed a sense of permission to trust their own professionalism, or independently determine what happens in their classrooms after attending ARA+ PD. One arts teacher

from SCS3 shared, “I am an improviser by nature and use that to inform my teaching. ARA+ was more of a confirmation than an introduction, concerning creativity.” As a science teacher from SCS2 said, “I truly appreciate the validation that A+ provided me as far as integrating subjects is concerned. I was always a bit of a rogue.” Collectively, teaching beyond prescribed protocols was perceived as a risk before attending ARA+ PD. As a result of attending ARA+ PD, participants felt a sense of freedom to independently determine teaching strategies, which in turn directly influenced their sense of self-efficacy.

For students. The concept of permissible teaching practices had a direct influence on perceived permissible student practices and behaviors. First, teachers expressed a newfound permission for student decision-making as a permissible risk in the learning process. As one arts teacher from SCS3 explained, that as a result of ARA+ PD, “I feel that has helped me to guide students in expressing themselves as opposed to always trying to dictate what their answer will be.” Another SCS3 teacher shared, “I acknowledge the value of student work and strive to provide opportunities for students to have a voice in what they do. I know that I am also a work in progress in this area.” The connection between permissible risk-taking in teaching practices (for self) and the resulting permission for student-centered practices was clearly articulated by one interviewee at SCS2,

> I executed the activity quite hastily at the end of the semester, the results were amazing, and I saw how publication –even self-publication- is so self-affirming to the students and changes their perception of their work. That landed in me in a

> way it hadn't before- I've always shied away from performance and publication in my own life and had to acknowledge that in myself and get over it for me and my students' sake, because such good things come from it.

For participants in this study, a teacher's sense of self-efficacy to foster student creativity through an increased tolerance for student risk taking stemmed from their personal risk taking as a professional.

Another aspect of permissible risk taking for students that appeared in the data was the teachers' perceived responsibility to develop student risk taking skills as a component of student creative development. From the perspective of one SCS1b, ARA+ PD, "laid the groundwork to building a safe environment that students can lay their insecurities to the side if they don't feel like they are strong in art." Another teacher from SCS2 stated, "I encourage them to be courageous and explore different methods until they find the one that best suits them." The responsibility to develop student risk taking skills appeared more often and with greater emphasis in data collected from practitioners who taught students in fifth grade or higher. Members of SCS3 Focus Group spoke about this shift in student creativity among their student population,

> SCS3 focus group member 3, "As they get older, they don't take the risk. When they're younger, they do. They don't care."
>
> SCS3 focus group member 1,"Because then they start noticing what other people do."
>
> SCS3 focus group member 2, "And they compare themselves to what other kids can do, and so that shuts a lot of them down real fast."

> SCS3 focus group member 3: "Right, and they're much more self-conscious, but then if you think about the people that go on to be successful and come up with new ideas that kind of take our society further, we need the people who say, well, I'm going to try this anyway or I'm going to – take that chance."

The influence of creativity fostering PD resulted in both the internal acceptance of student driven instruction as a permissible professional risk as well as the external action of explicitly communicating the permission to take risks to students to address the professional expectation to develop creative students.

From administration and peers. Participants reported that the climate and culture of permissible risk taking for the purpose of creativity-fostering practices was essential. This was a consistent message that emerged in the focus groups and interviews. "We are allowed to be creative with our craft," stated one SCS2 teacher. Most poignantly stated by an SCS1a arts teacher contracted by the school district across two separate campuses, "I teach at two different environments and I do my best work here." Similarly, one grade level teacher in the SCS1a focus group teachers reported,

> I think that A+ has given me the opportunity to be more creative, because I'm not worried about my boss watching over everything I do and judging it so harshly because it's not by the book, because she expects there to be creativity in the class.

One SCS3 focus group member explained, "If you send the whole staff to training to do artistic things in the classroom, then you can't be upset that I'm doing artistic things in the classroom. I mean, to me, that was just kind of permission."

Administrative influence was further elaborated within an SCS1a interview,

> I think that the way I have fostered creativity in my students is the same way [*Principal*] has done it with the staff – is just giving them the opportunity to be creative, to give them free rein to do what they are thinking and to work through that process so that it's authentic to them – to give them just that freedom.

Participants in SCS3 focus group elaborated on peer support,

> …at this school there's such encouragement for doing things that allow our students to express their creativity and also for us adults to be creative and to think outside the box that I think it encourages people who may even be going, I don't know if I'm the most creative person, to try things and see how it goes.

This subtheme reveals the influence of social acceptance on a teacher's sense of self-efficacy. For even though participants may have considered risk taking as necessary to exercise creativity-fostering teaching practices and to student creativity development, teachers required permission from others within their school community of peers and administration in order to efficaciously address creativity in the classroom.

After attending ARA+ PD, identified for its creativity fostering practices, most teachers reported a positive influence to their sense of self-efficacy to address the professional expectation to develop student creativity. Specifically, teachers claimed that the exposure to ideas from other practitioners was influential in their ability to transfer the ideas, activity, or strategy directly into their classroom. Beyond the direct application of an idea, teachers also shared their perception of permissible risk taking was influenced by attending ARA+ PD. Participants gave themselves permission to try new practices

experienced during ARA+PD, gave their students permission to take risks and try new ways of learning, as well as felt permission to implement creativity fostering practices without judgment from their peers or reprimand from their principal. Although not all participants found all ideas applicable, which in turn, did not produce feelings of permissible risk taking for their classroom. There were no reports that attending ARA+ PD had a negative influence on participants' sense of self-efficacy to foster creativity in their students.

Research Question 2

The second research question asked, what did teachers perceive as the most salient knowledge and skills to assist them in developing student creativity? As part of the constant comparative process, two themes emerged as significant to the case study participants. Once again, the data among neutral versus positively influenced participants were not contradictory but supported the identified themes and will be presented within each subheading.

Establishing infrastructure for the creative process. The theme of knowing how to establish infrastructure for the creative process emerged as salient knowledge to a teachers' efficacious implementation of creativity fostering practices from participant comments on specific procedures and strategies experienced during ARA+ PD. *Infrastructure for the creative process* addressed any physical or organizational structure that teachers addressed as necessary to develop a classroom or school wide society that fostered creativity and supported the creative process among individual students. Comments oftentimes referenced intangibles and transitioned from the perspective of self

and personal learning to the perspective of teacher and learning of students, as exemplified by a veteran arts teacher from SCS1a,

> More than anything that I learned through the instruction, the materials, I learned more from the A+ environment created by the facilitators, because I didn't worry about sharing my ideas and I didn't ever worry about my painting or whatever being good enough or my tableau being accepted – and I thought, that's the kind of environment in my classroom that I want to create.

Reiterated by an SCS3 teacher,

> I have learned that creativity in myself and in my students can be developed… I can as well as my students can think through a topic or task, figure out what it means to me/them and how to adequately represent those thoughts or feelings through movement or expression of varying methods.

Establishing infrastructure for the creative process was the most salient piece of knowledge for participants, which contained two subthemes of *among professionals* and *fostering students*.

Among professionals. Two subthemes emerged, the first, *among professionals* addressed what participants identified as valuable knowledge to develop creative capacity in a society of peers. Within this subtheme, participants spoke of their own creative capacity development, in the company of coworkers, as a result of attending ARA+PD. In particular, teachers cited the infrastructural components to the process of creative thinking as influential. According to members across all SCSs of this case study, the utilization of brainstorming (Eberle & Stanish, 1996; IDEO, 2017), as an infrastructural

procedure in the collaborative creative process was influential. Repeatedly, teachers such as one arts educator from SCS2 expressed appreciation for the brainstorming procedure, "activities that use collective/collaborative brainstorming were the most helpful." As a participant from SCS1b explained, "intentional brainstorming routines because it builds trust and commitment when every voice is able to be heard without judgment." Participants' perceived their self-efficacy was influenced by the use of intentional procedures to foster creativity in collegial settings, possibly as model instruction or as a valuable tool to exercise professional creativity.

Beyond the procedural infrastructure to share ideas, participants seemed influenced by the inclusion of semistructured activities that addressed relationships and social influences on creativity. Among interview participants, a variety of team building activities was mentioned as necessary infrastructure to the creative development of not only self but to the entire staff as a collective society. A conversation among SCS3 focus group members captured the lingering influence of such experiences.

> SCS3 focus group member 2, "the rope thing-a-ma-jig"
>
> SCS3 focus group member 3, "Yeah, that was intense"
>
> SCS3 focus group member 1, "Some enjoyed it more than others [LAUGHTER]"
>
> SCS3 focus group member 2," But even those types of things where we were forced into situations where we had to trust each other as adults in the PD, right?"
>
> SCS3 focus group member 4, "Building those relationships amongst all of us is important, because we all have to have each other's backs as we go through the

> day – that rope thing was terrible [LAUGHTER]. Even that right there could be kind of like a collaborative moment."

Arts-based activities focused on professional responsibilities were also perceived to contain an infrastructure influential to the creative process as a group. The process was thoroughly described by an interviewee at SCS2,

> The externalization of our process has also been important. I'm thinking of when we did the tree and we had to kind of take the same thematic material and draw- and see how we would apply that in our own disciplines and then also see how like a biology teacher would apply that. I think that's one of the things. Like the brain, when it makes connections between two unlike things like a metaphor, we get a jolt of endorphins and serotonin. And I know that just kind of seeing it- seeing how others would apply that, I make sort of metaphorical connections with my discipline, and I feel like- already feel like a more creative person just in kind of sharing these things.

Even among the neutral influence group there was support for such experiences within ARA+PD. For example, an arts teacher from SCS2 said, "I certainly can understand how it's a good way to begin understanding how to implement creative processes – after all, isn't full immersion one of the most effective ways to grasp concepts quickly?" Interestingly, participants often assimilated ARA+PD experiences as influential to organizational classroom infrastructure, like a teacher with over thirty years teaching experience at SCS3 who stated, "these workshops set the tone for how we should engage our students in learning every day." In conclusion, participants perceived both procedural

and nonprocedural activities as a required infrastructure among professionals as salient knowledge to foster creativity in the classroom.

Fostering students. The second subtheme shifts from the school-wide environment that fosters and develops creativity among professionals to students in the classroom environment. *Fostering students* addressed what participants identified as newfound knowledge in establishing infrastructure for the creative process to develop creative capacity within students in the classroom environment. Data on the infrastructure for fostering student creativity had a greater response variance because many participants cited specific workshops and preference for specific arts integration strategies. Because a specific citation to a specific workshop may be difficult for the reader to understand out of context, the results were thematically grouped for implications to changes in classroom behaviors. As a whole, teachers developed a new understanding of creativity as a disciplined effort that required less instruction and more attention to the classroom climate.

For many teachers, the understanding of creativity as a disciplined effort, developed by routines and specific procedures was influential. “I have weekly routines that incorporate opportunities for creativity. This ensures that it is included in the lessons,” shared a SCS3 focus group member. A media specialist from SCS1a claimed that a specific workshop, “showed me ways to include drama and movement in almost any lesson. It also included the infrastructure necessary to set up the activities with students.” For others, such as a SCS2 teacher, the use of brainstorming was helpful in the classroom “A question is posed and we continue a process where each person

brainstorms and discusses and then we collectively pare down our ideas." Similar to the subtheme among professionals, the gained knowledge of procedural activities influenced teachers' sense of self-efficacy to foster student creativity. In this subtheme, however, teachers' implementation examples exhibited greater variation, possibly evidence of the positive influence to their sense of self-efficacy.

Several participants were influenced to restructure instruction time and change their personal instructional practices. A SCS2 math teacher who stated a neutral influence said,

> I learned that creativity can be hindered/stifled with too little or too many constraints. You need to have structure so the end results hit the objectives you were aiming for, but if you give too many constraints or examples, all the results will be the same.

Supported by a colleague, an SCS2 teacher said, "giving students a limited set of directions" was an intentional way of "how to become less of a sage on stage and practice more student driven instruction." Other participants also experienced a shift in instructional time, away from teacher directed to more time for student inquiry. An SCS1b teacher confirmed the importance of student think time, "We need to give students time for creative thinking and give suggestions without doing it for them." Another teacher from SCS3 spoke directly to relinquished instructional time,

> To allow children PLENTY of time to explore. Give them PLENTY of time to talk with their partners. Before A+ I would limit the amount of time that I allow

my children to make changes or expand on a project. NOW, I give them as much time as they need.

These pieces of data reveal that teachers who attended creativity-fostering PD had a newfound understanding that instructional time which featured less teacher-driven instruction and more student-driven exploration was salient to supporting student creativity development.

Finally, participants referenced their increased awareness of how classroom climate was an infrastructural practice for fostering student creativity. Many teachers expressed the need for positive encouragement, similar to a comment made by an SCS2 classroom teacher, "fostering a positive supportive environment that allows students to feel safe enough to take risks." Similar to the infrastructure among professionals, a positive classroom climate needed to produce trust among the group. Clearly stated by one teacher at SCS1b, "The most influential part of ARA+ PD has been about fostering trust in the classroom because if students don't trust you (teacher) or each other, they will not be creative." Such sentiments as "Children who feel as though they can respond at any time, about anything without ridicule or judgment will be much more likely to expand their creativity," shared by a teacher at SCS3 provided strong evidence of such findings. Similar to the social influence among professionals, teachers clearly expressed that as a result of creativity-fostering PD, they understood the impact of classroom culture and climate upon their ability to nurture student creativity.

Increase in flexible thinking. Flexibility is one of the mental operations of divergent thinking (Torrance, 1995; Acar & Runco, 2017) a capacity for creative problem

solving. The operation is measured by how many different associations, or perspectives, a person can make to one word, idea, or concept. Flexible thinking in this case study was the ability to make a new association or understand learning content and/or teaching practices from a different perspective.

The questionnaire instrument contained a question that explicitly asked teachers what skill they relied on most to develop creativity in students. Responses given were indirect and appeared to be a difficult question for teachers to answer, with only two responses that directly stated flexibility. The common phrase "outside the box", however, appeared more than once across all three instruments among all four subset cases. After analyzing the entire data collection from the case study and cross referencing definitions of mental operations associated with divergent thinking (see Kim, 2008; see Torrance, 1995; see Sawyer, 2006), I verified the most salient skill for fostering student creativity as flexible thinking. One example of an indirect reference to flexible thinking was from a SCS2 teacher, who said,

> I have learned to think "outside the box" when integrating arts into my English lessons; connections can be "loose" or not as direct as I have previously attempted and this "open-ended" factor allows for students to tailor a project to their specific vision.

An exposure to a variety of teaching strategies and creativity fostering practices had a direct influence on their flexible thinking in many aspects of their professional practices, according to the teachers. Participants reported flexibility in possible teaching strategies, assessments, and student learning styles. Succinctly stated by SCS1b participant, "Really,

just the different activities to help me open up my mind to the different possibilities." Likewise, a teacher from SCS2 stated, "I have used the tools and methodology we discussed to expand the way I think when planning my lessons." While participant data lacked creativity research jargon, the data expressed an increased flexibility of what would be considered effective classroom strategies from a practitioner's point of view.

More specifically, participants experienced an increase in flexible thinking about what could be considered assessments, as one teacher from SCS1b discovered, "I gained knowledge in differential methods of assessment. Checking for student knowledge can be accomplished in many ways." For a teacher from SCS3, "the in-depth study and practice showed me the differences and helped me to broaden my assessments in particular." One participant in the neutral influence group supported this finding by stating, "it has solidified my belief in using non-traditional methods to teach and assess." Not only did creativity fostering PD influence participants' perspective of effective teaching strategies but an increased flexibility in how to measure and assess student learning.

Participants expressed an increase in flexible thinking not only to their professional practices, but in understanding how students learn in a variety of ways. Many educators across three different subset cases commented on the value of multiple learning pathways, one of the A+ Essentials (Appendix A), based on Gardner's (2011) multiple intelligences theory. "The knowledge of multiple intelligences was most beneficial so I design lessons that fit the way students learn," said one SCS1a teacher. This theoretical understanding persisted throughout the case study as illustrated in a SCS3 teacher comment, "I feel that learning about the multiple learning pathways,

including my own, has helped foster and develop creativity in my lessons and what I allow my students to complete in the classroom." All educators shared this appreciation, as one arts educators from SCS2 stated, "Learning how others' creative minds and talents work differently than mine," was influential. It seemed that participants' ability to perceive a wider range of student perspectives was directly influenced by ARA+'s inclusion of Gardner's (1992) multiple intelligences theory. Teachers reported a more flexible approach to learning needs as a result of being able those needs from a wider range of student perspectives.

It seems important to note, that for at least one practitioner within each subset case, the concept of flexible thinking transformed their approach to the work itself, or a mindset. One grade level educator at SCS3 simply said, "This opened up a whole new way of thinking for me!" and a SCS2 participant claimed, "it wasn't so much as here's the information run with it, as it was the ideas behind it." An interviewee from SCS1a with three years of experience with ARA+ spoke directly to this transformative thinking,

> I was extremely skeptical walking in to A+ the first time, because we are always assigned some professional development that we're never really going to use. It's always some flash-in-the-pan something going on, and every few years we have to go back through this cycle of something. And so walking into A+, I was one of the ones sitting in the back rolling their eyes going, OK, yeah, sure. But seeing how it has transformed how I think about teaching has made a big difference and just the possibilities of what's out there – and you don't have to reinvent the

> wheel. So there are tons of ideas already out there, but sometimes it's just getting in the frame of mind to look for them and know what to look for.

For some, the holistic approach of creativity-fostering PD, with no particular emphasis on any one creativity theory or process, provided a holistic influence and increase in flexible thinking to all aspects of their professional practices.

In summary, teachers stated that their sense of self-efficacy to foster and develop student creativity was positively affected by the exposure of applicable ideas, or strategies perceived to be directly relevant to their classroom needs. Interestingly, teachers also stated that an environment of permissible risk taking had a positive influence on their self-efficacy. Permission was not only given and encouraged to self and to students but received and supported from administration and peers. Additionally, participants determined the most salient knowledge to efficaciously implement creativity in the classroom was establishing infrastructure for the creative process, any physical or organizational structure necessary to develop creativity and support the creative process among individual students. Establishing infrastructure was necessary for both the creative process among peers and fostering student creativity. Finally, the most salient skill for practitioners to foster student creativity was an increase in flexible thinking, or the ability to expand the range of acceptable teaching strategies and student solutions.

Evidence of Trustworthiness

In this section, I outlined how research practices, data, and corresponding results are credible, transferable, dependable, and confirmable. Internal validity, or creditability, of my study was maintained through the triangulation of data in addition to reliable

collection and review procedures. Multiple forms of data collected from multiple subset cases provided ample triangulation of data sources to confirm findings. All data collected underwent a member check process, which allowed every participant, regardless of the amount of data contributed, the ability to confirm that data provided accurately communicated their perspective of the issue. Saturation (Creswell, 2012) was confidently achieved due to the increased amount of data collected. Permission for alterations in recruitment, participation, and collection procedures were sought and approved by Walden IRB. Periodic counsel with my chair proved advantageous throughout the process, yet specifically in data analysis methodology. Peer review counsel was sought and obtained upon two occasions to review my theoretical analysis. First, a professor with previous publications on creativity in education from South Carolina reviewed my initial analysis of data and provided verbal feedback on identified themes later in the process. Secondly, a professor with extensive study in self-efficacy who previously conducted research on ARA+ reviewed and provided feedback on initial data analysis via email.

To increase transferability, I purposefully selected not only SCSs but also individual participants to represent a broad range of educational practitioners. In order to determine if the findings were broadly applicable to educational practitioners, I intentionally collected data from multiple subset cases, each with dynamic influences and demographics that readers might find similar to their situation. Arguably, the findings could be transferable to most educational setting by indicating what influences teacher

self-efficacy to foster and develop student creativity among a variety of circumstantial demographics.

A combination of technology platforms was used in my research process, all provided data dependability and confirmability. I used a personal Google account as a database, due to Google's universal platform, which allowed a multitude of file formats. This equated to direct uploads that were maintained in original form and avoided any data damage in format translations. For example, questionnaire data transferred from Survey Monkey in Excel format, remained an Excel file and interview Mp3 recordings remained Mp3 recordings. Because Google Drive is cloud-based technology, I was able to quickly transfer data from recording platforms on my personal devices into secure database storage. Finally, I opted to use Google's two-step verification process to ensure security.

Each upload can be confirmed with a timestamp. More importantly, opening each file and reviewing its accuracy to the original data file easily confirmed successful data transfer. Confirmable data accuracy results in increased confidence for future questions and opportunities to collaborate.

Summary

Through the constant comparative process of all data collected, I was able to glean some insights on this case study's two research questions. First, teachers believed the introduction and sharing of applicable ideas during the creativity fostering PD had a positive influence on their sense of self-efficacy to develop student creativity. Additionally, participants reported a perceived change in permissible risk taking as influential to their sense of self-efficacy to foster and develop student creativity in the

classroom. Changes in perceived permissible behaviors included a teacher's sense of professional self, promoting risk taking to students, and the perceived permission from their peers and principal for such risk taking. If there was a perceived lack of applicable ideas, then teachers were not willing to take the risk of implementation, which resulted in a neutral influence. Yet there was no evidence to suggest that creativity fostering PD had a negative influence on a teacher's sense of self-efficacy. Among the variety of creativity fostering experiences, participants communicated that the most salient knowledge that assisted them in developing student creativity was establishing infrastructure for the creative process. Finally, the most perceived salient skill among teachers to assist in the development of student creativity was the increased flexible thinking. According to the participants in this case study, an increase in flexible thinking from both within the teacher and exercises for the students were important.

The results of this case study provide insights from the practitioners' perspective on how a teacher's sense of self-efficacy to foster student creativity in the classroom is influenced. These insights both support findings from previous research cited in the literature review and extend understanding of the phenomenon for potential positive social change. In the final chapter, I will compare findings with existing knowledge, provide recommendations for further research and describe the potential impact for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

There have been increasing demands that public education develop creative students with little attention on teachers' preparedness and self-efficacy to implement changes in instruction necessary to achieve that goal (Kampylis, 2010; Mullet et al., 2016). Creativity research in education follows suit and has primarily focused on the student's creative development rather than the teacher's professional development. Research has investigated teachers' beliefs of creativity (Kampylis et al., 2009), how those beliefs influence instructional practices (Aloe et al., 2014; Davies et al., 2013; Liu & Lin, 2014), identified instructional practices that suppress and support creativity (Beghetto & Kaufman, 2014), and identified creativity-fostering instructional practices (Cropley, 1997; Sawyer, 2015). There is little research on how teachers develop a sense of self-efficacy to address student creativity and a particular gap in creativity research that offers recommendations from the practitioner's perspective. The purpose of this case study was to extend the research continuum and investigate how creativity fostering PD might influence a teacher's sense of self-efficacy to foster and develop creativity skills with students. Two questions guided my research,

1. How do teachers perceive the influence of creativity-fostering PD on their self-efficacy to foster and develop student creativity in the classroom?
2. What do teacher perceive as the most salient knowledge and skills to assist them in developing student creativity?

Teachers within this case study reported that their sense of self-efficacy to foster and develop student creativity was positively influenced after attending creativity-fostering PD, regardless of how many years taught, subject taught, implementation year, or geographic location. Among all data collected in this case study featuring qualitative approaches, two themes emerged, introduction to applicable ideas and permission to take risks, both for themselves as professionals, their students, and among the social environment of the school. The concept of applicability spanned across numerous aspects of teaching. Some of which addressed teaching strategies, assessments, and classroom culture. As a result of creativity-fostering PD, teachers experienced a change in perceived permissible risk taking. Participants gave themselves permission to risk teaching strategies previously unfamiliar with. Additionally, teachers gave themselves permission to risk not having all of the answers and provide students the ability to personalize their learning. Interestingly, teachers believed that it was also important to build the same capacity, or tolerance, for risk taking in their students. Finally, teachers reported a perceived social environment that permitted risk taking among peers and the principal was directly influenced by creativity fostering PD delivered to the whole school.

Among all of the creativity-fostering experiences, teachers reported that the most salient knowledge to efficaciously implement creativity-fostering practices was the infrastructure to the creative process. Teachers benefitted from procedures, protocols, and organizational structures that contribute to creative student development. Once again, the specific types of infrastructure ranged among participants from brainstorming rules to stated norms for trust within the classroom culture. And among all of the creativity-

fostering experiences, teachers reported that increased flexibility thinking was the most salient skill to efficaciously foster and develop creative students. The participants believed the ability and capacity to understand any idea from multiple perspectives was most important. Whether flexibility meant connecting ideas across academic disciplines, expanding what qualifies as assessment and multiple learning styles among students, teachers reported it was vital to developing a creative classroom.

Interpretation of the Findings

The findings from this case study may provide more insight into the type of PD experiences that contribute to teacher self-efficacy. Bandura (1997) explained that self-efficacy is a flexible construct and is vulnerable to change. To maintain a high sense of self-efficacy during any systematic or organizational change in professional expectations, systematic professional development is required to address potential gaps in necessary knowledge, skill, and capacity required to execute changes (Bandura, 1997, p. 36). Not all PD, however, is designed the same nor has the same influence on attendees. Teachers consistently referenced their own creative mastery experiences during ARA+ PD as influential to their sense of self-efficacy to address creativity in the classroom. This finding supports the recommendation of creativity researchers Bae, Hong, Park, and Kim (2013), Davies et al. (2013) and Minett (2015) who advised the best way for teachers to understand creativity is to engage in a creative experience. To clarify, ARA+ PD attendees experienced a variety of learning activities from the perspective of the student, thus transforming Bandura's mastery experience from the perspective of professional to student. Experiential learning (Kolb, 1984) is considered an A+ Essential (Appendix A),

previously proven as an effective model of professional learning for the purpose of changes in professional practices (Gegenfurtner et al., 2013; Sandholtz & Ringstaff, 2014) and may be a key understanding of how to improve teacher self-efficacy for any new teaching expectation. It cannot be assumed that teachers have experiences with creativity fostering practices to reference as a practitioner (Beghetto et al., 2011), consequently, being the recipient of creativity-fostering practices could be a prerequisite to any initial attempt to implement such strategies efficaciously. As Stewart (2014) explained, because ARA+PD design incorporated experiential learning for participants as a model for desired classroom practices instead of lecture style delivery, it promoted authentic dialogue, the opportunity to reflect for meaningful changes to their practice and practical application. For the participants in this case study, practical application had a significant influence upon their sense of self-efficacy.

Applicable Ideas

Teachers claimed their experiences in team building challenges, studio art experiences, and arts-integrated lessons exposed previously unknown content and strategies which were influential to their sense of self-efficacy because the experiences were perceived as directly applicable to classroom implementation. I interpret these comments as pivotal vicarious experiences, or the mental ability to see himself or herself as the observed facilitator using specific strategies and activities in their personal classrooms (Fackler & Malmberg, 2016; Martins et al., 2015). It seemed that if the practitioners could imagine themselves in the teaching role of an ARA+ PD experience, the more apt they were to evaluate the strategy and/or activity as applicable. For many

ARA+ PD participants, the vicarious experiences were influential to their sense of self-efficacy and resulted in action or attempted implementation of the activity or strategy in their classroom.

It would seem that variables associated with personality or personal beliefs does influence the interpretation of vicarious experiences (Bandura, 1997). Previously, creativity fostering behaviors among teachers have been predicted by Type 1 thinking style (Diciki, 2014) and significantly correlated to sophisticated ideas of learning and motivation for challenging work (Hong et al., 2009). Furthermore, Lee and Kemple's (2014) positive correlation to all nine CFTI subscales to personality trait, openness to experience may explain why teachers who teach the same subject content perceived ARA+ PD experiences in completely different ways. For example, while one math teacher from SCS2 claimed, "I have never left a PD with ideas to apply in a math setting" another math teacher from SCS1b interpreted ARA+ PD experiences from a completely different perspective:

> Something that I've taken away is that through the entire process of us going to A+, I have learned that it is not geared toward any specific kind of student. It covers the majority of students. Everybody can participate in one form or another, which is good with classes like math. If you can find a way to incorporate A+ into your lesson a majority of the time, it's not student specific. It's student friendly where about 90-95% of the students are actually being able to put their part in rather than sit there on the back row and not doing it.

This unexplained participant interpretation may be an insight into the development of a self-efficacious creativity fostering teacher. In order to find presented ideas applicable, the teacher would have to believe that creativity is a valuable skill and perceive a sense of purpose in fostering student creativity (Chan & Yeun, 2014). And in order to establish the belief that creativity is valuable for all, the teacher needs to value their own creative capacity as purposeful to meeting professional expectations (Rubenstein et al., 2013). This leads to the existing argument that teaching for creativity requires creative teaching (Davies et al., 2014; Jeffrey & Craft, 2004; Lim et al., 2014). Thusly, it could be that for teachers to perceive a creativity fostering idea as applicable, their vicarious experiences rely on their sense of creative self-efficacy, or the belief in one's creative capability (Tierney & Farmer, 2011) as purposeful. Creative self-efficacy could be the link between the first theme of applicable ideas and the second theme of permissible risk-taking for developing creativity fostering practitioners.

Permissible Risk Taking

The theme of permissible risk taking contained three subthemes: for self, for students, and among peers and administration. These subthemes may provide new insights into the role of creative self-efficacy in a teachers' sense of self-efficacy to develop the same skill in their students. As a result of the mastery experiences provided by ARA+ PD, teachers may have inadvertently experienced an increase in creative self-efficacy, the belief they were capable of successfully producing creative solutions, tangible products or intangible ideas and processes, that is appropriate for the task or problem (Beghetto et al., 2011; Karwowski et al., 2013; Pretz & McCollum, 2014;

Reiter-Palmer et al., 2012). Success in their own creative efforts and the observed success of others facilitating creativity-fostering PD seemed to equate to an internal motivation to risk implementation of such practices in their classrooms. Rinkevich (2011) found that creativity fostering teachers were comfortable with risk and Diciki (2014) discovered their willingness to operate beyond norms. For participants in this study, it would seem too many teachers were not provided experiences in the creative process or exposed to creativity fostering practices as a student (Chang et al., 2016; Karwowski et al., 2015) to reference as a practitioner (Beghetto et al., 2011) resulting in low creative self-efficacy. After attending ARA+ PD teachers were influenced to exercise creative self-efficacy through a creative solution that meant taking a personal or professional risk and practicing behaviors that feel beyond typical operational norms.

For self. Based on the teachers' perceptions of how their sense of self-efficacy was influenced by attending creativity fostering PD, it appeared that verbal persuasion and physiological states directly empowered participants to take risks in their attempts to implement creativity fostering practices. Similar to Martins et al. (2015), participants described ARA+ PD facilitators as supportive, offering encouragement, and established a classroom climate that felt nonjudgmental. It is important to note that descriptions provided by participants often addressed verbal persuasion as a counter balance to physiological states during creativity-fostering PD experiences. Creative experiences initially elicited emotions of frustration, discomfort, and fear followed by or mixed with feelings of acceptance and support. From the narratives collected in this case study, the combination of supportive verbal persuasion in the midst of achieving a goal with

physiological challenges resulted in a social climate that seemed to increase the sense of self-efficacy for most participants. There may be a closer relationship between the verbal persuasion and physiological states than current research provides. Potentially, once again the influence upon teacher creative self-efficacy may have served as a resource on how to foster and develop the same belief and skill in students.

For students. Among the nine principles of creativity-fostering practices, a few seem to have influenced participants more than others. According to the participants, their ideas of permissible risk taking, which included less teacher direction and/or teacher-anticipated outcomes, could be defined as student-centered practices (Lee & Hannafin, 2016). Student-centered learning, according to Lee and Hannafin (2016), is a complex process where students are expected to take a more active role in the learning environment. Within the context of creativity fostering principles, however, it seemed that teachers grasped the importance of delaying judgment on student ideas until that have been thoroughly worked out and clearly formulated and take students suggestions and questions seriously (Cropley, 1997). Narratives within the data explained how participants limited the number of constraints for greater student interpretation, attempted to consider student ideas openly, and exercised greater empathy for student learning needs. As it relates to teacher self-efficacy, participants reported that ARA+PD had positively influenced their ideas of teacher behaviors and the perceived sense of professional control. Greater student interaction and ownership were no longer perceived as a weakness but a positive contribution to the development of creative students.

The findings within this study revealed that teachers recognized the importance to provide permissible risk taking opportunities as developmentally necessary to maintain creative capacity within students, particularly as they mature. The correlation between student maturation and deterioration of creative capacity has been studied throughout creativity research (Barbot, Lubart, & Besancon, 2016). Consistent with what researchers call "the fourth-grade slump" (Torrance, 1967), participants who taught students in fifth grade or higher recognized intentional teaching practices were necessary to maintain creative capacity within students. Participating teachers recognized that student creativity was hindered by their own anxieties. Two specific student anxieties mentioned were the awareness of being observed by others and the perception that there was a predetermined right answer to any problem. In order for students to produce creative ideas, intentional teaching practices were necessary. The teachers in this case study determined that creativity fostering activities and exercises that required a certain amount of anxiety-confronting risk could help students build a tolerance for creative thinking, or comfortably present their ideas as unique and valid. Such awareness, claimed Amabile and Pillemer (2012), could contribute to the positive social-environmental factors of student motivation and personal creativity. The ability to recognize certain hindrances to student creativity development appeared to be a positive contributor to participant's sense of self-efficacy as a result of attending ARA+ PD.

Among peers and administrators. Regardless of the subset case school, perceived support for creativity-fostering practices from the principal had a significant influence on the participants' sustained development of self-efficacy (Fackler & Malmberg, 2016;

Lambersky, 2016). The continuation of the social environment experienced during ARA+PD within their subset case school working environment, from among peers but especially the principal was a determining influence for enacting on beliefs of self-efficacy to foster student creativity. Comments from focus groups and in-depth interviews revealed that decisions made by their schools and districts, in an effort to impact student test scores, has resulted in a suppressive work environment. Well-intended efforts, such as prescribed student learning pace and teaching strategies, as well as purchased curriculums and programs may have inadvertently eroded teachers' sense of self-efficacy by the lack of professional autonomy. Even among teachers who reported a strong sense of self-efficacy to foster student creativity in this case study stated they would not act upon those beliefs before ARA+ PD for fear of reprimand or retribution. After attending ARA+ PD as a whole school, the expectation for risk taking became part of the social climate for both practitioners and students. The support and verbal persuasion from leadership for professional decision making, especially creativity-fostering practices that are perceived as nontraditional and unconventional, were influential to the social environment (Collie et al., 2012; Kass, 2013), which in turn influenced individual teacher self-efficacy.

Establishing Infrastructure for the Creative Process

The theme *establishing infrastructure for the creative process* provides evidence of a creativity gap (Makel, 2009) in most practitioners within this case study. It suggests that practitioners had not previously understood that the creative process required any infrastructure, a stereotypical association to creativity as innate. As Kampylis et al.

(2009) discovered, teacher behaviors perpetuated the belief that creativity is an innate skill regardless of their reported beliefs to the contrary. It would appear that following the recommendation to provide practitioners opportunities to explore how creativity development can be incorporated into classroom practices (Davies et al., 2014; Mullet et al., 2016) is an effective way to influence practice. After being exposed to and experiencing creativity fostering exemplars, teachers recognized the intentional differences in instructional facilitation, classroom design, task structure, and student interactions between ARA+PD and traditional classroom practices. All of which were perceived to influence their sense of self-efficacy.

Establishing infrastructure for the creative process provided a bridge from traditional practices to creativity fostering practices for the teachers within this case study. Teachers have traditionally perceived creative student behaviors as disruptive and undesirable (Mullet et al., 2016). Making infrastructural changes such as classroom design and incorporating movement routines provided practitioners a way to comfortably confront previously misdiagnosed student behaviors. Myhill and Wilson (2013) reported that teachers perceived a lack of authority to assess creative products. Many teachers in this case study referenced newfound comfort with creative products as a result of arts integration strategies. Assessment of creative products was referenced to arts and nonarts content standards and therefore were grounded to key professional accountability measures.

The identification of such a theme among participants in this study could suggest a connection between creative metacognition and a developmental step towards

becoming a creativity fostering teacher. Defined by Kaufman and Beghetto (2013b), creative metacognition is, “a combination of creative self-knowledge (knowing one’s own creative strengths and limitations, both within a domain and as a general trait) and contextual knowledge, (knowing when, where, how, and why to be creative).” Teachers who attended creativity fostering PD seemed to have been influenced by a master creative experience and improved their personal and professional sense of creative self-efficacy. Upon reflection of those same experiences, both from the student perspective and as an observed vicarious experience, teachers extrapolated the infrastructural differences. Thus, participants began to develop a creative metacognition that influenced their sense of self-efficacy to foster creativity in the classroom because they were able to answer the previously unknown questions, such as why the practices were relevant to the learning objectives and how to establish classroom procedures and structures to support the practice.

Increase in Flexible Thinking

The final theme was increase in flexible thinking as the most salient skill for teachers’ sense of self-efficacy to address creativity in the classroom. The identification of flexible thinking as a necessary skill for creativity development is well supported in creativity research. The fact that teachers identified this skill above all others provides evidence in support of several different theories among creativity research. What follows is an elaboration of identified subthemes with an explanation and connection to specific creativity theories.

Among professionals. Participants acknowledged how creativity fostering PD influenced their ideas about teaching and learning, specifically providing experiences that challenged and demanded flexibility in instructional strategies, student learning needs, and student assessment methods. Most teachers reported attempting strategies learned within ARA+PD, so the increased flexibility in teaching strategies or student assessment would equate to a mini-c developmental stage. The ideas remain novel and unique only to the individual in the context of their lived experiences (Kaufman & Beghetto, 2009).

Further professional creative development may be difficult in the current education system. By evidence of this case study, practitioners positively responded to exemplars of creativity fostering practices (Kampylis et al., 2011; Soh, 2015) and referenced guiding documentation (Collard & Looney, 2014; Lim et al., 2014; Newton & Beverton, 2012) provided by ARA+ PD facilitators as helpful to their self-efficacy to address creativity development. This enthusiasm resulted in attempted implementation of observed practices, evidence of mini-c professional development or trying a novel or unique approach to the individual teacher. This case study also revealed persistent contradictions on a systematic level between performance expectations placed on teachers, the data used to measure quality teacher performance, and decisions of how frequently creativity fostering teaching practices were exercised. Even when provided PD opportunities to creativity-fostering practices from their school and district administration, teachers continued to report the contradictory struggle of prioritizing creativity fostering practices caused by the state evaluation system that placed value upon standardized testing results (Ayob et al., 2013; Myhill & Wilson, 2013; Sawyer, 2015;

Sternberg, 2015). The hierarchical structure of the educational system, which places societal value on test scores, results in an environment that teachers perceive as contradictory to the expectation to develop student creativity *(*Ayob et al., 2013; Myhill & Wilson, 2013*)*. This contradiction could be a hindrance to teacher's further exploration to develop their own unique creativity fostering strategies on either a little-c level, among their colleagues or Big-C level within the profession of teaching.

It could be argued that participants were exposed to and were facilitated in both convergent and divergent thinking exercises, yet participants overwhelmingly cited flexible thinking, a mental operation of divergent thinking (Runco & Acar, 2017), as the most salient skill to foster creativity in the classroom. Arts integration was the primary teaching strategy and by its nature converges art and nonart content for unique processes and products that achieve student learning goals. The lingering affect for ARA+ PD recipients, however, was the exposure to nontraditional strategies and novel approaches to teaching and learning. Even after attending creativity fostering PD and attempted creativity fostering practices, most participants associated creativity with divergent thinking, most commonly referenced as "outside the box" in their responses. Divergent thinking is most closely aligned with the originality half of creativity. Consistent with previous creativity research, teachers in this case study continued to communicate incomplete views of creativity (Davies et al., 2014, Mullet et al., 2016). Similar to Davies et al. (2014), teachers who participated in this study did not address the appropriate and useful portion of creativity. What's more, most teachers who attended ARA+ PD continued to associate creativity with the arts curriculum (Bolden et al., 2010; Kampylis

et al., 2009; Newton & Beverton, 2012, Turner, 2013). This could be explained due to the attention on the Arts as one of the A+ Essentials (Appendix A), with most ARA+ PD including an arts experience or arts-integrated classroom lesson. To clarify, there were teachers from across all four subset case schools who directly stated that creativity is possible in all subjects, yet not all credited ARA+ PD with broadening their perspective of creativity beyond the arts. In closing, teachers may have acknowledged their own mini-c development, within teachers' persistent limited understanding of creativity.

For students. Lingering limitations on how creativity is defined and understood by teachers results in limitations to how student creativity development is supported by teachers. Data collected from participants revealed an overwhelming focus on divergent thinking, with flexible thinking, or considering an idea or solution from another conceptual perspective (Acar & Runco, 2017) being the most salient skill. Creativity-fostering PD may not be explicit enough to ensure practitioners develop practices that address the complex nature of creativity. Participants did report a new or broadened understanding of creativity, yet reported practices and salient learning remain limited, possibly only extending upon previous stereotypes. Primarily, the alternative perspective referenced was from the artist perspective as a result of arts-integration. The reliance upon arts integration maintained a narrow association of creativity with the arts (Bolden et al., 2010; Kampylis et al., 2009; Newton & Beverton, 2012, Turner, 2013). Researchers have held that practitioners need PD on creativity issues (Beghetto & Kaufman, 2014; Collard & Looney, 2014; Davies et al., 2014; Kampylis et al., 2011) Although there is no way to speculate how PD on creativity may contribute to a teacher's

sense of self-efficacy, the overwhelming focus upon flexible thinking in this case study suggests an investigation into creativity may be necessary in the metacognitive development of a creativity-fostering teacher. In conclusion, creativity-fostering PD appears to influence teachers' sense of self-efficacy but may produce limited changes in classroom practices because teachers interpret the experiences through limited, pre-existing understandings of creativity.

Beyond identified skill and how classroom practices to exercise those skills in students may be limited, the findings within this study revealed that teachers were influenced by the specific creativity fostering principle, encourage flexible thinking in students (Cropley, 1997) Similar to permissible risk-taking, participants recognized the importance to implement practices that increased flexible thinking for the purpose of fostering student creativity development. And once again, practitioners who worked with students 5th grade or higher referenced the intentional inclusion of such practices to address self-imposed student hindrances. Teachers in this case study determined that an increase in flexible thinking could help students build empathy to other's point of view, feel comfortable to express a unique perspective, and experience validation regardless of outcome. The repeated acknowledgement of self-efficacy to address student creativity amidst social anxiety suggests that teachers who attended ARA+ PD did develop a new understanding of the nature of creativity. Although not explicitly stated, it could be inferred that participants acknowledged one of the 4Ps of creativity, Press (Batey, 2012) or the creative social environment. In conclusion, creativity fostering PD influenced

participants' sense of efficacy to foster creativity seemingly by the ability to recognize and address certain social hindrances to student creativity development.

Limitations of the Study

It is important to address the limitations of this study for the reader and researcher alike. Although a case study design was the best methodology for my research, the parameter of shared experiences among practitioners in the case (Creswell 2012; Merriam, 2009) is a limitation. For my case study, data were only collected from practitioners employed at ARA+ network schools. Other PD opportunities may be identified as creativity-fostering and feature dramatically different teaching strategies, which could produce dramatically different results. Furthermore, the purposeful sampling was limited to only four selected ARA+ schools instead of among all ARA+ PD participants from the entire ARA+ network. For that matter, a different selection of subset case schools could have produced different findings. All of these limitations, however, are indicative to the uncontrollable variables that exist in the real world and in an educational setting (Houghton et al., 2015; Pearson et al., 2015; Turner & Danks, 2014) and do not diminish the value of case study itself.

This case study featured purely qualitative methods in order to construct understanding from lived experiences (Merriam, 2009) and avoided inconsistent participant interpretation of predesigned scale instruments (Wyatt, 2015). All three instruments used in this case study were designed by me and strictly asked participants about their perceptions, which limited the ability to understand how professional practices and behaviors may have actually been influenced. A qualitative approach that

captures both rich thick narratives and other data such as observations or classroom artifacts could potentially provide insight beyond perceived influence to influential impact on participants' professional practices.

My findings result from a constant comparative process of the case as a whole. This decision was strictly an issue of limited time as a single, novice researcher. Each subset case school could potentially yield unique findings based on its unique combination of variables. Consequently, findings from a constant comparative analysis of each subset case school's data, independent of the entire case, could yield deeper understandings of the factors that influence teachers' perceptions of influence to self-efficacy. Additionally, an exploration of categorical data such as number of years teaching, age, content taught and others might yield unique findings as well.

The data collection time period could be a limitation. Data were collected during a span of four months, across summer and into the beginning of the fall semester. This created an inconsistent timeline across subset cases. For SCS3, data was collected in the fall while SCS2 data was collected in early summer, within one month of student dismissal and before year 3 ARA+PD. For SCS1a and SCS1b, data was collected after year 2 ARA+PD. Although protocols were consistent, it is possible that the data would have changed if the ability to collect data across all subset cases within the same month were possible.

Because I worked for ARA+ and was a familiar face to many participants, thus benefitted from a perceived membership (see Merriam, 2009). Although the established familiarity was helpful in recruitment and questioning, it also caused some unintended

limitations. Some comments ventured into program evaluation, which did not ultimately deteriorate the integrity of the case study due to the constant comparative analysis process. Because of my familiarity, some participants may have misunderstood the intention of the survey or seized the opportunity to share their opinions, recommendations, and information about programming issues rather than strictly address the research questions.

Recommendations

In consideration of my findings and the current education climate that continues to expect teachers to develop creativity skills in students alongside content mastery, I offer three recommendations. The recommendations address three distinct hierarchical levels of the education system. I propose research can continue to provide insights into the broadest level of teacher preparation and pre-service, the ground level of current practitioners, and more elite levels of administration and lawmakers.

There is an immediate need for research that explores and explains how a sense of self-efficacy to foster student creativity develops for education practitioners. If student creativity development is to be a professional expectation of all teachers, then the reliance of preexisting personal beliefs of creativity (Davies et al., 2014; Hong et al., 2009; Mullet et al., 2016) and personal creative self-efficacy (Li et al., 2016; Rubenstein et al., 2013) is not a reliable, systematic approach. For systematic implementation of creativity fostering practices in all classrooms, further research needs to explore how teachers develop the capacity to efficaciously address student creativity development, regardless of personality traits (Dicki, 2014; Lee & Kemple, 2014) and predisposition to creative behaviors

(Mullet et al., 2016). Recommendations for PD on creativity issues are widespread (Beghetto & Kaufman, 2014; Collard & Looney, 2014); Davies et al., 2014; Kampylis et al., 2011; Sternberg, 2015), yet with little attention or connection to andragogy (Knowles, Holton, & Swanson, 2012), or adult learning theory. Participants in this case study reported a positive influence to their sense of self-efficacy to foster student creativity in the classroom after from attending PD based on pedagogical creativity-fostering practices. Research that explores PD experiences best suited for teachers as adult learners may provide greater insight on not only what theoretical creativity content PD should contain but the methodological approaches that effectively develop teacher self-efficacy to address student creativity development. As Kampylis et al. (2009, 2011) defends and this case study reveals, research needs to include the practitioner's perspective for a comprehensive understanding of how teachers develop a sense of self-efficacy to foster creativity in others for systematic recommendations.

Further research that explores the correlation between teachers' sense of self-efficacy to foster creativity and exercising creativity fostering practices is also needed. There is little evidence to suggest that teachers have a comprehensive and complete understanding of what creativity is (Davies et el., 2014; Lin, 2014; Mullet et al., 2016), which results in practices that might unintentionally suppress creativity rather than support it (Beghetto & Kaufman, 2014). Specific self-efficacy scales have been developed for a variety of constructs that relate to the phenomenon of teaching for creativity, such as teacher self-efficacy (Tschannen-Moran & Hoy, 2001), creative self-efficacy (Beghetto &Kaufman, 2011), and most recently, Teaching for Creativity Scale

developed by Rubenstein et al. (2013). Based on discrepancies between stereotypical and research based definitions of creativity (Davies et al., 2014; Mullet et al., 2016), however, Wyatt's (2014) criticism of participant interpretation of scaled self-efficacy scale instruments such as Teaching for Creativity Scale (Rubenstein et al., 2013) may not provide a completely accurate interpretation of the phenomenon. According to Rubenstein et al. (2013) teachers were capable and reported confidence to develop creativity in students. Yet within this case study, even teachers who stated previous comfort with creativity-fostering teaching practices cited new understandings about creativity and the influence to change their practices for improved student creativity development. And even with the overwhelming positive influence to the study's participants' sense of self-efficacy, responses contained evidence of persistent gaps in teachers' exclusion of useful and appropriateness of their ideas about creativity. Furthermore, participants in this case study communicated a clear influence to their sense of self-efficacy to foster student creativity from the environmental encouragement, whereas Rubenstein et al. (2013) found no correlation between the self-efficacy and environmental encouragement constructs. Mixed methods research approaches may provide greater insight into the construct of teacher self-efficacy, specifically to foster and develop creativity in students. More importantly, mixed methods research could address the lack of conclusive evidence of how teachers perceive their ability to address student creativity and evidence that correlates to creativity fostering practices. Studies similar to Davies et al. (2014), which include observational and other qualitative data along with scale instruments, such as Rubenstein et al.'s (2013) might bridge an

important gap in research. To understand the phenomenon of how to influence change in teacher practice, the exploration between what teachers perceive and what is actually happening in their classrooms seems crucial.

Finally, research that explores the potential gaps in the hierarchical decision-making structure of most education systems seems to be a desperate need. Regardless of attendance to creativity fostering PD and a supportive principal, participants in this study continued to perceive conflict to exercise practices that foster student creativity (Kuntz et al., 2013; Myhill & Wilson, 2013; Olivant, 2015; Rubenstein et al., 2013) due to the environmental pressures and contradictory value placed on student performance on standardized tests (Ayob et al., 2013; Myhill & Wilson, 2013; Sawyer, 2015; Sternberg, 2015). Because practitioners rarely determine educational laws, rules, and policies, research should explore how lawmakers and administrative decision makers understand creativity and their perceptions of how to incorporate creativity in the classroom and how current student performance assessments measure the desired skill. Additionally, research needs to explore how lawmakers and administrators perceive the influence of laws, rules, and policies on the classroom environment, with a particular query into environments that support 21st Century skills, such as creativity. If gaps exist in current educators, then gaps probably exist in within administrators and legislators. It cannot be assumed that those who establish and enact high stakes testing accountability environments understand the contradictory impact those laws have on classroom practices and desired teaching and student behaviors.

Implications

In order to develop teacher self-efficacy to address student creativity in the classroom, teachers need to be the recipient of creativity fostering practices and observe how a teacher might foster creativity. The seminal work of Torrance (1970, 1995) continues to hold true, that to instill creativity in others, teachers must deeply understand the skill (Beghetto & Kaufman, 2014; Lee & Kemple, 2014). Based on the collective findings in my study, it would seem too many teachers were not provided experiences in the creative process or exposed to creativity fostering practices as a student to reference as a practitioner (Kaufman & Beghetto, 2013b). Researchers Selkrig and Keamy (2017) defend that personal creative learning is a foundational requisite for teachers in order for either creative teaching or teaching for creativity to be present. The inclusion of creativity and creativity fostering practices in teacher preparation programs could begin to address the gap, yet does not address the current and immediate need. For current practitioners, systematic PD opportunities to experience creativity fostering practices firsthand and potentially replicate vicarious experiences seem to be a practical need for understanding classroom application and infrastructural components of implementation.

Increased demands for modeled creativity fostering practices in teacher preparation and systematic PD might be as problematic as the phenomenon of asking teachers to develop student creativity without PD on the nature of creativity and creativity fostering practices. This case study included practitioners with a range of one to over 30 years of teaching experience, so the knowledge and skills acquired after attending creativity fostering PD seemed relevant to all current educators. Teacher preparation and

PD providers should consider attending creativity fostering PD or at least learn more about creativity fostering practices in order to develop mastery experiences for practitioners.

Based on the findings in this study, teachers need more than what literature alone provides. More specifically, the way content is delivered and teachers are engaged in PD matters to the long-term influence to teacher self-efficacy. Considering the experiential constructs of self-efficacy and the A+ Essentials (Appendix A), PD that heavily relies on experiential learning (Kolb, 1984) is presumably an influential variable to a teacher's sense of self-efficacy and ultimately, a willingness to implement changes in their practice (Knowles et al., 2012). Experiential learning, according to this study's participants, provided clear examples of theoretical application and produced emotional reactions that provided deeper empathy to the student experience. These findings support the needs of the adult learner according to Knowles, Holton, and Swanson (2012) that, "greater emphasis in adult education is placed on individualization of teaching and learning strategies (p. 64)" because adults define themselves by lived experiences. Without the experience of being the recipient of creativity fostering practices, it would seem PD that simply informs teachers of creativity and creativity fostering practices would be less influential to their self-efficacy.

Arts integration as a teaching strategy may be a successful entry into creativity fostering practices for teachers. Repeatedly, teachers within this case study cited the use of arts-based projects and activities as a method to address student creativity. Arts integration has been promoted as a creativity fostering practice (Sawyer, 2015), yet

Sawyer (2015) and others (Boulocher-Passet, Daly, & Sequeria, 2016) argued against perpetuating the association between the arts and creativity fostering. I assert, this assumption positioned ARA+ teachers in a readiness to learn (Knowles et al., 2012) state, and could be a developmental stage for teacher self-efficacy to foster student creativity. First, being a recipient of a modeled arts integration lesson, teachers were given the opportunity to develop their own creative learning (Selkrig & Keamy, 2017). Additionally, through arts integration, ARA+ teachers comfortably entered creativity fostering practices from a perceived sense of expertise, albeit based upon stereotypical associations between creativity with the arts. Additionally, arts integration is standards-based and might be why teachers in this study felt that the strategy helped implement creativity without compromising the responsibility to address content standards. After teachers build comfort with arts integration, then theories of creativity and creativity development can be used to reflect on lived experiences, thus provide a developmental model for teachers' deeper introspection of creativity fostering practices in nonarts curriculum.

The recommendation for creativity PD should also extend beyond classroom teachers and to the administrators who are responsible for teacher evaluations and collegial mentorship. Participants in this case study spoke directly to principal leadership and acceptance of creativity fostering practices as key to their sense of self-efficacy to address student creativity. Whether teachers understand how to foster creativity in the classroom, teachers may not utilize those practices if they are not understood by authoritative figures for fear of reprimand or retribution. To shift the value from

standardized testing and be able to effectively evaluate the value of creativity fostering practices, those who are in positions of power on teacher accountability (evaluations) need to be knowledgeable about the practices.

Conclusion

Creativity has been plucked from obscurity and widely celebrated for its value in all social contexts. As a result, the need to develop student creativity skills in preparation for citizenship is an ever-increasing demand for education systems. Primarily the expectation to develop creativity skills has fallen to teachers without any systematic efforts to ensure professional competency or efficacy to do so. It cannot be assumed that the more creativity is discussed as a desirable skill in popular culture and in our school systems that the understanding of the construct increases with frequency. This study brings to light the need for teachers to be provided opportunities to understand creativity not previously provided to them as students in a traditional education system that did not value creativity development.

Teachers should be provided opportunities to consistently experience creativity fostering practices through PD that expects teachers to participate in the creative process and exercise creative thinking. In order to be able to foster student creativity development, the teacher must experience his or her own creative development. Through master creative experiences teachers become aware of the cognitive, emotional, and psychological contributors to creativity. Consequently, teachers develop a newfound understanding of creativity, which enables the ability to identify necessary changes to

incorporate creativity in the classroom. Yet fostering teacher creative development for the purpose of efficacious development of student creativity is limited in effectiveness.

If creativity development is to be systematically incorporated into every classroom and fostered by every teacher, then systematic changes in practice must extend beyond the teacher. Teachers' sense of self-efficacy can be influenced by the social persuasion of accountability standards, which continue to value rote memorization and factual knowledge. Ultimately, a teacher's sense of efficacy to foster and develop student creativity not only includes PD that supports their understanding of creativity but an accountability system that values the development of creativity.

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National A+ Schools Consortium

A+ Essentials: A Set of Commitments ™

A+ Essentials revised and adopted by the National A+ Schools Consortium, October 2016.

Arkansas A+ Schools

Arts

In A+ Schools the arts are:

- experienced daily through instruction, integration and exposure
- inclusive of drama, dance, music, visual arts, creative writing and media arts
- included in curriculum planning and design
- integrated in all content areas
- valued as essential to creativity, learning and personal experiences
- a part of the school's internal and external identity

Curriculum

In A+ Schools curriculum is addressed through:

- developing teacher skills in creating effective and engaging instruction
- ongoing curriculum exploration and planning
- intentional two-way integration of the arts and other disciplines
- horizontal and vertical alignment of standards
- enhanced conceptual connections
- collaborative development of integrated lessons and units

Multiple Learning Pathways

In A+ Schools multiple learning pathways include:

- Multiple Intelligences (MI) theory and practice
- brain research and brain-based philosophies
- a focus on building 21st century and higher order thinking skills
- creating and balancing learning opportunities that support the whole child
- intentional opportunities for students, families, community to develop understanding of how people learn

Experiential Learning

In A+ Schools experiential learning:

- creates student engagement
- is grounded in arts-based and hands-on learning experiences
- provides integrated and authentic connections to real-life application
- models the creative process and inquiry-based instruction
- allows for understanding of entry points and differentiated instruction
- provides multi-faceted assessment opportunities

Enriched Assessment

In A+ Schools enriched assessment is:

- a reflective practice that is designed for learning
- inclusive of arts and multiple learning pathways
- on-going, integrated, experiential and collaborative
- used both as a self-assessment tool by teachers and students and to help meet school system requirements
- instrumental in creating a comprehensive picture of student understanding

Collaboration

In A+ Schools collaboration is:

- valued and intentional
- fostered by administration and faculty
- prioritized through designated time for classroom and special area teachers to plan together
- experienced throughout the day and in many ways
- utilized to build relationships within and outside the school community

Infrastructure

In A+ Schools infrastructure:

- supports the A+ philosophy
- fosters supportive and shared leadership
- addresses daily logistics to allow for collaboration
- provides time, space and resources to support implementation
- continually maintains a shared vision and develops faculty commitment
- provides relevant professional development and mentoring
- is reflected at all levels

Climate

In A+ Schools climate is enhanced through:

- building collaborative skills that create an environment of respect and support
- developing a creative community that is fun and engaging for teachers and students
- focusing on life-long learning for the entire school community
- working towards a common vision and shared decision-making
- sharing and celebration

Appendix B: Questionnaire

Questionnaire

Name:

Number of years teaching:

Number of years teaching at *name of A+ school*?

Grade and content taught:

What have you learned about creativity from ARA+ PD?

What knowledge was most beneficial to your professional ability to foster/develop creativity within your students?

What was the most influential learning activity for you to incorporate creativity into the classroom?

What skill, or set of skills, have you relied on most to foster/develop creativity in your students?

How has ARA+ PD influenced your feelings about being capable to foster and develop creativity within your students?

What else would you like me for me to know about your experiences before and after your ARA+ PD?

Is there anything else you would like to share?

Appendix C: Focus Group Protocol

Introductory Procedures

Welcome all participants and thank them for contributing their time and thoughts.

Review the research objective, focus group agenda, and anticipated time line.

Explain the use of audio recording equipment.

Provide Informed Consent Forms and review their rights as participants.

Ask for and answer any questions from focus group members.

Provide the list of questions in a handout to participants with instructions that they will be given five minutes to silently read the questions and make any notations they would like before we begin the conversation.

Focus Group Questions

Please state your name, how many years teaching, how many years teaching at name of A+ school and the grade and content you currently teach.

How would you describe the 21st century skills and how are they significant to students?

How would you define creativity as a 21st century skill?

How do you feel about the professional expectation to develop creative students?

How has ARA+ PD influenced your answers to these questions?

Appendix D: Individual Interview Protocol

Introductory Procedures

Thank participants for contributing their time and thoughts.

Review the research objective, interview agenda, and anticipated time line.

Explain the use of audio recording equipment.

Provide Informed Consent Forms and review their rights as participant.

Ask for and answer any questions from participant.

Provide their responses to the questionnaire to use as a reference.

Interview Questions

Please state your name, how many years teaching, how many years teaching at name of A+ school, and the grade and content you currently teach.

Review responses and ask clarification on specific answers of interest in addition to answering the following questions as needed.

How would you define creativity as a 21st century skill?

How do you feel about the professional expectation to develop creative students?

How has ARA+ PD influenced your answers to these questions?

How capable do you feel in developing creativity skills within your students?

How have you dealt with the expectation of fostering creativity in your students?

How has ARA+ PD influenced your feelings about your ability to incorporate creativity in your classroom?