

Spring 2022

The Impact of Content-Specific Virtual Mentoring on Job Satisfaction and Attrition: A Mixed Methods Study of Delaware Arts Teachers

Rachel M. Hoke

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THE IMPACT OF CONTENT-SPECIFIC VIRTUAL MENTORING ON JOB
SATISFACTION AND ATTRITION:
A MIXED METHODS STUDY OF DELAWARE ARTS TEACHERS

by

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Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Education in

Curriculum and Instruction

College of Education

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2022

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ACKNOWLEDGEMENTS

This work is submitted with deepest gratitude to my family and friends for their love, patience, and unwavering support throughout this process. Sincere thanks are also extended to my dissertation advisor, Dr. William Morris, the educational technology program faculty, and my Cohort TMNT classmates, from whom I have learned endlessly. This research would not have been possible without the cooperation of the Delaware Department of Education and Delaware State Education Association, and the enthusiasm of so many dedicated visual and performing arts teachers who agreed to take part in this intervention and research. I know that you'll never stop "fighting the good fight" for your students, but I hope this work will play some small role in making that fight just a little bit easier.

ABSTRACT

Teacher attrition is most prevalent among novice teachers and occurs largely as a result of poor job satisfaction. Content-specific mentoring interventions demonstrate effectiveness in combating novice teacher attrition, but are inaccessible by visual and performing arts teachers due to their status as one-person departments within school buildings. This mixed methods action research implemented virtual delivery of content-specific mentoring for novice arts teachers to mitigate geographic isolation throughout the state of Delaware. Research questions assessed (1) the intervention's impact on attrition intentions, (2) the intervention's impact on job satisfaction, and (3) perceptions of mentoring by novice and experienced arts teacher participants.

The intervention paired first- and second-year novice arts teachers from throughout Delaware with individual mentors matched by grade levels and content area, utilizing instructional technology to deliver content-specific mentoring in a virtual format. Participants ($n = 47$) included novice and mentor teachers who engaged in the intervention, along with prospective mentor teachers. Quantitative and qualitative data on job satisfaction, plans for attrition, and mentoring perceptions were collected concurrently through a Likert-style survey and individual semi-structured participant interviews.

Quantitative data were analyzed for descriptive statistics and indicated generally positive job satisfaction, moderately low likelihood of attrition, and positive perceptions of the intervention by all participant groups. Inductive analysis of qualitative data

revealed major themes related to a widespread need for arts-specific teacher networking and collegial support, the development of a unique arts teacher identity contributing to professional isolation, a perception of content-specific mentoring as mutually beneficial for mentors and mentees, and positive attitudes toward a virtual delivery model. The study findings guide recommendations that Delaware should adopt a content-specific model for novice teacher mentoring using a hybrid delivery system and provide increased opportunities for leadership, networking, and content-related professional development for arts teachers as a method of improving job satisfaction to mitigate attrition.

TABLE OF CONTENTS

Acknowledgements	iii
Abstract.....	iv
List of Tables	ix
List of Figures	x
CHAPTER 1: INTRODUCTION	1
National Context	2
Local Context.....	6
Statement of the Problem.....	10
Researcher Subjectivities and Positionality	12
Definition of Terms.....	15
CHAPTER 2: LITERATURE REVIEW	17
Introduction.....	17
Teacher Attrition.....	18
Job Satisfaction	28
Professional Development as a Teacher Retention Strategy	35
Mentoring.....	41
Virtual Mentoring	54
Chapter Summary	65
CHAPTER 3: METHOD	69
Research Design.....	69

Setting and Participants.....	73
Intervention	76
Data Collection	82
Procedures and Timeline.....	103
Rigor and Trustworthiness	107
Plan for Sharing and Communicating Findings.....	109
CHAPTER 4: ANALYSIS AND FINDINGS	114
Quantitative Analysis and Findings	115
Qualitative Findings and Interpretations.....	126
Chapter Summary	156
CHAPTER 5: DISCUSSION, IMPLICATIONS, AND LIMITATIONS	158
Discussion	158
Implications.....	175
Limitations	185
Conclusion	188
REFERENCES	190
APPENDICES	219
Appendix A: Institutional Review Board Approval	219
Appendix B: VPA Mentoring Handbook	220
Appendix C: Informed Consent	239
Appendix D: Mentor/Mentee Attrition and Satisfaction Questionnaire	242
Appendix E: Interview Protocols.....	246
Appendix F: Observation Forms.....	248

Appendix G: DPAS-II Component Rubric for Teachers	256
Appendix H: Guiding Questions for Conferences	258
Appendix I: Discussion Logs	261
Appendix J: New Teacher Observation Forms	265
Appendix K: TMLPM/MMASQ Item Alignment	266
Appendix L: TJSQ/MMASQ Item Alignment	269
Appendix M: Turnover Intentions Measure	273
Appendix N: Teaching Satisfaction Scale	274
Appendix O: Satisfaction with Mentoring Measure	275
Appendix P: Mentor’s Interview	276

LIST OF TABLES

Table 3.1: Alignment of Data Sources.....	82
Table 3.2: Alignment of MMASQ Constructs.....	87
Table 3.3: Alignment of MMASQ Items	92
Table 3.4: Alignment of Interview Prompts	97
Table 3.5: Alignment of Data Analysis Methods	103
Table 3.6: Timeline of Intervention Procedures and Data Collection	104
Table 4.1: Participant Teaching Experience	115
Table 4.2: Participant Groups by Content Area and Grade Level	116
Table 4.3: Internal Consistency of MMASQ Sections and Subscales.....	118
Table 4.4: Pre-Intervention MMASQ Descriptive Statistics	122
Table 4.5: Post-Intervention MMASQ Descriptive Statistics.....	125
Table 4.6: Interview Participant Demographics	128
Table 4.7: Quantity of Qualitative Codes	130
Table 4.8: First Cycle Code Types	132
Table 4.9: Final Qualitative Themes with Component Categories and Subcategories....	138

LIST OF FIGURES

Figure 4.1: Cycle 1 coding in Delve	131
Figure 4.2: Cycle 1 coding visualization	132
Figure 4.3: Visualizations of Cycle 2 code groupings.....	133
Figure 4.4: Digitized Cycle 2 code groupings in Excel.....	133
Figure 4.5: Cycle 3 code category visualizations	134
Figure 4.6: Cycle 3 categories in analog format	135
Figure 4.7: Cycle 3 categories in digital format	135
Figure 4.8: Analog visualization of Cycle 4 themes.....	136
Figure 4.9: Digital visualization of Cycle 4 themes	136

CHAPTER 1

INTRODUCTION

The problem of teacher attrition has been extensively studied (Ado, 2013; Gallant & Riley, 2014; Perda, 2013; Schaefer, Long, & Clandinin, 2012; Smith & Ingersoll, 2004), yet shows no signs of improving (Ingersoll, Merrill, & Stuckey, 2014). Its established correlation with teacher job satisfaction (Abril & Bannerman, 2015; Callahan, 2016; Charner-Laird, Szczesiul, Kirkpatrick, Watson, & Gordon, 2016) suggests that novice teacher mentoring programs are an effective strategy to promote early-career retention (Ford, Urick, & Wilson, 2018; Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007), even more so when they are content-specific (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Ensign & Woods, 2017; Smith & Ingersoll, 2004; White & Mason, 2006). The geographic disbursement of visual and performing arts teachers has long been an obstacle to equitable access for this population (Conway, 2015; Smith & Ingersoll, 2004); however, virtual delivery of a content-specific mentoring intervention may be the key to providing these beneficial supports (Bautista, Wong, & Cabedo-Mas, 2019; Reese, 2016; Reese, 2017; Smith & Israel, 2010).

To set the stage for the development of this action research study, it is necessary to introduce its (a) national and (b) local contexts, followed by (c) a statement of the problem, (d) explanation of researcher subjectivity and positionality, and (e) definition of key terms.

National Context

The profession of teaching is unique in that there are no entry-level positions. Educators entering their first year of teaching are held to the same standards of instruction and student achievement as those who have taught for several years or decades (Kane & Francis, 2013). Novice teachers are in need of the most support, and also represent the subgroup at the highest risk for attrition (Gallant & Riley, 2014; Hughes, 2012; Perda, 2013). Nearly half of this attrition is the result of poor job satisfaction (Ensign & Woods, 2017). Many districts and states have responded to this challenge through the development of novice teacher induction and mentoring programs delivered over the course of a year or several years (Carver & Feiman-Nemser, 2009; Clark, 2012; Smith & Ingersoll, 2004). For teachers in visual and performing arts content areas such as dance, media arts, music, theater, and visual art, these programs are often less effective due to a lack of applicability to their specific academic content (Conway, 2015).

Attrition

Studies attempting to determine how many teachers leave the profession each year have resulted in conflicting findings, reporting annual attrition rates of anywhere from five to 50% (Gallant & Riley, 2014; Hancock, 2003; Olson, 2000; Schaefer et al., 2012). Arts teachers leave the education field at rates similar to those of their peers in other content areas, but for different reasons (Hancock, 2009; Krueger, 2000). Although the specific rate at which teachers leave is unknown, it is clear that they are doing so early in their careers, typically within the first five years (Hughes, 2012; Matthews & Koner, 2017; Olson, 2000).

Although attrition occurs for a variety of reasons, several factors have been isolated as leading contributors, including working conditions (Gardner, 2010; Ingersoll et al., 2014), teacher burnout (Aloe, Amo, & Shanahan, 2013), and urban school settings (Ado, 2013; Green & Muñoz, 2016). Together, these contributors comprise the overall job satisfaction that strongly predicts teachers' likelihood of leaving either their teaching position or the education profession altogether (Ensign & Woods, 2017).

Additional factors that place arts teachers at particular risk include a lack of adequate support for their content from administration and the overall school community (Gardner, 2010; Green & Muñoz, 2016; Krueger, 2000), which often manifests in the form of itinerant or part-time teaching positions (Gardner, 2010; Krueger, 2000) and teaching outside one's area of certification (Abril & Bannerman, 2015; Olson, 2000). These obstacles contribute to feelings of poor self-efficacy (Blackburn, Bunch, & Hayes, 2017; Hanson, 2017), professional isolation (Charner-Laird et al., 2016; Clark, 2012; Verdi, 2016), marginalization within the school community (Gaudreault, Richards, & Woods, 2017; Iannucci, MacPhail, & Richards, 2019), and perceptions of not mattering or being treated as second-class teachers (Gaudreault et al., 2017). Cumulatively, these factors negatively impact teachers' overall job satisfaction (Blackburn et al., 2017; Krueger, 2000), which is responsible for over 45% of all teacher attrition (Ensign & Woods, 2017).

Novice Teacher Induction

As school districts and states combat teacher shortages in nearly every secondary school subject as well as special education (Matthews & Koner, 2017; USDOE, 2020), many have recognized the progression of attrition (Gallant & Riley, 2014) and instituted

novice teacher induction programs as a remedy (Clark, 2012). These programs may be mandatory or voluntary at the state or district level and have become extremely widespread, with 80% of teachers nationwide reporting participation in some type of novice teacher training (Clark, 2012; Smith & Ingersoll, 2004). While specific requirements vary, induction programs are generally viewed as an assistive, rather than evaluative, tool for teacher support (Carver & Feiman-Nemser, 2009). Mentoring is the most common component of induction programs (Carver & Feiman-Nemser, 2009; Villar & Strong, 2007), with some designs also utilizing professional development (Carver & Feiman-Nemser, 2009), professional learning communities (Verdi, 2016), and individual or collaborative action research (Ado, 2013; Watkins, 2005).

Novice teachers perceive mentoring to be a positive and useful component of their training (Clark, 2012; Languell, 2018; Whitaker, 2000; White & Mason, 2006), and participation in a mentoring program places novice teachers at an 18% lower risk for attrition (Smith & Ingersoll, 2004). Characteristics that contribute to mentoring's effectiveness include opportunities for collaboration (Bautista et al., 2019; Sparks et al., 2017) and support (Sikma, 2019; Whitaker, 2000; White & Mason, 2006). The most effective mentoring programs are content-specific (Clark, 2012; Smith & Ingersoll, 2004; White & Mason, 2006), providing contextual support for the novice teacher's content area or grade level (Ado, 2013).

The effectiveness of a mentoring program is increased when it includes a mentor who can assist novice teachers in the development of their pedagogical and content knowledge (Ballantyne & Packer, 2004; Carver & Feiman-Nemser, 2009; Conway, 2015; Smith & Ingersoll, 2004). Researchers recommend that this be achieved through

providing a mentor from the same content area or grade level as the novice teacher (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Ensign & Woods, 2017; Smith & Ingersoll, 2004; White & Mason, 2006). However, arts teachers are unlikely to experience these beneficial characteristics, due to a lack of access to content-specific mentors and professional development opportunities (Conway, 2015; Parsad & Spiegelman, 2012).

Role of Technology

The ubiquitous infusion of technology resources into K-12 schools (National Science Foundation, 2018) represents an opportunity to combat barriers that have previously prevented arts teachers from receiving equitable benefits from novice teacher mentoring programs (Conway, 2015). Virtual mentoring is a developing model in the science, mathematics, and special education disciplines that could be expanded to benefit other content areas (Smith & Israel, 2010). Online collaboration tools allow novice teachers to communicate with experienced mentors working in different buildings or districts to conduct observations, engage in conferences for debriefing and feedback, and collaboratively plan lessons in synchronous or asynchronous formats (Donne & Lin, 2013; Reese, 2016; Reese, 2017; Smith & Israel, 2010; West, 2015). This virtual mentoring model has already encountered success both at the local and statewide levels when implemented as an electronic professional learning network (Duran, Fossum, & Luera, 2006; Meadows, 2017), but its full potential for application to content-specific novice teacher mentoring programs in the arts has yet to be realized or empirically evaluated.

Local Context

This research was conducted throughout the state of Delaware, with novice teachers working in the visual and performing arts content areas. Delaware currently defines novice teachers as those with four or fewer years of experience, mandating that they take part in mentoring as a component of the state-sponsored Comprehensive Induction Program (Green, 2019).

Certification

Arts teachers credentialed in Delaware are certified in all sub-content areas of their fields, for grades kindergarten through 12. Although teachers may have specialized in a particular sub-content area of their artistic discipline during their collegiate teacher preparation program, their subsequent certification does not acknowledge this distinction. For example, one teacher who studied opera during their university music education training and another whose focus was jazz trumpet will both obtain the same generic Teacher of K–12 Music certificate. With this certification, both will be equally credentialed for any music position offered by a school or district, including but not limited to elementary general music, secondary general music, band, orchestra, choir, guitar, piano, harmonizing instruments, music theory, music history, or music appreciation (14 DE Code § 1505). As an outcome of these broad classifications, many novice arts teachers obtain their first jobs instructing a sub-content area far outside of their artistic specialization, an experience akin to teaching outside their area of certification that may place them at a higher risk for attrition (Conway, 2002).

Novice Teachers

The state of Delaware aligns with the national model, with most school buildings employing one or two arts teachers per content area, and some teachers assigned to itinerant positions in multiple buildings or sub-contents. Some local districts have enacted collective bargaining agreements that allow for the transfer of teachers within their department to a different sub-content, building, or grade level at the district's discretion, and which permit established teachers to voluntarily transfer into vacancies on a yearly basis (RCCSD Board of Education & RCEA, 2017). As a result, the open positions remaining available for novice teachers often consist of the most difficult teaching settings that are deemed undesirable by veteran employees.

Novice teachers are required to participate in the state-mandated Comprehensive Induction Program, delivered over the course of their first four years of teaching (Green, 2019). Mentoring is the central component of this program, as all novice teachers are paired with an individual mentor in their school building during their first two years of employment. Mentors conduct non-evaluative observations of novice teachers throughout these first two years and meet for debriefing sessions following their observations. The induction program also requires novice teachers to participate in state and district professional development offerings and an ethics course during their first two years, complete a collaborative book study within a professional learning community during their third year, and conduct a self-analysis and develop a plan for growth during their fourth year (Delaware Department of Education (DDOE), 2017).

Arts Teachers

The current structure of the Comprehensive Induction Program in Delaware places novice arts teachers at a significant disadvantage. Because novice teacher mentors are matched only by building assignment, beginning arts teachers are nearly always paired with a mentor who does not teach their same content, despite overwhelming evidence of the ineffectiveness of this approach (Clark, 2012; Conway, 2015; Smith & Ingersoll, 2004; White & Mason, 2006). Novice arts teachers' self-reported areas of highest need are content knowledge and skills and pedagogical knowledge and skills (Ballantyne & Packer, 2004), information that a mentor from a different content area is simply unable to provide.

Prior to 2014, the state of Delaware utilized arts content area standards based on the recommendations of its various professional organizations, such as the National Art Education Association and the National Association for Music Education. The Delaware Department of Education (DDOE) provided teachers with the Delaware Recommended Curriculum as their basis for instruction, a document that was not a true curriculum, but which included a collection of the standards and corresponding grade-level expectations (DDOE, 2008). Following the 2009 advent of the Common Core State Standards Initiative for mathematics and literacy, teachers of the arts followed suit, assembling a national taskforce to develop the National Core Arts Standards (NCAS).

Delaware was among the states to engage in early adoption of the NCAS in 2014 and now requires all teachers of the visual and performing arts to adhere to its standards in their teaching (DDOE, 2014). Since the adoption of the NCAS, Delaware school districts remain in an ongoing process of developing and revising curricular materials and

assessments that align to these new standards, meanwhile leaving teachers to create their own individual course materials with little to no district or state oversight. For novice teachers who are unlikely to have had formal training in curriculum development, this may be a prohibitively difficult task resulting in teacher frustration and inconsistent student learning objectives, and for which the assistance of a content-specific mentor would be exceedingly useful (Bautista et al., 2019; Whitaker, 2000).

Role of Technology

The state of Delaware contains 19 public school districts and 24 publicly-funded charter schools (DDOE, 2017; Rodel, 2020), whose teachers are required to participate in mentoring and the Comprehensive Induction Program. An increasing percentage of these districts have implemented one-to-one student technology, most commonly by providing students and faculty with Chromebooks and Google accounts. A group of nine public districts has also formed the BRINC Consortium, a cooperative partnership through which the districts engage in joint technology purchasing and the open sharing of technological and curricular resources (Linn, 2013).

The small size of this state and its school choice system that enables student movement between districts (Rodel, 2020) encourage the adoption of statewide technology initiatives for ease of recordkeeping and user transitions. In response, DDOE has implemented the Schoology learning management system in all publicly-funded schools statewide. All teachers in these schools have access to at least one internet-connected device (National Science Foundation, 2018), and many use additional tools such as laptops, iPads, or Chromebooks. The universal availability of technology tools throughout the state makes virtual observation and collaboration a realistic endeavor that

will not require significant investment in additional resources or training. Therefore, this state is an ideal candidate for the implementation of a virtual mentoring program to better serve the needs of its beginning arts teachers.

Statement of the Problem

In many schools, the visual and performing arts are composed of one-person departments (Abril & Gault, 2008; Bautista et al., 2019; Stanley, 2011) or itinerant faculty who are assigned to multiple buildings (Parsad & Spiegelman, 2012). Novice arts teachers frequently experience feelings of professional isolation (Gaudreault et al., 2017; Verdi, 2016) and lack the opportunities for collaboration and collegial support afforded to other teachers (Battersby & Verdi, 2015; Iannucci et al., 2019; Krueger, 1999). These perceptions of isolation lead to feelings of unpreparedness that cause novice teachers to shift their focus “to surviving rather than to effective teaching” (Legette, 2013, p. 13) and have a negative impact on their job satisfaction (Ensign & Woods, 2017; Krueger, 2000). As a result, nearly 30% of novice arts teachers report moderate to strong job dissatisfaction within their first three years of teaching (Ballantyne & Packer, 2004).

Although an estimated 11 to 27% of arts teachers leave the profession yearly (Hancock, 2009), teachers are at the highest risk for attrition during their first five years (Hughes, 2012; Ingersoll et al., 2014; Perda, 2013), with some studies finding that as many as 50% left teaching during this time (Gallant & Riley, 2014; Smith & Ingersoll, 2004). Current targeted efforts that have demonstrated effectiveness in retaining novice teachers, such as district- or state-mandated mentoring programs (Krueger, 2000; Sparks et al., 2017; Villar & Strong, 2007; White & Mason, 2006), are less impactful for arts

teachers due to a paucity of access to mentors within their own content areas (Conway, 2015; Smith & Ingersoll, 2004).

Poor job satisfaction caused by professional isolation is a well-documented problem (Charner-Laird et al., 2016; Gaudreault et al., 2017; Iannucci et al., 2019; Stanley, 2011; Verdi, 2016) impeding the retention of arts teachers (Ensign & Woods, 2017; Legette, 2013), but which can be mitigated by strong mentor relationships (Krueger, 2000; Sparks et al., 2017). Beginning arts teachers report needing additional support in developing their pedagogical and content knowledge and skills (Ballantyne & Packer, 2004; Whitaker, 2000), which can be provided most effectively through opportunities to network and build relationships with other teachers in their content (Abril & Bannerman, 2015; Eliahoo, 2009). While the implementation of a mentoring program in general has a positive impact on teacher attrition (Sparks et al., 2017; Villar & Strong, 2007), providing novice teachers with a mentor who works in the same content area can reduce their likelihood of attrition by as much as 30% (Smith & Ingersoll, 2004).

In the past, the opportunity to engage in content-specific mentoring has been limited by the physical separation of arts teachers who work in different school buildings; however, the ubiquity of electronic collaboration tools and synchronous meeting platforms has already led to the development and implementation of virtual mentoring interventions for teachers in other settings and content areas (Chong et al., 2020; Dawson, 2010; Donne & Lin, 2013; Gentry, 2011; McQuade, Davis, & Nash, 2015; Reese, 2016; Smith & Israel, 2010). The initial success of these programs suggests that the implementation of a similar intervention for novice arts teachers may mark an important

step toward not only retaining teachers, but cultivating an appealing and healthy work environment to sustain them throughout their careers (Schaefer et al., 2012).

Purpose

The purpose of this action research is to implement a virtual content-specific mentoring program for visual and performing arts teachers enrolled in the Comprehensive Induction Program during their first two years of employment, and to evaluate its impacts on teachers' job satisfaction and intentions to remain in their teaching positions.

Research Questions

The research questions addressed by this study include the following:

1. How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?
3. How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?

Researcher Subjectivities and Positionality

By prioritizing its real-world applications, this research necessarily operates within the pragmatic paradigm, focusing on topics and methods that address practical solutions (Creswell & Creswell, 2018). Within the context of this research, this entails adhering to the ontology that a single, factual reality exists, with the caveat that all individuals, including researchers, interpret this reality differently based on personal experiences and social contexts (Mertens, 2009). The parameters of this paradigm also

provide some freedom in methodological structure, abiding by the principle that there is no objectively correct research design, aside from what is the best fit for the setting, participants, and goals of the study (Morgan, 2007).

Positionality

This research studied arts teachers from throughout the state in which the researcher had previously taught music, and could therefore be considered as belonging to the participant group. Researcher positionality within this study can be described by Herr and Anderson's (2005) continuum as "insider in collaboration with other insiders" (p. 31). Both the researcher and all participants had direct experience and interaction with the problem this study aims to solve. Although the data collection methods and protocols were pre-determined, participants had an influential voice in co-creating their experiences throughout the study, and their reflections on the quality of the intervention made up a significant portion of the data collection, analysis, and representation.

A central aspect of negotiating this positionality was striking an appropriate balance between the roles of researcher and peer, as some of the study participants were former colleagues within the arts education community in Delaware. Additionally, by maintaining an ethical standard of confidentiality while asking participants to divulge information about their own job performance and perceptions of other teachers, the researcher was necessarily positioned as an outsider from administrative stakeholders by not revealing certain information or identifiers (Herr & Anderson, 2005). Although there is a need to share the conclusions of this research with all stakeholders in order to create a pragmatic impact (Agee, 2009; Creswell & Creswell, 2018), this insider positionality

enabled access to and anonymization of sensitive information to ensure the protection of all participants (McAteer, 2013).

Impact

Approaching this research from a pragmatic perspective strengthens its applicability and the likelihood that it can be utilized for measurable change within its local setting (Creswell & Creswell, 2018; Morgan, 2007). Having experienced first-hand the situation being studied, an insider researcher's perception of the problem is in itself subjective, and must be strongly supported by literature and data to ensure that its conclusions are truly representative of the study participants' experiences (Herr & Anderson, 2005). This begins by acknowledging that these perceptions are influenced by insider experiences and confirming through collaboration with other insiders that the voices of the participant group as a whole are accurately represented.

Definition of Terms

The variable of *teacher attrition* addressed by this study includes both true attrition, in which teachers leave education altogether (Harris, Davies, Christensen, Hanks, & Bowles, 2019), as well as migration, in which teachers transfer to a different position within the teaching profession (Hancock, 2009). This construct is considered to be undesirable in comparison to its opposing condition of *teacher retention* (Schaefer et al., 2012), in which teachers remain in their positions consistently over time.

For the purposes of this research, *novice arts teachers* are limited to first- and second-year teachers in a K–12 visual or performing arts content area. Multiple studies indicate that these teachers are within the group at the highest risk for attrition (Perda, 2013; Smith & Ingersoll, 2004) and in need of the most support (Gallant & Riley, 2014; Matthews & Koner, 2017).

Job satisfaction is operationalized as a “pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1976, p. 1300), a definition which remains popular in current research (Ford et al., 2018; Green & Muñoz, 2016). This study’s construct of job satisfaction examines elements specific to education, including administrative support (Gardner, 2010; Green & Muñoz, 2016; Krueger, 2000), teacher self-efficacy (Blackburn et al., 2017; Hanson, 2017), and professional isolation (Charner-Laird et al., 2016; Clark, 2012; Verdi, 2016).

The issue of *professional isolation* specific to arts teachers can be viewed as an outcome of physical isolation (Battersby & Verdi, 2015; Tollefson-Hall, 2015), diverse and difficult teaching assignments (Stanley, 2011), and role conflict (Ensign & Woods, 2017; Iannucci et al., 2019) that results in marginalization (Gaudreault et al., 2017),

perceptions of not mattering within the school community (Becher & Orland-Barak, 2018), and being treated as second-class teachers (Abril & Bannerman, 2015).

The *mentoring* intervention developed in this study adheres to the definition of mentoring as “an induction or apprenticeship to develop competency, provide challenges, and to support progression” (McQuade et al., 2015, p. 324), with the primary goals of collaboration (Bautista et al., 2019; Sparks et al., 2017) and support (Sikma, 2019; Whitaker, 2000; White & Mason, 2006).

Guided by the works of Conway (2015) and Reese (2016), *content-specific mentoring* involves pairing novice arts teachers with an experienced teacher matched by content area or grade level (Conway, 2015) and includes two-way observations (Bautista et al., 2019; Sparks et al., 2017) and feedback that focuses on the elements of collaboration, reflection, and shared analysis (Reese, 2016).

Substantial precedent exists for *virtual mentoring* delivered through electronic formats, including but not limited to Skype (Reese, 2016; West, 2015), ooVoo (West, 2015), Wiki spaces (Donne & Lin, 2013; Meadows, 2017), Adobe Connect, (Meadows, 2017), text-based discussion boards (Smith & Israel, 2010), and video sharing platforms (Ault, Spriggs, Bausch, & Courtade, 2019; Bautista et al., 2019). The video conferencing platform Zoom (2021) constituted the primary delivery method for this intervention.

CHAPTER 2

LITERATURE REVIEW

Introduction

The purpose of this action research is to implement a virtual content-specific mentoring program for visual and performing arts teachers enrolled in the Comprehensive Induction Program during their first two years of employment, and to evaluate its impacts on teachers' job satisfaction and intentions to remain in their teaching positions. This literature review frames the extant research related to constructs involved in the following research questions: (1) How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions? (2) What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware? (3) How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?

Literature Review Method

Numerous research databases were used for gathering literature about the topic and its background. *Education Source* and *ERIC* were consulted as a starting point through the University of South Carolina library database system, with additional sources gathered from *Academia*, *Google Scholar*, *JSTOR*, *SAGE*, and *Taylor & Francis*. Boolean searches were conducted with extensive combinations and variations of

keywords, including *arts teachers*, *electronic mentoring*, *e-mentoring*, *job satisfaction*, *mentoring*, *music teachers*, *new teachers*, *novice teachers*, *professional isolation*, *retention strategies*, and *teacher attrition*. Search modifiers included limits for peer-reviewed, full text, English language academic journal articles, published in the last five to seven years, with exceptions for older seminal sources and research on subtopics for which the existence of recent literature is limited. After establishing a foundation of current literature through these searches, reference mining was completed to execute ancestral searches for additional sources. In some cases, direct inquiries were conducted to obtain specific information within a single database, as in the case of national teacher shortage statistics from the U.S. Department of Education database.

Organization of the Literature Review

This review of the literature traces the causal and corollary links connecting major constructs related to this study. This chapter is organized according to the following topic sections: (a) a broad overview of the impacts and causes of teacher attrition, (b) an examination of factors related to teacher job satisfaction, (c) a review of professional development as a teacher retention strategy, (d) a discussion of teacher mentoring practices, and (e) a synopsis of virtual mentoring intervention components and results from the literature.

Teacher Attrition

The phenomenon of teacher attrition, or teachers leaving the profession, is the foundational problem of practice indicating the need for the current study. Because the participants in this study include early-career teachers and teachers of the arts content areas, these two subgroups are examined specifically after a more general discussion of

overall teacher attrition. The related literature reviewed here encompasses (a) operationalizing attrition, (b) attrition statistics, (c) impacts of attrition, (d) contributing factors in teacher attrition, (e) novice teacher attrition risk, and (f) arts teacher attrition risk.

Operationalizing Attrition

Teacher attrition, or turnover (Ingersoll et al., 2014), can be defined as the instance of teachers leaving either their teaching positions or the education field altogether (Harris et al., 2019). Hancock (2009) further separated this phenomenon into *attrition*, which describes teachers who cease working in education, and *migration*, which describes teachers who transfer to a different position within the education profession. Both of these are considered oppositional to the desired condition of teacher *retention*, meaning that teachers consistently remain in the same professional position over time (Hancock, 2009).

As in all professions, some percentage of attrition and migration is normal and necessary, occurring as a result of retirement, family circumstances, layoffs, or termination (Ingersoll et al., 2014). However, the majority of teachers who leave their positions do so voluntarily (Ford et al., 2018), with fewer than 20% of teacher vacancies occurring as the result of budgetary layoffs (Ingersoll et al., 2014). For teachers who leave voluntarily prior to retirement, “attrition is a process, not an event” (Gallant & Riley, 2014, p. 575), the result of a long, labored decision relating to one’s professional identity and needs. Therefore, it is possible to reduce teacher attrition by developing interventions that cultivate an appealing and healthy work environment for teachers who remain in their positions (Schaefer et al., 2012).

Attrition Statistics

An enormous amount of variance exists within the literature that reports statistics on teacher attrition and migration (cf. Ingersoll et al., 2014; Schaefer et al., 2012; Smith & Ingersoll, 2004), likely due to an absence of standardized reporting methods and recordkeeping practices that differ by state (Hancock, 2009). While studies of national teacher samples show that the rate of teacher turnover may be anywhere from five to 50% (Ingersoll et al., 2014; Schaefer et al., 2012; Smith & Ingersoll, 2004), most place it somewhere between 15 and 20% each school year (Harris et al., 2019; Krueger, 2000; Perda, 2013; Sparks et al., 2017). In an alarming comparison of teacher attrition rates from 1988 to 2009, researchers found that yearly attrition had risen by 41% during that time period (Ingersoll et al., 2014). Although the exact attrition rates are unclear, teachers who leave their positions each year number in the thousands, with drastic consequences for the landscape of education nationwide.

Impacts of Attrition

Teacher attrition represents only one element within an enormous schema of interconnected challenges in education. However, it demonstrates a clear cause-effect relationship with several other adverse conditions. When attrition is considered as a cause, its significant detrimental effects include the financial burden of replacing teachers, national teacher shortages, and harmful impacts on student achievement.

Financial burden. Replacing teachers who leave results in astronomical monetary costs for educational institutions (Villar & Strong, 2007), representing \$7.2 billion in yearly educational expenditures nationwide (Sparks et al., 2017). In 2016, Callahan estimated that the price of replacing a single teacher was as high as \$8,000. A

2019 study determined that prices range from a minimum of \$4,400 to as much as \$17,900 (Harris et al., 2019). This cost is typically paid through a combination of district and state education funds (Villar & Strong, 2007), creating undue burden on already-strained education budgets. Reducing teacher attrition would result in direct financial savings for educational and government institutions.

Teacher shortages. When teachers leave at faster rates than those at which they can be replaced, the result is a *teacher shortage*, defined by the U.S. Department of Education (USDOE) as, “an area of specific grade, subject matter or discipline classification, or a geographic area in which the Secretary determines that there is an inadequate supply of elementary or secondary school teachers” (USDOE, 2020, p. 3). In the visual and performing arts content areas alone, teacher shortages have been reported over the past 10 years in 34 U.S. states, as well as the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands, with nearly all of these states reporting shortages in multiple content areas or grade levels. The state of Delaware, which is the setting for the current study, is among the states with a documented history of teacher shortages in both music and visual art (USDOE, 2020).

Despite efforts that aim to incentivize retention, teacher shortages have shown no indication of improving. Enrollment in traditional university teacher preparation programs has decreased, even while overall student enrollment is on the rise (Harris et al., 2019). Although there remains a sufficient supply of qualified and certified teacher candidates, these individuals are leaving the profession or declining to accept teaching positions (Matthews & Koner, 2017). A number of incentive programs have emerged, such as Alternate Route to Certification, The New Teacher Project, Teach for America,

and Troops to Teachers, which are intended to attract established professionals to teaching as a career-change option (Harris et al., 2019; Ingersoll et al., 2014). However, these have met with mixed results, as attrition is even more prevalent among teachers who enter the profession later in their careers (Perda, 2013).

Reduced student achievement. High rates of teacher attrition also have a direct impact on student learning outcomes. With no permanent solution in place to combat persistent teacher shortages, schools and districts are often forced to hire inexperienced teachers who are underqualified or emergency-certified, and who may not be sufficiently knowledgeable in the content or grade level they are hired to teach (Perda, 2013).

Olson's (2000) review of the literature on teacher competency and retention estimated that one-third of teachers are tasked with teaching outside of their area of certification for at least part of the school day, a percentage that is often substantially greater in high-poverty schools. Because teacher attrition perpetuates a cycle of novice teachers being replaced with other novice teachers, students never gain the benefit of learning from an experienced educator (Callahan, 2016). Furthermore, the lack of consistency and cohesion in teaching staff inhibits the development of a positive and effective school culture (Perda, 2013). Together, this underqualification, inexperience, and inconsistency undermines student learning outcomes.

Contributing Factors

After examining the effects for which teacher attrition is a cause, it is necessary to investigate the causes from which teacher attrition is the outcome. In plain language, why do teachers leave? Although the answer is complex, it can be reduced to a combination of personal and institutional factors (Schaefer et al., 2012; Sikma, 2019).

Personal factors include teachers' own academic achievement, family circumstances, personal resilience, and demographics such as age and gender (Hancock, 2003; Hanson, 2017; Olson, 2000; Schaefer et al., 2012; Smith & Ingersoll, 2004). These characteristics are unlikely to be manipulated through organizational interventions, and are beyond the scope of this study. *Institutional factors* comprise variables such as working conditions, teacher burnout, and school setting (Gardner, 2010; Ingersoll et al., 2014) that contribute to comprehensive job satisfaction (Ford et al., 2018), which functions as a dependent variable in the current study.

Working conditions. Overall working conditions influence teachers' perceptions of their jobs and whether or not they choose to pursue what are perceived as better teaching positions (Gardner, 2010). Teachers' impressions of their working conditions include components such as autonomy and influence over schoolwide decisions (Ingersoll et al., 2014), relationships with administration, salary, and the expectations placed on teachers by the larger education community (Harris et al., 2019). Reported satisfaction with these working conditions varies highly between schools and districts (Schaefer et al., 2012). This variability indicates that it is possible to enact changes that improve working conditions, and consequently, teachers' experiences.

Teacher burnout. A second institutional factor contributing to attrition is the culture of teacher burnout. *Burnout* can be conceptualized as a combination of "emotional exhaustion, depersonalization, and (lowered) personal accomplishment" (Aloe et al., 2013, p. 101). While there is no consensus as to the precise cause of teacher burnout, some researchers contend that it may be predicated upon a lack of institutional support (Callahan, 2016) or the expectations placed on teachers to fulfill multiple roles

within the context of their teaching positions (Iannucci et al., 2019). Regardless of cause, the most common manner of coping with burnout is for teachers to emotionally disengage from their work, eventually leading to attrition (Aloe et al., 2013).

School settings. Schools that are categorized as urban or high-poverty face especial challenges in retaining teachers (Baker, 2012). Urban schools experience teacher attrition rates that are as much as 50% higher than their suburban and rural counterparts (Green & Muñoz, 2016). Vacancies are often filled by young, inexperienced teachers (Baker, 2012), resulting in a novice professional culture (Sikma, 2019) composed of a high percentage of early-career teachers (Ado, 2013). Novice teachers in urban settings report feeling unprepared by their teacher preparation programs (Languell, 2018), particularly if they did not attend a university program in an urban setting themselves (Baker, 2012). Additionally, urban teachers report unique challenges that include student discipline, lack of parental support, and insufficient funding (Baker 2012), along with an absence of culturally competent curricula and professional learning opportunities (Anderson & Denson, 2015; Languell, 2018; Mathur, Myers, & Barnes, 2017). These challenges all converge in a perennial cycle of novice teachers experiencing high needs but receiving low support, which contributes to their decisions to leave urban schools.

Novice Teacher Attrition Risk

Of particular interest to researchers of teacher attrition are the perspectives of novice teachers, who have the highest attrition rates of any identified subgroup (Gallant & Riley, 2014; Perda, 2013; Smith & Ingersoll, 2004). To fully understand the

conditions that shape novice teacher attrition in particular requires an examination of novice teacher attrition rates, teacher preparedness, and reality shock.

Novice teacher attrition rates. *Novice teachers* (Ben-David, 2017; Clark, 2012; Romar & Frisk, 2017; Sikma, 2019), also termed *new* (Callahan, 2016; Green & Muñoz, 2016; Waterman & He, 2011; Watkins, 2005; White & Mason, 2006), *beginning* (Perda, 2013; Smith & Ingersoll, 2004) or *early-career* (Ado, 2013; Gallant & Riley, 2014; Legette, 2013) teachers, are generally defined as those who are within their first five years of teaching (Gallant & Riley, 2014; Ingersoll et al., 2014; Smith & Ingersoll, 2004; Sparks et al., 2017). It is during the formative experiences of these first five years that the risk of attrition and migration is at its highest (Hughes, 2012; Ingersoll et al., 2014; Perda, 2013), with some researchers reporting attrition rates of up to 50% (Gallant & Riley, 2014; Smith & Ingersoll, 2004). Teachers near the beginning of their careers are likely to pursue a new position or professional field if they feel dissatisfied with their jobs (Gardner, 2010), while those who have been teaching for 10 years or more are unlikely to leave, regardless of their satisfaction level (Hughes, 2012). For the purposes of this study, novice teachers include only those in their first two years of teaching, based on Delaware's state licensing guidelines (DDOE, 2017).

Teacher preparedness. The education field is unique in that there is no such thing as an entry-level teaching position (Kane & Francis, 2013). Beginning teachers are held to the same standards and expected to perform at the same level as their veteran colleagues, despite having significantly less experience (Charner-Laird et al., 2016). Yet, early-career teachers report feeling poorly prepared by their university teacher preparation programs (Ballantyne & Packer, 2004), leading to a sense of isolation and

operating in survival mode upon entering the classroom (Legette, 2013). An understanding of the knowledge and skills novice teachers may be lacking is vital to promoting their prompt success.

Certain discrete aspects of teacher training have been noted to be insufficiently addressed by university teacher preparation programs. Novice teachers self-identify pedagogical skills and content knowledge as their most profound needs (Ballantyne & Packer, 2004; Blackwell, 2018; Legette, 2013; Olson, 2000; Tollefson-Hall, 2015), along with lesson plan writing (Tollefson-Hall, 2015), classroom management (Legette, 2013) and more practical classroom teaching experience prior to graduating (Blackwell, 2018; Legette, 2013). Fewer than half of recent university education program alumni report feeling prepared to effectively implement technology in the classroom (Blackwell, 2018; Haning, 2016). With so many novice teachers reporting dissatisfaction with their collegiate teacher preparation programs (Ballantyne & Packer, 2004), it is not surprising that they enter the profession feeling unprepared to teach effectively.

Reality shock. Compounding the difficulties introduced by inadequate teacher preparation is the sudden transition from a student identity into a teacher identity (Schaefer et al., 2012; Van Overschelde, Saunders, & Ash, 2017), resulting in what may be termed *reality shock* (Ensign & Woods, 2017; Van Overschelde et al., 2017) or *culture shock* (Anderson & Denson, 2015; Callahan, 2016). This shock is partially due to the sudden loss of collaborative opportunities (Charner-Laird et al., 2016) and content-focused professional learning (Clark, 2012) that are heavily emphasized by many university curricula. Novice teachers also frequently struggle with assimilation, or finding their place within the professional culture of their school or district (Ensign &

Woods, 2017). Upon entering the workforce, it is not uncommon for new teachers to discover that the expectations placed upon them by administration, parents, and students are unachievable (Harris et al., 2019) and feel that they are incapable of success. This combination of factors sets up a substantial gap between expectation and reality (Kane & Francis, 2013) that is difficult for novice teachers to surmount without assistance.

Arts Teacher Attrition Risk

The examination of visual and performing arts teacher attrition requires consideration of the unique factors impacting this subgroup of the educator population. Although arts teachers leave both their teaching positions and the education profession at a rate similar to teachers of other content areas, their reasons are influenced by the context of their teaching position (Hancock, 2009). Significant risk factors in addition to those faced by all teachers include the prevalence of being isolated from content area colleagues within the school community (Krueger, 2000) and not being viewed as an equal by co-workers in other content areas (Abril & Bannerman, 2015). Other factors unique to arts teachers include being required to teach outside of their area of certification, as 38% of arts teachers are expected to do (Abril & Bannerman, 2015), and working in an itinerant or part-time position (Gardner, 2010; Krueger, 2000; Parsad & Spiegelman, 2012). Arts teachers are also less likely to receive organizational support when working with students with special needs, contributing to the cumulative difficulty of their jobs (Gardner, 2010). These contextual factors uniquely impacting arts teachers, particularly those early in their careers, must be considered as components of overall job satisfaction that impact their likelihood of attrition, migration, or retention.

Job Satisfaction

Institutional and contextual factors predicting teacher attrition all share common ties to overall job satisfaction. A review of the literature related to teacher job satisfaction reveals the key constructs of (a) operationalizing job satisfaction, (b) determinants of teacher job satisfaction, and (c) its impact on teacher attrition.

Operationalizing Job Satisfaction

Current educational researchers (Ford et al., 2018; Green & Muñoz, 2016) frame their conceptualizations of teacher *job satisfaction* after Edwin Locke's (1976) definition, which describes job satisfaction as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1300). Modern definitions (Ford et al., 2018) have updated this interpretation to include both positive and negative perceptions surrounding one's job experiences, considering satisfaction level as a continuum. Still others argue that job satisfaction, whether positive or negative, is part of an "evaluative judgment" (Moè, Pazzaglia, & Ronconi, 2010, p. 1145). For the purposes of this study, job satisfaction is considered as the relative positive or negative emotional state resulting from an evaluative judgment of one's job experiences.

Determinants of Teacher Job Satisfaction

Specific elements of working conditions unique to the field of education are prominent influences on teachers' levels of job satisfaction. These include the amount of support provided by school administrators, teachers' own levels of self-efficacy, and the degree to which teachers experience professional isolation in their work settings.

Administrative support. Support from school administration has been observed as the single most influential factor related to teacher job satisfaction (Gardner, 2010;

Krueger, 2000). Unfortunately, teachers generally report that levels of administrative support are unacceptably low (Green & Muñoz, 2016). Specific areas in which teachers desire stronger administrative assistance include classroom management, promoting student discipline, and enforcing student behavior expectations (Callahan, 2016). An adequate level of administrative support is also the institutional factor most strongly tied to teacher retention (Gardner, 2010), which suggests that it should be an area of significant focus for both researchers and school officials.

Among administrators' many duties is the responsibility of evaluating teacher performance. National education mandates such as No Child Left Behind (NCLB) and Race to the Top (RTTT) place overwhelming emphasis on teacher accountability and metrics associated with high-stakes standardized testing (Conway, 2011). These policies circumvent even the best administrators' abilities to engage in supportive evaluation processes and lead to a professional culture in which standardized testing outcomes are valued over student learning attitudes or growth (Ford et al., 2018). Although teacher evaluation is necessary, successful building administrators engage with teachers in supportive, collaborative processes focused on improving, rather than assessing, their instruction (Watkins, 2005). In light of evidence of a positive relationship between teachers who experience supportive evaluation practices and their overall job satisfaction (Ford et al., 2018), administrators must assume responsibility for not only retaining, but sustaining teachers in a supportive environment (Watkins, 2005).

Teacher self-efficacy. A key component of teacher job satisfaction is *self-efficacy*, or the belief in one's own capacity to handle difficult situations that may arise in the classroom (Blackburn et al., 2017). Teachers with a high degree of self-efficacy

demonstrate confidence in experimenting in their teaching practices, without allowing fear of making mistakes to prevent them from discovering innovative solutions (Hanson, 2017). This confidence is likely to occur when teachers feel knowledgeable, not only in the content itself, but in how to instruct it (Mishra & Koehler, 2006; Romar & Frisk, 2017). Self-efficacy further impacts classroom management (Aloe et al., 2013) and overall job satisfaction (Blackburn et al., 2017) by influencing the degree to which teachers feel capable of responding to challenging situations and establishing a healthy work-life balance.

Classroom management. The challenge most frequently identified by teachers as having a negative impact on self-efficacy is classroom management (Aloe et al., 2013), particularly for teachers in urban settings (Baker, 2012). Novice teachers describe a deficit in effective classroom management instruction in their university teacher preparation programs that leads to lowered confidence in their capacity to handle management challenges, regardless of their actual ability (Ben-David, 2017). Poor classroom management self-efficacy can impede teachers' feelings of personal accomplishment related to their career (Aloe et al., 2013), which are significant contributors to their job satisfaction (Perda, 2013).

Providing teachers, particularly those who are new to the profession, with practical experiences in classroom management can contribute to improved feelings of self-efficacy (Ben-David, 2017). Because teachers entering the profession continue to feel unprepared (Aloe et al., 2013), administrators need to provide additional support to develop teacher self-efficacy in this domain (Callahan, 2016). This can be accomplished effectively through hands-on teaching experience and guided observations of other

teachers in both successful and unsuccessful management scenarios (Ben-David, 2017). The resultant increase in perceived self-efficacy is not only beneficial to teachers themselves (Mathur et al., 2017), but also advances teachers' abilities to develop positive relationships with students (Ben-David, 2017; Languell, 2018).

Connections to job satisfaction. In summary, increasing teachers' confidence in their abilities to handle challenging classroom management situations may have a positive impact on feelings of burnout and overall job satisfaction, and therefore, attrition (Aloe et al., 2013; Blackburn et al., 2017). Because classroom management and student behavior challenges are often cited as factors contributing to teachers' decisions to leave their positions (Blackburn et al., 2017; Callahan, 2016), additional support in these areas is needed (Callahan, 2016). The relationship between self-efficacy and overall job satisfaction (Blackburn et al., 2017) indicates that job satisfaction is more closely related to working conditions than teachers' personal abilities (Ford et al., 2018). Therefore, providing teachers with the necessary support to feel capable of dealing with difficult situations (Callahan, 2016) may be one method for reducing and preventing teacher attrition (Blackburn et al., 2017).

Professional isolation. For educators, who frequently spend large portions of their day as the only adult in the room (Stanley, 2011), professional isolation is a significant concern relating to job satisfaction (Verdi, 2016), with marginalization functioning as an added burden for arts teachers (Gaudreault et al., 2017). A thorough understanding of this construct includes an operationalization of professional isolation and marginalization, and a discussion of physical isolation and role conflict.

Operationalizing professional isolation and marginalization. In addition to the literal isolation of being physically separated from other adults for large portions of the day, many teachers experience *professional isolation* as a lack of belonging or camaraderie within their school setting (Verdi, 2016). For novice teachers, this is often due to the sudden loss of collaborative experiences that are a central component of university teacher preparation programs (Charner-Laird et al., 2016). Teachers new to the school are often tasked with teaching the courses and students that are unwanted by more veteran staff members, which can also feel isolating (Clark, 2012).

In addition to this professional isolation, arts teachers are likely to experience *marginalization* within their school communities (Gaudreault et al., 2017). This is generally the result of a school community culture that places a low priority on the academic content of the arts (Becher & Orland-Barak, 2018) and therefore does not view arts teachers as equal to teachers of other content areas (Abril & Bannerman, 2015). As a result, arts teachers perceive that they do not matter within their school buildings and assume the status of second-class teachers (Gaudreault et al., 2017) within the staff hierarchy.

Physical isolation. While most teachers are isolated within their individual classrooms throughout the day, arts teachers may also be isolated from one another throughout their entire building or district (Battersby & Verdi, 2015; Stanley, 2011). Many teachers of the arts represent one-person departments (Abril & Gault, 2008; Bautista et al., 2019) and may be the only instructor of their content in an entire building (Stanley, 2011). In rural areas, distances between schools may even inhibit arts teachers' abilities to interact with one another outside of the regular school day (Tollefson-Hall,

2015). This isolation often impedes collaborative learning opportunities (Battersby & Verdi, 2015) and is connected to poor job satisfaction (Gaudreault et al., 2017).

Role conflict. It is customary for teachers of arts content areas to have a wide variety of responsibilities within their professional roles. State certifications in the arts content areas are typically very broad, enabling arts educators to teach an extensive range of courses and grade levels. In Delaware, the context of this study, certifications in arts content areas, such as dance, media arts, music, theater, and visual art, span all grade levels from kindergarten through 12th grade, with no restrictions on specializations within the content area (14 DE Code § 1505). As a result, many arts educators must balance a diverse teaching load that includes multiple grade levels, sub-content areas, or even school buildings (Gardner, 2010; Iannucci et al., 2019; Krueger, 2000), and which is likely to contain courses or responsibilities outside of the teacher's primary area of specialization (Abril & Bannerman, 2015).

Additionally, many arts teaching positions come with the expectation that the teacher will lead or direct public-facing extracurricular activities, such as the drama club, marching band, or dance team (Ensign & Woods, 2017; Iannucci et al., 2019). Although these additional responsibilities may or may not be accompanied by extra pay, they necessarily require additional time and attention separate from one's primary teaching responsibilities. This contributes to what is termed *role conflict* (Ensign & Woods, 2017; Iannucci et al., 2019), defined as the stress and burnout that commonly result from the heavy demand of fulfilling multiple simultaneous roles within the school community (Iannucci et al., 2019). The combination of teaching in various sub-content areas, grade levels, or buildings, and leading or directing extracurricular activities, make role conflict

a key component of professional isolation and overall job satisfaction that is specific to arts teachers (Ensign & Woods, 2017; Iannucci et al., 2019).

Impact of Job Satisfaction on Attrition

Significant components of teacher job satisfaction have been identified as administrative support, self-efficacy, and professional isolation. Administrative support is the single-most impactful variable determining teachers' job satisfaction levels (Abril & Bannerman, 2015; Green & Muñoz, 2016; Krueger, 2000), with those working in schools where support is lacking demonstrating low levels of satisfaction and high attrition rates (Callahan, 2016). This support is frequently felt to be needed most in the area of classroom management (Baker, 2012), which is strongly correlated with teachers' perceptions of their self-efficacy in the classroom (Aloe et al., 2013; Blackburn et al., 2017).

Professional isolation is also a major component of job satisfaction (Clark, 2012; Ensign & Woods, 2017) and closely associated with attrition (Abril & Bannerman, 2015; Charner-Laird et al., 2016), placing arts teachers at particular risk. When these components are considered holistically, there is no single bigger predictor of attrition than comprehensive job satisfaction (Callahan, 2016; Ford et al., 2018), which is responsible for over 45% of all teacher attrition (Ensign & Woods, 2017). Nearly 30% of novice arts teachers report feelings of moderate to strong dissatisfaction with their jobs (Ballantyne & Packer, 2004), representing a significant portion of the population that should be considered at a high risk for attrition.

Professional Development as a Teacher Retention Strategy

The impact of teacher attrition has been well-established, along with poor job satisfaction as its primary cause. If the previous question was to ask why teachers leave, then its natural consequent is: How can we get them to stay? This review of the literature related to teacher retention strategies (a) summarizes professional development as the most common retention strategy, (b) discusses characteristics that make professional development effective, and reviews established interventions for (c) arts teachers and (d) novice teachers as among the target populations of this study.

Professional Development

Strategies to promote teacher retention among experienced educators generally fall into the category of *professional development*, which can be considered any type of teacher learning (Garet, Porter, Desimone, Birman, & Yoon, 2001) that influences knowledge, practice, or skills (Bauer, Reese, & McAllister, 2003; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Schneckenburger, 2014). This may encompass activities in traditional lecture formats as well as instructional coaching and interactive learning (Gürgür, 2016) that facilitate “changes in the knowledge, beliefs, and attitudes of teachers that lead to the acquisition of new skills, new concepts, and new processes related to the work of teaching” (Fishman, Marx, Best, & Tal, 2003, p. 645). Professional development promises a number of significant benefits for teachers, but is not without its challenges to practical implementation.

Benefits. Naturally, the central intended benefit of teacher retention strategies, including professional development, is the retaining of quality teachers within their schools and districts. A host of subordinate benefits have been identified as central

contributors to this goal for their capacity to foster a supportive professional culture through professional development (Ado, 2013). Some valuable advantages include changes to internal teacher attitudes and beliefs, such as increased self-reflection practices (Gürgür, 2016), perceptions of self-efficacy (Sinclair, Watkins, & Jeanneret, 2015), and reduced feelings of being stressed or overwhelmed at work (Ado, 2013; White & Mason, 2006). Some of these positive effects may be due to the opportunities provided through professional development for collaboration with colleagues (Ado, 2013; Clark, 2012; Stanley, 2011; Stanley, Snell, & Edgar, 2014). Ultimately, these benefits result in tangible and measurable improvements to teachers' knowledge and skills (Garet et al., 2001; Schneckenburger, 2014; Xie, Kim, Cheng, & Luthy, 2017) and instructional practices (Duran et al., 2006; Gallo, 2018; Garet et al., 2001; Gürgür, 2016), making professional development a valuable resource in quality teacher retention.

Challenges. Despite evidence indicating that professional development is beneficial to teachers, researchers have been confounded in their efforts to accurately measure the effectiveness of its individual components (Fishman et al., 2003; Garet et al., 2001). One particular concern that has emerged is the difficulty in regulating group culture in collaborative activities. Stanley (2011) notes that concerted efforts must be made to prevent collaborative peer groups from becoming echo chambers for complaining without a focus on constructive solutions. Teacher attitudes toward professional development have a measurable impact on the benefits teachers incur from their participation in those learning experiences (Torff & Byrnes, 2010), suggesting that a negative group culture carries the risk of undermining an intervention's effectiveness.

An additional challenge relates to attitudes of teacher support or resistance toward professional development initiatives. Resistance is likely to manifest through teachers choosing not to make time for professional learning, not valuing the information presented, or not implementing the feedback or initiatives provided (Jacobs, Boardman, Potvin, & Wang, 2018). Teachers are most likely to have supportive attitudes toward professional learning during their first two years of teaching, after which their enthusiasm declines (Torff & Byrnes, 2010), while teachers with 10 or more years of experience demonstrate the least support (Jacobs et al., 2018). Teacher attitudes also vary by content area and grade level, with elementary teachers more likely to support professional development than secondary teachers (Torff & Byrnes, 2010). Special education teachers represent the content area most likely to demonstrate support, with subject area teachers including visual and performing arts less likely to display supportive attitudes (Torff & Byrnes, 2010), and science teachers demonstrating the least support (Jacobs et al., 2018).

Resistance must be considered in context and may be due to a variety of factors, including overall avoidance of change, a belief that such change is not necessary or will be unsuccessful, a desire to maintain routine, or perceptions of new initiatives as a threat to teachers' professional autonomy or undermining of their expertise (Jacobs et al., 2018). Regardless of the root cause, when teachers perceive professional development as negative or not useful to their practice, this is likely to become a self-fulfilling prophecy that leads to fewer gains in knowledge and skill (Torff & Byrnes, 2010). Therefore, in order to facilitate impactful professional development that aids in teacher retention, it is vital to examine not only its content and delivery, but teacher perceptions that may influence its potential effectiveness.

Characteristics of Effective Professional Development

Historically, much research has been conducted comparing teachers' perceptions of professional development; far less has evaluated the outcome-based effectiveness of the professional development itself (Garet et al., 2001). More recently, an emphasis on shifting professional development toward hands-on, interactive experiences (Gürgür, 2016; Sinclair et al., 2015; Torff & Byrnes, 2010) has stimulated a re-examination of which characteristics make professional development impactful. Regardless of delivery method, one such characteristic is professional development that is context-specific (Penuel et al., 2007; Sinclair et al., 2015; Stanley et al., 2014) and embedded in the school culture (Garet et al., 2001; Torff & Byrnes, 2010). This allows for the practical application of knowledge and skills directly to the context within which it is provided (Ben-David, 2017; Penuel et al., 2007).

Other essential characteristics of effective professional development include experiences that are sustained over time rather than single-session (Gallo, 2018; Garet et al., 2001; Penuel et al., 2007; Schneckenburger, 2014; Stanley et al., 2014; Torff & Byrnes, 2010), focused on specific academic content rather than generic teaching strategies (Garet et al., 2001; Schneckenburger, 2014; Stanley et al., 2014; Torff & Byrnes, 2010), and reflective or analytic in nature (Bautista et al., 2019; Gürgür, 2016; Stanley et al., 2014). Perhaps the most impactful characteristic of all is professional development that contains a collaborative component (Battersby & Verdi, 2015; Duran et al., 2006; Meadows, 2017; Stanley et al., 2014; Torff & Byrnes, 2010; West, 2015; Xie et al., 2017). Collaboration in professional development holds the capacity to promote a supportive professional culture (Ado, 2013), provide context-specific support (Sinclair et

al., 2015), advance shared goals, (Stanley, 2011), and alleviate feelings of being overwhelmed (Ado, 2013).

Although schools and districts may mandate some amount of professional learning participation, professional development is at its most beneficial when it is teacher-led or allows for some amount of teacher choice or control (Bautista et al., 2019; Stanley et al., 2014; Torff & Byrnes, 2010). This enables participants to create opportunities that are focused on teacher learning, specifically, promoting positive changes in teachers' knowledge, attitudes, and skills (Fishman et al., 2003; Sinclair et al., 2015; Stanley et al., 2014). The inclusion of all these characteristics supports meaningful professional development experiences, the effectiveness of which can be measured through their impact on student achievement and the fidelity with which teachers implement their acquired knowledge and skills (Penuel et al., 2007).

Professional Development for Arts Teachers

Despite the extant knowledge on effective forms of professional development, arts teachers are still unlikely to be offered quality learning opportunities. Professional development in the arts typically consists of workshops that are single-day rather than sustained, and which do not include collaborative elements (Gallo, 2018). Arts teachers are also unlikely to have access to content-focused opportunities related to their subject area (Schneckenburger, 2014). Music teachers specifically are offered fewer professional development experiences than any other content area group of teachers, participating in only about half of the professional learning as core content area teachers (Gallo, 2018). For teachers of the arts to access content-specific learning, they typically must travel outside of their own schools and districts, and engage in professional development on

their own time, which may be cost-prohibitive (Garet et al., 2001; Schneckenburger, 2014).

These deficits only cover what is known despite a severe gap in research specific to professional development for arts teachers (Conway, 2011; Garet et al., 2001; Zelenak, 2015). Within the research that does exist, most of the findings are limited to qualitative data only (Penuel et al., 2007), and have been unable to provide a clear picture of what teachers truly learn or how students may benefit (Fishman et al., 2003). Although this body of research is increasing, evaluation-focused education policy initiatives such as NCLB and RTTT continue to preclude schools and districts from providing equitable content-focused opportunities for teachers of the arts (Conway, 2011).

Professional Development for Novice Teachers

In addition to the professional development efforts aimed at all teachers, some interventions have been concentrated directly toward retaining novice teachers. The most commonly-employed tactic is the use of comprehensive teacher induction programs (Clark, 2012). As of 2004, the number of teachers participating in an induction program had risen to 80% and was predicted to continue growing (Smith & Ingersoll, 2004). Induction programs are often employed as compulsory, multi-year professional learning on a state- or county-wide basis (Carver & Feiman-Nemser, 2009) as an effort to improve novice teacher retention and quality (Kane & Francis, 2013; Sikma, 2019) and to function as a bridge between expectation and reality as teachers enter the profession (Kane & Francis, 2013). The limited research on the effectiveness of individual induction components has produced inconclusive, and at times, conflicting results (cf. Glazerman et al., 2010; Kane & Francis, 2013; Sikma, 2019; Waterman & He, 2011). Yet, in several

states, including Delaware, the satisfactory completion of a novice teacher induction program is a requirement for re-licensure following the initial years of teaching (Carver & Feiman-Nemser, 2009; 14 DE Code § 1503).

Although induction programs may employ a variety of tools and strategies, including professional learning communities, book studies, and self-evaluations (DDOE, 2017), novice teacher mentoring is their most common component (Carver & Feiman-Nemser, 2009; Villar & Strong, 2007). By connecting professionals who are at differing stages of their careers, mentoring enables novice teachers to perform at a higher level than they would be capable of without this additional support (Tollefson-Hall, 2015). The primary goal of mentoring in this context is to network beginning teachers with a knowledgeable veteran mentor teacher who can provide collaborative and supportive evaluation of novice teachers' instruction (Ford et al., 2018) without the outcome-focused metrics of an administrative lens. This supportive evaluation may be provided by either an assigned or informal mentor, with no differing impact on effectiveness (Bain, Young, & Kuster, 2017; Sikma, 2019; White & Mason, 2006). Regardless of how this support is received, novice teachers who perceive their evaluation experiences as supportive demonstrate higher levels of overall job satisfaction (Ford et al., 2018) and may therefore be less susceptible to attrition.

Mentoring

In response to evidence that mentoring is the most widely-used tool to promote novice teacher retention (Carver & Feiman-Nemser, 2009; Clark, 2012; Villar & Strong, 2007) and the prominent position of mentoring within Delaware's state-mandated Comprehensive Induction Program (Green, 2019), a mentoring-based intervention was

selected for this study. To elicit a more extensive understanding of novice teacher mentoring, this review of the related literature encompasses (a) operationalizing mentoring, (b) connections between mentoring and retention, (c) characteristics of effective mentors, (d) components of effective mentoring, and (e) content-specific mentoring.

Operationalizing Mentoring

In the context of teacher education, *mentoring* “is used as an induction or apprenticeship to develop competency, provide challenges, and to support progression” (McQuade et al., 2015, p. 324). The nature of the mentoring relationship is dynamic and dependent on context, centered around specific and measurable goals related to the advancement of the *mentee*, or the individual receiving support (Chong et al., 2020). This provides a bridge between the educational environment and the application of learning in the practical context of the professional world (McQuade et al., 2015). Through a focus on experiences that stimulate growth and reflective analysis of practice (Stanulis et al., 2019), this relationship is mutually beneficial to both the mentors and mentees (Chong et al., 2020).

Connections Between Mentoring and Retention

Some of the most compelling evidence in favor of novice teacher mentoring comes from its measured impact on teacher attrition and retention. A variety of longitudinal studies concluded that novice teachers who receive any type of mentoring, regardless of its quality, are anywhere from 10 to 20% more likely to remain in teaching than their peers who do not receive mentoring (Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007; Xu & Payne, 2014a). One such study suggests that novice

teachers with two or fewer years of experience who participate in a mentoring program are able to perform as well or better than experienced teachers in terms of effectiveness, as measured by student test scores (Villar & Strong, 2007). This indicates that the support provided through a mentoring intervention may be a key component in improving teacher effectiveness (Charner-Laird et al., 2016). As teacher effectiveness is connected to self-efficacy (Sinclair et al., 2015), and self-efficacy impacts job satisfaction (Blackburn et al., 2017; Ford et al., 2018; Van Overschelde et al., 2017) and therefore attrition (Aloe et al., 2013; Blackburn et al., 2017), it stands to reason that a mentoring intervention implemented with fidelity has the potential to significantly improve retention among novice teachers.

The positive relationships novice teachers develop through their mentoring programs are significant contributors toward their decisions to remain in the teaching profession (Sparks et al., 2017). This includes an enhanced ability to cultivate meaningful relationships with students (Ben-David, 2017), as well as the mentor-mentee relationship itself, which provides support and reduces isolation (Sparks et al., 2017). Common planning time for novice teachers to collaborate with their mentors and content area peers is a critical element of these relationships and reduces the likelihood of attrition by 43% (Smith & Ingersoll, 2004). Researchers recently exposed a substantial gap in the attrition rates of novice teachers in private versus public schools, where teachers leave at respective rates of 21% per year and 15% per year (Sparks et al., 2017). One hypothesized explanation for this difference is the higher likelihood of access to relationships developed through mentoring programs for public school teachers (Sparks et al., 2017).

Characteristics of Effective Mentors

The common practice of assigning mentors from among a convenience pool of teachers who happen to work in the same building (Smith & Israel, 2010) is not enough to ensure that a mentor teacher will be effective. Several factors should be considered when selecting and matching mentors with mentees, including mentors' career stages, personal traits, and mentoring styles.

Career stages. Throughout their careers, teachers may be considered as belonging within one of three career stages: first-stage, second-stage, or third-stage (Eros, 2011; Kirkpatrick, 2007). *First-stage teachers* are new to the field and adapting to professional demands; *second-stage teachers* have achieved veteran status and desire new challenges; *third-stage teachers* have previously peaked in effectiveness and may be unwilling to embrace change (Eros, 2011; Kirkpatrick, 2007). Second-stage teachers, characterized as those who have been teaching for approximately four to 10 years (Conway & Eros, 2016), are likely to make the most ideal mentors, due to their enthusiasm for teaching (Conway, 2015) and interest in pedagogy (Eros, 2011). Classroom management, a primary source of concern for new first-stage teachers, is likely to be an area of confidence for second-stage teacher mentors (Conway & Eros, 2016), making them ideal leaders in this domain.

As second-stage teachers begin to feel comfortable in their positions and abilities, they frequently seek out leadership roles (Conway & Eros, 2016) and demonstrate an increased understanding of and interest in the pedagogy of their content areas (Eros, 2011). One noted shortcoming of school systems is a failure to provide adequate opportunities for growth for second-stage teachers (Gallant & Riley, 2014). A potential

method for addressing this flaw is to present opportunities for second-stage teachers to assume increased responsibility for the design and leadership of their own professional learning (Conway & Eros, 2016), which for some, may take the shape of mentoring a novice teacher in a mutually beneficial relationship (Bierema & Merriam, 2002; Chong et al., 2020).

Mentor traits. In synthesizing the extant research on effective teacher mentors, a number of key mentor characteristics emerge. Perhaps most importantly, mentors must possess extensive knowledge of the theory and practice central to education (Abramo & Campbell, 2016). This knowledge is vital to a mentor's ability to understand the context of the needs of their mentees (Abramo & Campbell, 2016), and the support a mentor is able to provide is influenced by the context of their own educational practice (Becher & Orland-Barak, 2018). Despite being sufficiently knowledgeable, an effective mentor should also demonstrate a willingness to relinquish control (Abrams, 2016) in order to provide novice teachers with valuable freedom to experiment with teaching tactics and innovations, recognizing that mistakes are an inevitable and natural part of this process (Hanson, 2017). These mistakes can be reframed as "growth-producing experiences" (Stanulis et al., 2019, p. 568) by a mentor who values critical reflection and analytic thinking (Abramo & Campbell, 2016). A mentor's enthusiasm for teaching and developing new teachers can also have a marked impact on the success of the relationship (Conway, 2015). Finally, the level of compatibility between mentors' and mentees' personalities and teaching styles can be significant (Bain et al., 2017) as these variables contribute to one's overall style of mentorship.

Mentoring styles. Several researchers (Bain et al., 2017; Langdon, 2017; Sinclair et al., 2015; Weasmer & Woods, 2003) have attempted to develop frameworks that explain differences in approaches to mentoring by various individuals. Collectively, they focus on the beliefs and behaviors of mentors, and tend to advocate in favor of one approach over others.

Model, mentor, or guide. Weasmer and Woods (2003) first conceptualized the roles of supervising teachers as model, mentor, or guide in an examination of host teachers' roles in supporting teacher candidates. These roles were later observed in teacher mentors coaching beginning teachers (Bain et al., 2017). This framework alleges that some supervising educators take on the role of a *model*, acting as an exemplary educator whose practices can be emulated by an inexperienced teacher. Others adopt the role of *mentor*, taking a more passive approach that relies on providing observational feedback to the mentee, while encouraging them to engage in analytic reflection. The remaining educators function in the role of a *guide*, providing ongoing proactive and reactive communication that allows mentees to experiment with their own ideas, while offering experienced-based knowledge about potential strengths and pitfalls (Bain et al., 2017; Weasmer & Woods, 2003). Novice teachers indicate a preference for the guide style of mentorship as the approach most likely to provide them with the necessary knowledge and skills to meet the challenges of the classroom (Bain et al., 2017).

Mentor, model, facilitator, translator, or validator. In examining the roles that teachers are likely to assume during mentorship, Sinclair, Watkins, and Jeanneret (2015) found that teacher behavior falls into the categories of mentor, model, facilitator, translator, or validator. Similar to the *mentor* and *model* archetypes identified by other

researchers (Bain et al., 2017; Weasmer & Woods, 2003), teachers who are engaged in these two roles focus respectively on providing feedback and demonstrating examples of best practices (Sinclair et al., 2015). Other teachers act as *facilitators*, striving to assist their peers in developing a schema for scaffolding pedagogical knowledge and skill. Those who function as *translators* primarily emphasize making the transition from acquiring knowledge as a learner to applying this knowledge in the practical context. The principal function of those who act as *validators* is to provide confirmation and acknowledgement of the benefits of the professional knowledge and skills. While each of these roles has value in the setting of professional learning, the addition of teachers who can serve as facilitators and translators in particular adds further benefit beyond model and mentor teachers alone (Sinclair et al., 2015).

Supervisory, supportive, or collaborative. A conceptualization of mentoring as assuming a supervisory, supportive, or collaborative approach was first introduced in 2014 (Kemmis, Heikkinen, Fransson, Aspfors, & Edwards-Groves, 2014). This framework has since been reviewed to discover that, despite similar experiences and contexts, mentors may approach their duties differently when viewed through these lenses (Langdon, 2017). Some educators address mentoring as *supervisory*, with the primary purpose of appraising mentee progress toward the goal of obtaining permanent licensure. Others favor a *supportive* approach, with the main focus on providing encouragement and guidance for novice teachers (Kemmis et al., 2014). The remainder of mentors, particularly those with high levels of self-efficacy (Langdon, 2017), engage in a *collaborative* method that immerses novice teachers in a community of professional

learning, leading to their enhanced self-development as an educator (Kemmis et al., 2014).

Researchers who advocate for a collaborative approach (Kemmis et al., 2014; Langdon, 2017) suggest that it provides a safe space for novice teachers to engage in critical dialogue (Charner-Laird et al., 2016), and leads to teachers who “understand themselves as responsible professionals able to draw on their own expertise and the expertise of their colleagues in the profession to meet the challenges of their professional work and lives” (Kemmis et al., 2014, p. 163). For mentors to authentically engage in a collaborative approach, it is vital that they view themselves as learners also, with a willingness to reflect and critically examine their own teaching practices (Langdon, 2017).

Components of Effective Mentoring Programs

In addition to the career stages, traits, and mentoring styles of the mentor teachers, individual components of the mentoring intervention itself have been identified as integral to its effectiveness. The essential features of successful mentoring programs include elements of both collaboration and support.

Collaboration. The cornerstone of constructing an effective mentoring intervention is the development of collaborative experiences for mentees. This collaboration may manifest in several ways, including collegial interactions that function as tools for decreasing feelings of professional isolation (Charner-Laird et al., 2016). When the mentoring relationship is conducive to shifting these interactions toward the practice of reflective conversations (Stanulis et al., 2019) aimed toward the self-assessment of teaching (Gürdür, 2016), intensive growth can occur. The collaborative

aspects of mentoring are integral to increasing novice teachers' self-efficacy (Ladipo, 2013) through their power to build confidence in handling challenging teaching situations (Clark, 2012).

For teachers enrolled in Delaware's Comprehensive Induction Program, this collaboration most prominently takes the form of *two-way observations* (Green, 2019), in which the mentee is able to observe their mentor's teaching and also have their own teaching observed by the mentor (Bautista et al., 2019). Two-way observations are a critical component of collaborative mentoring programs (Sparks et al., 2017), alleviating teacher perceptions of professional isolation (Bautista et al., 2019). Novice teachers in particular are in need of "regular observations and assessments of teaching" (Ensign & Woods, 2017, p. 87), which they were accustomed to receiving frequently throughout their university teacher preparation programs. These collaborative observations promote a deeper understanding of theory, practice, and pedagogical knowledge and skills for novice teachers, while encouraging experienced educators to try new teaching tactics and feel more confidence in their practices (Bautista et al., 2019).

Support. A large portion of the mentor teacher's responsibilities is likely to consist of providing support to mentees. This support may take a variety of forms, but the most common manner of support sought by novice teachers is emotional support (Sikma, 2019; Whitaker, 2000) as a method for managing job-related stressors (White & Mason, 2006). Much of this need for emotional support may be in response to classroom management challenges commonly faced by inexperienced teachers (Baker, 2012; Callahan, 2016), which are often best overcome through collaborative observation (Ben-David, 2017). Critical dialogue surrounding these observations is identified as an

effective method for helping novice teachers to feel supported, especially when this dialogue is perceived as bi-directional and collaborative (Charner-Laird et al., 2016).

Novice teachers are also likely to seek out instructional support (Sikma, 2019), a necessary aid to provide the best possible learning outcomes for their students (Abrams, 2016). It is critical for this support to be delivered in a contextual manner that is specific to the novice teacher's setting (Ado, 2013). This context is dependent on both the mentor's and the mentee's teaching positions, and is especially central to the experiences of arts teachers, whose content areas may be placed at a lower priority by the overarching school community (Becher & Orland-Barak, 2018). Mentors who are able to assist novice teachers in critically evaluating their instructional practices within an authentic context can meaningfully contribute to successful teacher development (Charner-Laird et al., 2016).

Content-Specific Mentoring

In order for mentor teachers to provide worthwhile instructional support, they must demonstrate a comprehensive understanding of its context (Charner-Laird et al., 2016). For this reason, mentors who teach within the same content area as their mentees are able to provide the most impactful support (Abramo & Campbell, 2016; Clark, 2012; Ensign & Woods, 2017; White & Mason, 2006). The existing literature discussing content-specific mentoring spans topics related to its impact, need, pedagogy, content knowledge, and equity for arts teachers.

Impact. A comprehensive review of the literature on novice teacher mentoring led Clark (2012) to the conclusion that:

An assigned mentor teacher who teaches the same grade level or subject area as the novice teacher is critical. It provides an opportunity for the novice teacher to learn the nuances of the grade level or subject they have been hired to teach, how to differentiate instruction for a variety of learners, and how to manage the classroom and the curriculum in this specific context (p. 198).

Supporting these findings, mentees themselves report content-specific mentoring as more useful and applicable to their instructional practice (Callahan, 2016) than supports provided by mentors from outside their content area (White & Mason, 2006).

Perhaps the most compelling evidence for the impact of content-specific mentoring comes from its documented connections to novice teacher retention. In a landmark study, Smith and Ingersoll (2004) discovered that novice teachers who were paired with mentors from the same content area were less likely to leave their teaching positions or the education field altogether after their first year of teaching. While providing mentoring of any kind reduced the likelihood of attrition by 18%, this reduction grew to 30% when the mentoring was simply adapted to be content-specific (Smith & Ingersoll, 2004). This leads to the conclusion that content-specific mentoring has a greater impact on not only teaching practices (Callahan, 2016), but also job satisfaction and novice teacher attrition.

Need. In addition to the measurable positive impact of content-specific mentoring, there is a palpable need among novice teachers, especially those in the arts, for content-specific supports that are currently absent. Mentors who understand the subject matter are integral to providing key components of effective mentoring, including contextual support, instructional support, and knowledge of theory and practice (Abramo

& Campbell, 2016). Researchers overwhelmingly agree that content-specific mentoring should be widely employed (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Conway, 2015; Stanley et al., 2014; White & Mason, 2006), and that aligning novice teachers with mentors in their same content areas leads to the best outcomes (Ensign & Woods, 2017).

Pedagogy. The concept of *pedagogy* within teaching can be broadly defined as the ways of transmitting knowledge or values (Petrie, 2006) that enable individuals to achieve social, political, or economic goals (Hinchliffe, 2001). Pedagogy within the arts content areas is particularly unique, and typically consists of a blend of multiple approaches to facilitate understanding of a content or process (Becher & Orland-Barak, 2018). This may include assessment methods and instructional strategies, which can be developed through reflective analysis and collaboration (Wongsopawiro, Zwart, & van Driel, 2017). A capable understanding of this pedagogy is a strong contributor to teacher effectiveness, and must be shared by a knowledgeable mentor (Whitaker, 2000). Therefore, the uniqueness of pedagogy in the arts requires supports such as mentoring to be content-specific, in order to foster increased pedagogical development among novice teachers (Eliahoo, 2009).

Content knowledge. In contrast with pedagogy, which encompasses the ‘how’ of teaching, is *content knowledge*, which may be considered the ‘what’, comprising both the theoretical and practical aspects of a subject (Hayden & Baird, 2018) that are the most central to understanding it (Dyment, Chick, Walker, & Macqueen, 2018). For teachers, content knowledge increases with their experience and exposure to their subject matter (Xie et al., 2017). Teachers of the arts must quickly become experts in an extremely

broad range of content knowledge due to the expansive nature of their state certifications (14 DE Code § 1505), a task which can be aided through observation and practical experiences with a content area mentor (Bautista et al., 2019). Mentees view their mentors' content knowledge as among the most valuable components of their support, indicating the need for mentors matched by content area (Whitaker, 2000).

Equity for arts teachers. Research on novice teacher mentoring specific to teachers of the arts has only existed since the mid-1990s, and remains limited (Conway, 2015). Nearly all of the extant literature is confined to qualitative or exploratory studies, and is substantially deficient in comparison to research focused on other content areas, specifically mathematics and sciences (Bautista et al., 2019; Smith & Israel, 2010). More extensive research, particularly studies that include quantitative components, should be conducted to provide a clearer picture of how to best provide content-focused mentoring supports for novice arts teachers.

The absence of content-specific mentoring programs for novice teachers in the arts is likely due to a combination of geography and cost. The physical distance between arts teachers who work in separate schools (Battersby & Verdi, 2015; Tollefson-Hall, 2015) and their common status as one-person departments within their buildings (Bautista et al., 2019; Stanley, 2011) make on-site mentoring matched by content area difficult to achieve. Some schools or districts have also hesitated to implement more intensive content-specific programs due to a perception that they are cost-prohibitive (Garet et al., 2001; Villar & Strong, 2007). However, there is compelling evidence supporting the conclusion that these interventions are ultimately a profitable financial

investment due to their impact on teacher retention (Ensign & Woods, 2017; Villar & Strong, 2007).

A viable solution to the obstacles of geographic isolation and costs of mentoring novice arts teachers lies in the innovation of virtual mentoring, a cost-effective model (Ault et al., 2019) that would enable arts teachers to receive equitable and beneficial content-specific mentoring experiences. This intervention has demonstrated effectiveness in alleviating professional isolation (Bautista et al., 2019), which contributes to poor job satisfaction (Ensign & Woods, 2017) and eventual attrition (Clark, 2012; Verdi, 2016).

Virtual Mentoring

The notion of virtual mentoring represents a practical method of delivery for content-specific mentoring to novice arts teachers who may be geographically separated. This intervention can provide equitable support to ameliorate professional isolation, improve job satisfaction, and prevent attrition among novice arts teachers. A review of the related literature includes (a) operationalizing virtual mentoring, (b) the electronic delivery of educational experiences, (c) the existing precedent for virtual mentoring, (d) benefits, (e) challenges, and (f) implications for the current study.

Operationalizing Virtual Mentoring

Much of the current research on *virtual mentoring*, also called *online mentoring* (Dawson, 2010; Gentry, 2011), *electronic mentoring* (Gentry, 2011; McQuade et al., 2015), or *e-mentoring* (Chong et al., 2020; Hunt, Powell, Little, & Mike, 2013; Smith & Israel, 2010), derives its definition from a seminal work by Bierema and Merriam (2002), who frame it as “a computer mediated, mutually beneficial relationship between a mentor

and a protégé which provides learning, advising, encouraging, promoting, and modeling, that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face mentoring” (p. 214). For a professional relationship to be considered as belonging to virtual mentoring, it must center around specific, measurable, and reflective goals (Chong et al., 2020) and be facilitated partially or exclusively through an electronic delivery method that allows flexible access (Smith & Israel, 2010) and is not restricted by geography (Chong et al., 2020). In this study, the virtual mentoring intervention is used to advance the Comprehensive Induction Program goals required of novice teachers by the Delaware Department of Education (DDOE) (Green, 2019) and is facilitated in electronic formats that support both synchronous and asynchronous interactions.

Electronic Delivery of Educational Experiences

Virtual mentoring, like other electronically-facilitated educational experiences, is fundamentally different from its traditional, face-to-face counterpart. Detailed evaluation of this construct requires an examination of teacher technology access and behaviors as well as a discussion of electronic professional learning communities, which represent the genesis of the electronic delivery of teacher supports.

Access to technology. In the past, access to the requisite technology resources and skills may have presented a barrier to virtual mentoring initiatives. However, computers are now “universally available” (National Science Foundation, 2018) in K–12 schools. All public schools nationwide have had internet-connected computers since 2008, with 88% of individual classrooms reporting full access to high-speed broadband networks as of 2016 (National Science Foundation, 2018). Therefore, a lack of access to

technology resources is highly unlikely to function as a barrier to the success of a virtual mentoring intervention in this context.

Teacher technology use. Teachers' knowledge and skills surrounding the use of technology have a significant impact on the probability that they will integrate it effectively into their work (Ertmer, 1999). As their experience with technology increases, teachers become even more likely to use it (Liu, Ritzhaupt, Dawson, & Barron, 2017). Long-term technology usage through an ongoing initiative such as virtual mentoring may even promote increased technology integration within teachers' individual classrooms (Bauer et al., 2003; Duran et al., 2006; Herther, 2009; Zelenak, 2015). Because the majority of teachers receive direct instruction on technology skills beginning during their university teacher preparation programs (Haning, 2016), they enter the profession with both a significant amount of technology experience and a high frequency of use. This suggests that current teachers are likely to possess the technological knowledge and skills to successfully engage in virtual mentoring (Carver, 2016; Herther, 2009).

In addition to knowledge and skills, teacher attitudes are also an important factor in their technology use. Overall, teachers tend to demonstrate enthusiasm about integrating technology when access and resources are provided (Liu et al., 2017; Zelenak, 2015). The ability of modern technologies to enable near-instantaneous communication that mimics the dynamics of a face-to-face interaction (Balfour & Underwood, 2019; Blau & Hameiri, 2017) alleviates objections related to reduced interpersonal connections. In a recent study of teacher mentoring interventions (Ault et al., 2019), teacher participants indicated a preference for utilizing virtual program components over their

face-to-face alternatives. This provides encouraging evidence that teacher attitudes toward a virtual mentoring intervention are likely to be favorable (Duran et al., 2006).

Electronic professional learning communities. One aspect of educational practice that has been adapted to electronic delivery is the *professional learning community (PLC)*, a collaborative professional learning model that emphasizes “reflective shared inquiry” (Stanley, 2011, p. 71). Objectives of a PLC include the development of communal goals, a focus on the knowledge and issues deemed most important by its members, and construction of a culture of belonging and camaraderie (Stanley, 2011; Verdi, 2016). PLCs are considered by teachers to be highly valuable in their professional learning when they incorporate elements of teacher choice and control (Verdi, 2016), which are often accomplished through the development of collaborative groups and activities (Stanley, 2011). Evidence indicating that the content and tone of interactions and feedback shared electronically are perceived to be equally as authentic and useful as those that occur face-to-face (Ault et al., 2019; Reese, 2017) suggests that the electronic delivery of PLCs and other programs may have considerable value. However, the majority of the related research has focused on the mathematics and science content areas, and there are significant gaps related to the arts in particular (Bautista et al., 2019).

Professional learning communities for arts teachers. State-level public school funding provisions of the 2009 Race to the Top initiative allocated resources for teacher professional development, which most states chose to invest into PLCs (Battersby & Verdi, 2015). Although teachers generally perceive this intervention as beneficial (Verdi, 2016), the value of PLCs is currently not equitable for teachers of the arts (Battersby &

Verdi, 2015; Verdi, 2016). Arts teachers are typically not provided the opportunity to participate in a PLC with colleagues of their own content area (Verdi, 2016; West, 2015), due to their geographic separation from one another (Bautista et al., 2019; Tollefson-Hall, 2015; Verdi, 2016). The electronic delivery of PLCs has the potential to remove this barrier (Battersby & Verdi, 2015; Conway, 2015), and has already been implemented in isolated settings with convincing success (Meadows, 2017; Verdi, 2016; West, 2015).

Precedent for Virtual Mentoring

While this review of the literature unearthed only one study (Bautista et al., 2019) that explicitly examined the effects of a virtual mentoring intervention for arts teachers, limited further research does exist related to its implementations in other professional fields and content areas within education.

Virtual mentoring in other fields. Although virtual mentoring has gained popularity in various professional fields throughout the last decade (Chong et al., 2020), it has been slow to make its way into education beyond limited, informal uses in the mathematics, sciences, and special education content areas (Smith & Israel, 2010). Even for fields in which a precedent exists for virtual mentoring, the effectiveness of these programs has in most cases not yet been empirically evaluated (McQuade et al., 2015). In arts education specifically, the majority of the research on electronic delivery of educational experiences has been related to PLCs and other professional development activities, and has not exclusively focused on either mentoring or novice teachers (cf. Battersby & Verdi, 2015; Meadows, 2017; Verdi, 2016; West, 2015). Still, several aspects of virtual mentoring in other fields or content areas are imminently pertinent to its application in arts teacher education. These include the need to invest adequate time and

resources into recruiting and training effective mentors (Smith & Israel, 2010) and developing program structures that promote two-way interactions with a flexible level of support that can be adjusted based on mentees' changing needs (McQuade et al., 2015).

Virtual mentoring within education. An area of education in which virtual mentoring has begun to gain traction is the training of new special education teachers, who, like arts teachers, may be geographically distant from one another (Dawson, 2010; Gentry, 2011). In keeping with other teacher subgroups, new special education teachers perceive mentoring as highly useful and integral in improving their job satisfaction, even more so when paired with a mentor from their same content area or grade level (White & Mason, 2006). A significant organizational benefit resulting from virtual mentoring is that these programs are often able to be implemented without incurring additional financial costs beyond traditional mentoring, leading to high levels of support from organizational administrators (Donne & Lin, 2013).

The inclusion of both synchronous and asynchronous features (Smith & Israel, 2010), has enabled virtual mentoring programs in special education to produce benefits that are equivalent to or in excess of traditional delivery formats. Collaboration between the mentor and mentee, as well as between novice teacher peers, is a central focus (Donne & Lin, 2013), and may be established through text-based, audio, or video communication methods. Participants in virtual mentoring programs that implement text-based interaction alone seek and receive the same types of knowledge and support as their peers in traditional face-to-face mentoring programs (Smith & Israel, 2010). These benefits may be even greater with the inclusion of additional communication methods that promote diverse forms of interaction.

Online collaboration comes with added advantages beyond face-to-face mentoring. These include the convenient sharing of instructional resources (Donne & Lin, 2013) and flexible access that removes time-bound constraints for aspects such as observations and feedback (Smith & Israel, 2010). Novice teachers participating in virtual mentoring programs perceive the online environment to be less intimidating than receiving feedback and asking questions face-to-face, and are exposed to a wider professional network than simply the colleagues within their own buildings (Smith & Israel, 2010). This contributes to an overall perception of virtual mentoring programs as beneficial and implies that they are likely to reduce attrition (Donne & Lin, 2013).

Benefits

Although mentoring has traditionally been delivered face-to-face, growing evidence on virtual forms of this intervention indicates that many of its components are equally or more valuable in an electronically-delivered format (Ault et al., 2019; Balfour & Underwood, 2019). These include the capacity of mentoring to improve the teaching skills (Bautista et al., 2019; Smith & Israel, 2010; Tollefson-Hall, 2015) and instructional effectiveness (Villar & Strong, 2007) of novice teachers. Virtual mentoring retains the same value as its traditional counterpart in terms of cultivating a relationship that is mutually beneficial to both the mentor and mentee (Bautista et al., 2019; Chong et al., 2020; Reese, 2016), while removing barriers, enabling augmented experiences, and increasing cost-effectiveness.

Removal of barriers. One component of virtual mentoring that represents a distinct advantage over face-to-face programming is its ability to remove barriers to access. Teachers in need of mentoring support face barriers that include geographic

distance (Bautista et al., 2019; Bierema & Merriam, 2002; Chong et al., 2020; Smith & Israel, 2010), synchronous time requirements (Balfour & Underwood, 2019), and distractions for students caused by in-person observations (Ault et al., 2019). Virtual delivery of mentoring extends access to marginalized populations, such as teachers in extremely rural areas (Ault et al., 2019; Bierema & Merriam, 2002; Carson, Callard, Gillespie, Choppin, & Amadour, 2019; Dawson, 2010) and high-poverty communities where teacher shortages are common (Ado, 2013; Aloe et al., 2013; Green & Muñoz, 2016; Ingersoll et al., 2014).

Augmented experiences. Additional advantages of virtual delivery exist in the form of augmented or enhanced experiences beyond what would be achievable in a traditional mentoring program. With mentor-mentee observations that occur via video format, self-reflection can be a component of post-observation discussions (Balfour & Underwood, 2019), and observers can directly reference the applicable moment in a lesson when sharing feedback (Baecher, 2020). Because participants in a virtual program are not bound by geographic or time restrictions, novice teachers can connect with a nearly unlimited network of mentors and professional contacts who may not be physically accessible (Balfour & Underwood, 2019; Bierema & Merriam, 2002; Dawson, 2010; Reese, 2017; Smith & Israel, 2010) or adhere to a compatible work schedule (Baecher, 2020). For many arts teachers, a virtual intervention represents the only feasible access to a mentor who works in the same content area and who can directly engage with the academic material (Bautista et al., 2019). These augmented opportunities all represent avenues through which virtual delivery can amplify the

mentoring experience by way of transformative elements that would not be possible in a traditional format.

Cost-effectiveness. The cost-effectiveness of a virtual mentoring program must be considered a significant benefit, particularly for administrators, lawmakers, and other stakeholders outside the classroom. Traditional mentoring programs represent a significant investment, costing up to \$7,000 per teacher (Ensign & Woods, 2017). More comprehensive, content-specific models can cost as much as \$13,000 per teacher, due to increased expenditures for mentor travel and release time for observations (Villar & Strong, 2007). However, these programs have demonstrated themselves to be profitable investments, yielding a \$1.66 return on investment for every \$1.00 spent (Ensign & Woods, 2017; Villar & Strong, 2007). This translates to a savings of \$8,500 per teacher, for each novice teacher who remains in their position over the course of five years (Villar & Strong, 2007).

When traditional, or even comprehensive, content-specific mentoring programs are facilitated virtually, the potential financial benefits are even greater. By utilizing existing technology resources already embedded in district or state budgets, virtual mentoring programs have been implemented with no additional costs beyond those of their face-to-face parallels (Donne & Lin, 2013). A content-specific model for arts teachers could alleviate the additional burdens of travel and release time for arts teachers in different buildings through the more cost-effective and flexible option of remote observations (Ault et al., 2019), potentially leading to even greater financial savings. Even so, these monetary gains only represent a small fraction of the overall benefit to teachers, students, and school communities resulting from the reduced rates of teacher

attrition connected with content-specific mentoring (Smith & Ingersoll, 2004; Sparks et al., 2017).

Challenges

Despite the documented benefits of virtual mentoring and teacher mentoring overall, it is not without its challenges. While no research encountered in this review implies that mentoring reduces job satisfaction or promotes attrition, some studies do show inconclusive (Waterman & He, 2011) or statistically insignificant (Glazerman et al., 2010) results related to mentoring's measurable impact. Even so, Gentry (2011) cautions that the methodology of these inconclusive studies limits their generalizability, as many only examine quantitative data and fail to account for the quality or context of the programs they evaluate (Waterman & He, 2011). Determining the true measurable impact of mentoring is likely to be exceedingly difficult (Eliahoo, 2009), because it may be considered unethical to include a control group for interventions which have a potential positive impact on student learning outcomes (Smith & Ingersoll, 2004).

Practical challenges to implementing effective mentoring in a virtual environment have emerged primarily as limitations of participants' proficiency in using the requisite technology (Ault et al., 2019; Bierema & Merriam, 2002; Gentry, 2011) and limitations of the technology's capability to facilitate real-time interaction (Balfour & Underwood, 2019; Reese, 2016). In the absence of these barriers (Ertmer, 1999), additional challenges include establishing an authentic relationship via technology (Bierema & Merriam, 2002), effective role modeling within a virtual environment (Dawson, 2010), and managing situations in which mentors and mentees do not participate equitably in virtual interactions (Gentry, 2011). Each of these challenges represents areas of

necessary further research to continually improve the quality of virtual mentoring interventions.

Implications for Current Research

Extremely limited research exists discussing the use of virtual mentoring within arts education, with the majority of this research focusing on pre-service arts teacher candidates. Reese (2016) suggests that much of the knowledge gained from these pre-service arts teacher studies is likely to be transferrable to research with active novice teachers in the arts.

Virtual mentoring of pre-service arts teacher candidates. Virtual mentoring is a growing method through which to provide exposure to classroom environments and feedback on teaching and instructional skills to pre-service teacher candidates enrolled in university arts teacher preparation programs. Key components of virtual mentoring for pre-service arts teacher candidates include two-way observations between teacher candidates and experienced teachers (Reese, 2016), post-teaching feedback conferences with an experienced mentor (Reese, 2016; Reese, 2017), and critical evaluations of lesson planning (Tollefson-Hall, 2015). Reflection and shared analysis are integral elements underlying each of these activities (Reese, 2016).

Feedback or debriefing conferences are the component of pre-service arts teacher mentoring most likely to be conducted virtually, and have demonstrated initially positive results (Reese, 2017). Mentees perceive these feedback conferences as assisting them in understanding the pathway for their skill development (Tollefson-Hall, 2015), and mentors benefit from the motivation to critically reflect on their own teaching practices (Reese, 2016). In a virtual setting, mentor-mentee interactions are likely to follow

different patterns than a face-to-face conversation, possibly as a result of less familiarity with one another. However, these virtual interactions still contribute positively to arts teacher candidates' professional development (Reese, 2017).

Virtual mentoring of novice arts teachers. In the only study found during this review of the literature to implement a content-specific virtual mentoring intervention with beginning arts teachers, Bautista, Wong, and Cabedo-Mas (2019) conducted a small, qualitative study of novice music teachers using virtual observations to facilitate mentoring activities. This study argues that observation is central for novice teachers to understand theory and practice and develop their teaching knowledge and skills, and therefore, needs to be content-specific. The implementation of video-based peer observations of teaching removed the barriers previously faced by music teachers who were geographically separated from one another by enabling content-specific observations, which helped to reduce novice teachers' feelings of professional isolation. Major conclusions of this study found that the main ways in which novice teachers found the virtual observations useful were "inspiring lesson design, improving teaching strategies, anticipating students' reactions, and building confidence" (Bautista et al., 2019, p. 39). Although further research in this area is certainly needed, these results represent encouraging evidence of the potential benefits of virtual content-specific mentoring for novice arts teachers.

Chapter Summary

This review of the literature related to content-specific virtual mentoring for novice arts teachers in Delaware has spanned the relevant topics and connections between teacher attrition, job satisfaction, teacher retention strategies, novice teacher mentoring,

and virtual mentoring. The primary conclusion of this review is that content-specific virtual mentoring has the potential to improve job satisfaction and reduce the attrition rate of novice arts teachers.

Summary of the Literature

Novice teachers are the group of educators most susceptible to attrition (Gallant & Riley, 2014; Perda, 2013; Smith & Ingersoll, 2004). Most educators who leave either their teaching positions or the education profession altogether do so within their first five years of teaching (Gallant & Riley, 2014; Hughes, 2012; Ingersoll et al., 2014; Perda, 2013; Smith & Ingersoll, 2004). Poor job satisfaction is the leading cause of novice teacher attrition (Abril & Bannerman, 2015; Callahan, 2016; Charner-Laird et al., 2016; Ford et al., 2018), cited as the primary reason for leaving by over 45% of teachers (Ensign & Woods, 2017).

Job satisfaction is comprised of factors including administrative support, self-efficacy, and professional isolation (Abril & Bannerman, 2015; Aloe et al., 2013; Baker, 2012; Blackburn et al., 2017; Callahan, 2016; Clark, 2012; Ensign & Woods, 2017; Green & Muñoz, 2016; Krueger, 2000). Professional isolation in particular is a primary concern for novice arts teachers, who may be physically distant from one another and working in isolation in separate school buildings (Battersby & Verdi, 2015; Bautista et al., 2019; Gaudreault et al., 2017; Stanley, 2011; Tollefson-Hall, 2015). Several strategies for improving teacher job satisfaction and retention have emerged, most commonly, the practice of ongoing professional development throughout teachers' careers (Bauer et al., 2003; Fishman et al., 2003; Garet et al., 2001; Gürgür, 2016; Penuel et al., 2007; Schneckenburger, 2014). For novice teachers, the most frequently-employed

retention strategy is mentoring by an experienced teacher (Carver & Feiman-Nemser, 2009; Clark, 2012; Villar & Strong, 2007), which has boasted 10 to 20% reductions in novice teacher attrition (Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007).

Mentoring demonstrates increased effectiveness when it is content-specific (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Ensign & Woods, 2017; White & Mason, 2006), creating a reduction in novice teacher attrition of up to 30% (Smith & Ingersoll, 2004). However, arts teachers encounter barriers to content-specific mentoring due to their physical isolation from one another (Battersby & Verdi, 2015; Bautista et al., 2019). Virtual mentoring embodies one possible solution in providing equitable access to content-specific mentoring for arts teachers who are geographically separated (Bautista et al., 2019; Reese, 2016; Reese, 2017). This intervention has the potential to reduce novice arts teachers' professional isolation (Bautista et al., 2019), thereby improving their job satisfaction (Clark, 2012; Ensign & Woods, 2017) and reducing their likelihood of attrition (Callahan, 2016; Ensign & Woods, 2017; Ford et al., 2018).

Justification for the Current Study

Virtual and content-specific teacher mentoring remains a small and developing research field, with the majority of the literature focusing on the mathematics, science, and special education content areas (Bautista et al., 2019; Smith & Israel, 2010). This small body of existing research is largely exploratory and qualitative (Bautista et al., 2019; Eliahoo, 2009), pointing to the need for quantitative substantiation of its claims. The current study complements detailed, qualitative data with measurable quantitative elements as an initial step toward eliminating this gap in the literature.

Content-specific mentoring is vital to provide for novice teachers, based on its documented effectiveness (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Ensign & Woods, 2017; White & Mason, 2006) and mentees' perceptions that it is more useful than having a mentor who teaches in a different content area (White & Mason, 2006). For novice arts teachers in Delaware who are physically separated throughout different school buildings or districts, adapting the state-mandated Comprehensive Induction Program for virtual delivery is the most practical and cost-effective method for providing these content-specific supports (Ault et al., 2019; Donne & Lin, 2013) while still adhering to the DDOE requirements for re-licensure, which require that all novice teachers complete a mentoring and induction program before applying for their Continuing License (14 DE Code § 1503).

The literature implies that content-specific virtual mentoring has the potential to reduce arts teacher attrition by improving job satisfaction through reduced professional isolation. The current study marks a necessary advancement toward determining whether this intervention exhibits real-world effectiveness in the context of arts teachers enrolled in the Delaware Comprehensive Induction Program.

CHAPTER 3

METHOD

The purpose of this action research was to implement a virtual content-specific mentoring program for visual and performing arts teachers enrolled in the Comprehensive Induction Program during their first two years of employment, and to evaluate its impacts on teachers' job satisfaction and intentions to remain in their teaching positions. The following research questions were addressed:

1. How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?
3. How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?

The following sections within this chapter describe the study's (a) research design, (b) setting and participants, (c) intervention, (d) data collection, (e) procedures and timeline, (f) rigor and trustworthiness, and (g) plan for sharing and communicating findings.

Research Design

Numerous qualitative studies have documented the content-specific struggles of novice visual and performing arts teachers (Baker, 2012; Conway, 2002; Conway, 2015; Krueger, 2000; Legette, 2013). The broad nature of the subject area certifications issued by several states, including Delaware, along with the availability and distribution of arts

teaching positions, result in many individuals working in teaching assignments outside of their area of content specialization (14 DE Code § 1505). Therefore, beginning arts teachers often find themselves in need of not only the same logistical and classroom management supports as other novice teachers, but also highly specialized content-related knowledge and pedagogy that their school or district's standard-issue teacher induction program is unable to provide (Becher & Orland-Barak, 2018; Eliahoo, 2009; Whitaker, 2000).

The highly contextualized nature of this problem of practice (Rudestam & Newton, 2007) as it exists among arts teachers in Delaware necessitates an authentic understanding of the conditions and the ability to develop a customized solution. This makes action research an ideal approach for the design of this study. Extant qualitative research results point toward the need for a content-specific overhaul of district and state mentoring and professional development programs (Conway, 2002; Legette, 2013), informing the development of the current targeted intervention for visual and performing arts teachers. The mixed methods design of this study represents a first step in integrating quantitative measurement to this body of research (Morgan, 2014).

Action Research

Action research is primarily characterized as research conducted by practitioners themselves, with the goal of developing an improved understanding or solution to a local problem or phenomenon (Mertler, 2017). Its distinction from traditional research lies in the goal of defining, examining, and solving existing problems, rather than generating new theoretical knowledge (Reeves & Oh, 2017). This is a particularly appropriate framework for the field of education, where practical, yet customized, solutions are an

imminent need (Creswell & Creswell, 2018; Legette, 2013; Penuel et al., 2007). While sometimes not considered scientific in the traditional sense, action research is equally capable of producing valuable and pragmatically useful results (Greenwood & Levin, 2007).

A significant advantage of action research is its focus on the local context. When generalizability ceases to be a primary goal, educational researchers can develop and evaluate potential solutions that take into account the unique circumstances and variables of their individual classroom, school, or community (Hinchey, 2008). The cyclical nature of action research also allows for necessary adjustments to interventions or experiments (Manfra & Bullock, 2014). Importantly, these characteristics may alleviate some of the ethical limitations associated with traditional research in situations where a true control group is not appropriate or an intervention is determined to be ineffective or harmful.

Study Design

This study employed a mixed methods design, defined as a combination of qualitative and quantitative methodology that yields “complete, balanced, and useful research results” (Johnson, Onwuegbuzie, & Turner, 2007, p. 129) and aligns with the pragmatic approach to this research (Rudestam & Newton, 2007). Although developed with awareness of the design flexibility afforded by mixed methods approaches (Creswell & Plano Clark, 2018), the procedures for intervention and data collection were predetermined before the onset of the study (Schoonenboom & Johnson, 2017) and received approval from the Institutional Review Board, included in Appendix A. Data collection and analysis evaluated the effectiveness of the intervention using

corresponding research principles of both quantitative measurement and descriptive qualitative inquiry (Morgan, 2014).

Quantitative and qualitative data were gathered simultaneously in a convergent mixed methods design (Creswell & Creswell, 2018), such that the results could be compared for a more complete understanding of their significance (Creswell & Plano Clark, 2018). Because the research questions of this study reflect the need for both quantifiable data points (e.g., objective measurement of participants' job satisfaction and likelihood of attrition) and descriptive material (e.g., participants' perceptions of their experiences with mentoring), a mixed methods approach to gathering and analyzing data was vital (Rudestam & Newton, 2007). Although these data were collected concurrently, they were initially analyzed independently before merging to generate deeper understanding of the study results (Creswell & Plano Clark, 2018) and to strengthen the credibility of its conclusions (Schoonenboom & Johnson, 2017).

The action research framework was essential to this study, in that it allowed the researcher to work from an insider perspective, accounting for factors that were unique to the local research setting and which may have been unknown or imperceptible to outsiders (Manfra & Bullock, 2014). Its convergent mixed methods design provided "a comprehensive analysis of the research problem" (Creswell & Creswell, 2018, p. 15) that preserves the richness of detail present in descriptive qualitative data, while generating quantified evidence of measurable outcomes that align to its pragmatic goal of utility for a wide variety of stakeholders (Creswell & Plano Clark, 2018; Greenwood & Levin, 2007).

Setting and Participants

This research study was conducted throughout the state of Delaware, through a partnership with DDOE and the novice teacher and mentor participants enrolled in the Visual and Performing Arts (VPA) Mentoring Program developed by the researcher as an alternative to the Comprehensive Induction Program.

Setting

The study took place within the public and charter school systems in the state of Delaware. The statewide system encompasses a blend of urban, suburban, and rural school settings throughout its 19 public districts (DDOE, 2017) and 24 public charter schools (Rodel, 2020) across three counties. The state contains two major cities, Wilmington and Dover, numerous rural farming communities, as well as large suburban developments. Over 138,000 K-12 students are served through Delaware's public schools, which employ over 9,400 teachers (Rodel, 2020).

All public districts in Delaware, along with the majority of charter schools, employ teachers in the visual and performing arts content areas and deliver academic programming in line with the National Core Arts Standards (DDOE, 2014). Some school buildings contain multiple full-time arts teacher positions, while others are staffed by itinerant teachers who are assigned to multiple buildings. In the school years recently preceding and during this study, the state allotted one official professional development day per year within the academic calendar, during which districts customarily release their arts teachers to attend the state-level conferences of their respective professional organizations, such as the Delaware Art Education Association and Delaware Music

Educators Association. No other content-specific professional learning is required for arts teachers throughout the school year (DDOE, 2020).

Participants

Participants in this research study included visual and performing arts teachers in their first or second year of teaching in a K-12 school setting in Delaware, their assigned mentor teachers, and other veteran arts teachers who had volunteered to be mentors. These prospective mentors had expressed interest and were eligible to participate in the program as mentors, but the response rate of experienced teachers when recruiting for the intervention greatly exceeded the number of newly-hired arts teachers in need of mentors. This purposeful sample included $n = 47$ participants and consisted of novice teachers in the VPA Mentoring Program ($n = 4$), mentor teachers in the VPA Mentoring Program ($n = 6$), and prospective mentor teachers likely to participate in future iterations of the program ($n = 37$).

Participation criteria for novice teachers. All novice teachers in public or charter schools are required by DDOE to enroll in the state's Comprehensive Induction Program during each of their first four years of employment. During Year One and Year Two of the program, novice teachers are traditionally assigned an individual veteran teacher mentor (DDOE, 2017). Through DDOE's support of this intervention, all Year One and Year Two teachers in the visual and performing arts content areas were provided the option to enroll in the VPA Mentoring Program as an alternative to traditional induction activities. All novice teachers enrolled in the VPA Mentoring Program were invited to participate in the study. Declining to participate in the data collection components of the study did not impact teachers' ability or responsibility to complete

Year One or Year Two of either the VPA Mentoring Program or the traditional version of the Comprehensive Induction Program, at the discretion of DDOE.

Year One or Year Two status is assigned to teachers who are in their first or second year of working as a certified educator in the state of Delaware, and have not transferred their teaching credentials from another state. This includes teachers who are new to the profession, as well as those who may have prior teaching experience, but have not been previously licensed. Novice teacher participants held either an emergency or standard teacher certification in a visual or performing arts content area, as well as an Initial License for teaching in the state of Delaware. Teachers employed part-time or in positions that include both an arts content area and a content outside of the arts were excluded from this research.

Participation criteria for mentors. Visual and performing arts teachers from throughout the state were invited by the researcher and the DDOE Education Associate for Visual and Performing Arts to serve as mentors in the VPA Mentoring Program. Serving as a mentor is strictly voluntary, and qualification of mentor teachers is determined by DDOE. State guidelines require that all mentor teachers hold a current Continuing or Advanced License, have received a rating of Effective or Highly Effective on their most recent DPAS-II(R) evaluation, are not currently on an Improvement Plan, and have completed the required mentor training module (T. Green, personal communication, January 29, 2020).

Teachers designated as mentors for the VPA Mentoring Program were additionally required to be certified and currently employed full-time in a visual and performing arts content area, have five or more years of teaching experience in their

content area, and complete the VPA Mentor Training Module developed by the researcher. In accordance with DDOE procedures, mentor teachers are expected to fulfill a two-year commitment to supporting their assigned novice teacher through Years One and Two of the program, and receive a yearly stipend from DDOE as compensation.

Individual pairings of mentors and mentees were determined by the researcher and based on the similarities between participants' teaching positions according to content area, grade level(s), and student demographics by school or district. Some experienced teachers who volunteered and were qualified to serve as mentors were not able to be paired with a mentee due to lack of similarity in teaching position or the small number of novice teachers in need of mentors. These teachers were invited to participate in the study as prospective mentors and remain on the list of available mentors to be paired with newly-hired teachers in future school years.

Intervention

The study intervention consisted of a virtual mentoring program designed to provide content-specific supports to novice arts teacher participants. The components of the virtual content-specific mentoring program were modeled after the structure of the existing Comprehensive Induction Program currently required for all new Delaware teachers (DDOE, 2017). This represented an effort to maintain alignment with state licensure guidelines, which require that all novice teachers complete an approved version of the Comprehensive Induction Program during their first four years of Delaware employment in order to obtain their Continuing License (14 DE Code § 1503).

The current study implemented only the Year One and Year Two phases of what is ultimately planned to expand into a targeted induction program for arts teachers, with

the goal of continuing each cohort of novice teachers through all four years of an eventual, comprehensive intervention. Each novice teacher participant was paired with a veteran teacher mentor with greater than five years of experience teaching in their content area. The components of the intervention itself included mentor recruitment and training, pre- and post-intervention data collection, and content-specific mentoring activities.

Mentor Recruitment and Training

Serving as Lead Mentor for the visual and performing arts, a DDOE administrative position responsible for mentor recruitment, pairing, training, and monitoring, the researcher recruited teacher mentors on a volunteer basis from within pools of existing personnel, prior mentors, administrative recommendations, and professional organization memberships. As potential mentors were identified, DDOE staff reviewed their records to ensure that they met the licensure and certification requirements for mentoring: namely, all mentors must hold a valid Continuing or Advanced License, have received a rating of Effective or Highly Effective on their most recent DPAS-II(R) evaluation, and not currently be on an Improvement Plan (T. Green, personal communication, January 29, 2020). The researcher further determined whether potential mentors met the additional criteria for the VPA Mentoring Program, which included only mentor teachers who were certified and currently employed in a visual and performing arts content area, and have five or more years of experience teaching in their content area.

All potential mentors participated in an online training module provided through Zoom and the Schoology learning management system in use statewide, due to the mentors' geographic disbursement across the state. The training materials were

developed and delivered by the researcher. This training focused on the research-based components of effective mentoring, primarily, methods of providing collaboration and support (Charner-Laird et al., 2016; Sikma, 2019; Sparks et al., 2017; Stanulis et al., 2019). This training also prepared mentors for the various roles they were expected to take on, such as model, guide, supervisor, validator, and collaborator (Bain et al., 2017; Kemmis et al., 2014; Sinclair et al., 2015; Weasmer & Woods, 2003). The specific tasks and timeline for program activities were shared with mentors during this training, and mentors were also expected to review relevant portions of the VPA Mentoring Program Handbook, found in Appendix B. Mentors subsequently verified their completion of these activities using an online training assurance form accessed through Schoology.

District-level Site Coordinators, who typically oversee novice teacher induction and licensure, were asked to inform the researcher of any arts teachers within their district who were scheduled to be enrolled in Year One or Year Two of the Comprehensive Induction Program. These teachers were then offered the option to participate in the VPA Mentoring Program in lieu of the traditional induction activities. Those who opted in were matched by the researcher with a content-specific mentor from the list of those recruited, with pairings made based on similarity of content area and grade level (e.g., instrumental music, vocal music, or visual art; elementary or secondary; etc.). Additional efforts were made to match mentors and mentees by school or district demographics when possible. Initial introductions and facilitation of mentor-mentee contact occurred via email as pairings were assigned, along with invitations to participate in the study and documentation of informed consent, as found in Appendix C.

Pre- and Post-Intervention Data Collection

Prior to engaging in the intervention activities, mentor and novice (mentee) teacher participants were asked to complete the Mentor/Mentee Attrition and Satisfaction Questionnaire (MMASQ), as found in Appendix D, and engage in a semi-structured interview, the protocol for which can be found in Appendix E. A link to the survey along with a personalized access code was distributed via email, and participants completed it electronically using Qualtrics. Individual 30-minute interviews were scheduled and conducted via Zoom at participants' convenience during the data collection period. This process was repeated for novice and mentor teacher participants following the conclusion of the intervention period for the purposes of collecting post-intervention data.

Prospective mentor participants took part in a similar data collection experience. During the same semester that the intervention and data collection for other participants occurred, prospective mentors were also asked to complete the MMASQ and were given the option to opt-in to meet for a single 30-minute interview.

Content-Specific Mentoring Activities

Required activities for participants in the VPA Mentoring Program included synchronous mentor-mentee meetings and cycles of two-way observations and feedback.

Synchronous meetings. Throughout the intervention period, mentors and mentees were directed to engage in weekly synchronous meetings, facilitated primarily through Zoom, for the purposes of collaboration and support. The specific structure of these meetings was left open to participant choice, with suggestions that they may emphasize topics such as collaborative lesson planning, problem solving for classroom management, or other priorities as determined by individual pairs. Mentors were offered

the option to ask for assistance from the Lead Mentor or Site Coordinators to discuss issues specific to a building or district. In the Lead Mentor role for all visual and performing arts content areas, the researcher provided resources, support, and clarification of requirements to mentors and mentees upon request, but with no direct involvement in mentor-mentee relationships or meetings. The occurrence and general topics of each meeting were tracked by mentors and mentees for the purposes of verifying completion of required activities and ensuring that mentors received the appropriate stipend from DDOE.

Two-way observations. Mentor and mentee participants engaged in four cycles of two-way observations of one another's teaching throughout the school year. For each cycle, mentors observed their mentee's classroom remotely, either through livestreamed or pre-recorded video. During each observation, the mentor completed the corresponding Observation Form (Appendix F) to guide their focus toward a specific element from one of the first three components of the DPAS-II Component Rubrics for Teachers (Appendix G): (1) Planning and Preparation, (2) Classroom Environment, or (3) Instruction. Mentors subsequently met with their mentees to provide non-evaluative feedback based on this component and select areas of focus for future observations.

Mentors were also given the option to utilize the weekly meetings before and after each observation as mock pre- and post-observation conferences, where novice teachers were expected to provide justification for and reflection upon their pedagogical decisions. The content of these conferences was steered by Guiding Questions (Appendix H) and recorded using Discussion Logs (Appendix I), both of which are based on the Component Rubrics. This was intended to familiarize novice teachers with the Component Rubrics,

which are used for administrative performance evaluations, and to model the observation cycle that they can expect to experience when undergoing formal, evaluative observations by their supervising administrator.

Novice teachers also engaged in four remote observations of an experienced teacher's classroom, either through livestreamed or pre-recorded video, while completing a guided New Teacher Observation Form (Appendix J) similar to the forms used by their mentors. The first two of these observations were required to be of their mentor's classroom; the remaining two were allowed to occur either in the mentor's classroom or in the classroom of another experienced teacher in their content area. Although these observations could be completed in any order and scheduled at participants' convenience, all four observation cycles were expected to be completed prior to post-intervention data collection.

Justification for Virtual Delivery

While any content-specific mentoring process is likely to include observations, feedback, and interactions between new and experienced teachers (Reese, 2016), the terms *virtual*, *online*, or *e-mentoring* denote the electronic delivery of these activities. Virtual mentoring is defined by Smith and Israel (2010) as “a relationship between a more experienced individual (mentor) and a less skilled or experienced individual (mentee), primarily using computer-mediated communications, that is intended to develop and improve each mentee's skills, knowledge, confidence, and cultural understanding” (p. 30).

The extensive benefits of content-specific mentoring (Battersby & Verdi, 2015; Bautista et al., 2019) were the primary motivators behind the conception of this study as a

virtual intervention. Due to the physical separation of Delaware arts teachers across different buildings and districts, virtual communication tools are vital to the delivery of any content-specific intervention without incurring the additional costs of teacher travel and release time. Given these factors, the use of the technology itself should not be considered the purpose of the study, but rather, simply the most feasible and effective method for enabling content-specific mentoring and peer support in this context.

Data Collection

This mixed methods study employed both quantitative and qualitative data collection methods, in the form of a pre- and post-assessment survey instrument and semi-structured participant interviews. Both types of data addressed multiple research questions. Alignment between the research questions and data collection methods is displayed in Table 3.1, followed by descriptions of the qualitative and quantitative data collection methods.

Table 3.1
Alignment of Data Sources

Research question	Data sources
1. How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?	Pre/post surveys Interviews
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?	Pre/post surveys Interviews
3. How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?	Post survey Interviews

Quantitative Data

The Mentor/Mentee Attrition and Satisfaction Questionnaire (MMASQ), as found in Appendix D, was developed for the purpose of this study and used to collect quantitative measurement of three main constructs: future plans for attrition, migration, or retention; job satisfaction; and perceptions of the mentoring intervention. Because of the small sample size, generalizations from the quantitative MMASQ results should be regarded with caution (Gravetter & Wallnau, 2007); however, these results provide a beginning picture of the potential impacts for future, larger studies.

Instruments used to create the MMASQ. The MMASQ was developed from items contained within multiple existing instruments, with minor revisions to align the resultant measure to the study aims and enhance reliability. Items were drawn from two published instruments with established validity and reliability data: the Teachers' Motives for Leaving the Profession Measure (TMLPM) (Struyven & Vanthournout, 2014b) and the Teacher Job Satisfaction Questionnaire (TJSQ) (Lester, 1987b). A comparison of original items from the TMLPM and the resultant MMASQ items can be found in Appendix K, while a similar comparison of TJSQ and MMASQ items is presented in Appendix L.

Teachers' Motives for Leaving the Profession Measure (TMLPM). The original form of the TMLPM contains 36 items that evaluate early-career teachers' reasons for leaving the profession (Struyven & Vanthournout, 2014b). The initial study examined 66 possible causes of teacher attrition, and utilized Principal Component Analysis and Exploratory Factor Analysis to establish five specific factors that were found to account for 53% of teacher attrition with sufficient reliability (Taber, 2018). These factors

include (1) job satisfaction and relation with pupils/students ($\alpha = .866$), (2) school management and support ($\alpha = .873$), (3) workload ($\alpha = .850$), (4) future prospects ($\alpha = .868$), and (5) relations with parents ($\alpha = .882$) (Struyven & Vanthournout, 2014a).

Adaptations for the MMASQ. Factors 1-3 of the TMLPM were included on the MMASQ in their entirety and with minimal modification. Initial development and validation of the TMLPM was conducted with early-career teachers who had previously left the education field voluntarily. Therefore, the original item statements were worded in past tense, (e.g., “I experienced difficulties with parents”), and were adapted to present tense for the MMASQ. Responses are given on a 5-point scale, on which participants are asked to rate the significance of each statement as a contributor in their decision to leave teaching, with higher scores indicating stronger links between a statement and its contribution to attrition (Struyven & Vanthournout, 2014a). As the current study participants have not yet left the education field, the response fields were adjusted to reflect the level of truth they perceive in each statement as it relates to their present teaching position, viewing these factors as potential predictors of future attrition. These adaptations are detailed in Appendix K, Table K1.

For use in the current study, items relating to Factor 4: Future Prospects and Factor 5: Relations with Parents, were removed from the item pool. The item construction and factor analysis of the original TMLPM was completed using a population of early-career teachers working in Flanders, Belgium. The structure of educator certification in Belgium precludes teachers from obtaining a permanent teaching contract for at least their first five years of employment, resulting in higher response values for items in Factor 4: Future Prospects, such as “It is difficult to get a long-term

contract” and “There are too few prospects for a permanent position in teaching” (Struyven & Vanthournout, 2014a). The significance of this factor is unlikely be replicated in this study of teachers in Delaware public and charter schools, where no such contract structure exists.

Factor 5: Relations with Parents, was removed due to lack of measurable significance during initial validation. This factor was estimated to account for only eight percent of all attrition, the least of any factor. Its contribution to attrition was also rated as substantially lower than any of the other four factors, with a rating of ($M = .27$, $SD = .65$), while each of the remaining factors were rated at an average of ($M = .6$) or greater. This is likely to be due to the limited number of item statements loaded in this factor (Struyven & Vanthournout, 2014a).

Teacher Job Satisfaction Questionnaire (TJSQ). The original form of the TJSQ contains 66 items that evaluate teachers’ overall job satisfaction (Lester, 1987b). The initial study examined 120 possible contributors to job satisfaction, using Exploratory Factor Analysis to develop a 9-factor solution that included only items with eigenvalues greater than $\lambda = 1$. Overall reliability of the measure was calculated at $\alpha = .93$, implying significant reliability even if only a portion of the instrument was administered (Tavakol & Dennick, 2011). Each individual factor additionally demonstrated strong internal consistency, as measured by Cronbach’s alpha (Taber, 2018). These factors include: (1) supervision ($\alpha = .92$), (2) colleagues ($\alpha = .82$), (3) working conditions ($\alpha = .83$), (4) pay ($\alpha = .80$), (5) responsibility ($\alpha = .73$), (6) work itself ($\alpha = .82$), (7) advancement ($\alpha = .81$), (8) security ($\alpha = .71$), and (9) recognition ($\alpha = .74$) (Lester, 1987a).

In addition to these initial positive indicators, validation of the instrument and its individual factors has been replicated more recently, with similar results (Knox & Anfara, 2013; Shabbir, Wei, Nabi, Zaheer, & Khan, 2014). Applications of this instrument in other studies support the claims that institutional factors have a significant impact on teacher job satisfaction (Azimi Amoli & Youran, 2014; De Nobile & McCormick, 2008) and remain influential regardless of teachers' experience levels (Didonna, 2018; Thompson, 2008).

Items in this instrument consist of both direct-worded and reverse-scored statements (e.g., "I get along well with my students," "I am not interested in the policies of my school"). Each factor is measured using multiple statements, ranging from 3 to 14 per factor. The order of statements corresponding to each factor is mixed throughout presentation of the items. Responses are given on a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree*, with higher scores indicating higher levels of agreement (Lester, 1987b).

Adaptations for the MMASQ. Items from Factor 1: Supervision on the TJSQ were adapted for the MMASQ, with adjustments in wording to assess participants' perceptions of their mentor, rather than their immediate supervisor. The items from Factor 2: Colleagues, Factor 3: Working Conditions, Factor 5: Responsibility, and Factor 6: Work Itself were also included on the MMASQ. Reverse-scored items from these factors on the TJSQ were reworded to be direct-scored on the MMASQ to increase its reliability (Gehlbach & Artino, 2018). Items that presented as duplicates when reworded were removed. These adaptations are detailed in Appendix L, Table L1.

All items from Factor 4: Pay, Factor 7: Advancement, Factor 8: Security, and Factor 9: Recognition were removed from the item pool, as these variables were unlikely to change throughout the duration of this study. Both the pre- and post-intervention data were collected over the course of one semester within a single school year; therefore, participants' salaries, job security, contract status, and eligibility for promotion or transfer remained consistent throughout the duration of their involvement. Additionally, the influence of compensation, promotion, or job security was outside the scope of this study and could not be impacted by participation in the intervention, leading to the removal of Factors 4, 7, and 8. Factor 9: Recognition was determined to have an insufficient number of items to ensure validity following removal of duplicate reverse-scored and direct-scored items, at which point only two statements remained.

Table 3.2
Alignment of MMASQ Constructs

Research question	MMASQ construct
1. How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?	Future plans for attrition, migration, or retention (Section 2)
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?	Job satisfaction (Section 1)
3. How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?	Job satisfaction (Section 1) Future plans for attrition, migration, or retention (Section 2) Perceptions of the mentoring intervention (Section 3)

MMASQ. The MMASQ, constructed with items from the TMLPM and TJSQ, consists of three sections, each reflecting one of its main constructs: future plans for attrition, migration, or retention; job satisfaction; and perceptions of the mentoring intervention. Each of these constructs aligns with one or more research questions (RQs). Alignment between the MMASQ constructs and the study research questions is displayed in Table 3.2.

Future plans for attrition, migration, or retention. Respondents' future plans with regard to remaining in the education profession (RQ1) were evaluated primarily through 28 items drawn from Factors 1, 2, and 3 of the TMLPM: job satisfaction and relation with pupils/students, school management and support, and workload, respectively (Struyven & Vanthournout, 2014b). The wording of the original item statements was adapted by changing the verbiage from past to present tense, reflecting the status of study participants as currently teaching. Three items were edited to avoid multibarreled statements that may lead to inconsistent responses (Gehlbach & Artino, 2018). The MMASQ directs participants to respond on a 5-point scale indicating the level of truth with which they believe each statement applies to themselves in their current teaching position, with a score of one representing *not at all true* and a score of five representing *completely true*. Higher response scores indicate increased likelihood that a participant will leave the profession.

Job satisfaction. Respondents' levels of comprehensive job satisfaction (RQ2) were evaluated primarily through 25 items drawn from Factors 2, 3, 5, and 6 of the TJSQ: colleagues, working conditions, responsibility, and work itself, respectively (Lester, 1987b). While the original TJSQ response options were presented on a 5-point Likert

scale ranging from *strongly disagree* to *strongly agree*, the MMASQ adapts this same 5-point scale to range from *not at all true* to *completely true*, in an effort to minimize the effects of participant acquiescence (Gehlbach & Artino, 2018), positive response bias (Eley & Stecher, 1997), and straight-lined response patterns (McIntyre & Gehlbach, 2014).

Additionally, reverse-scored items from the TJSQ are revised as direct-worded statements on the MMASQ, such that higher response scores for all items indicate higher levels of job satisfaction. This adaptation was made in response to substantial evidence that reverse scoring has the potential to diminish reliability (Gehlbach & Artino, 2018) by leading to misresponse on as much as 20% of reverse-scored items (Swain, Weathers, & Niedrich, 2008). Direct-scored items are more likely to produce reliable responses (Barnette, 1997; Barnette, 2001), particularly in comparison to reverse-scored items containing negation (Swain et al., 2008), as is the case for many of the TJSQ items. Following adaptation of the reverse-scored items into direct-worded statements, nine of the items in these factors were found to be duplicates of existing statements (e.g., “I like the people with whom I work” and “I dislike the people with whom I work” become duplicates when both are positively worded), and were subsequently deleted. This modification also led to the deletion of Factor 9: Recognition, as previously discussed, due to the lack of remaining items.

Perceptions of the mentoring intervention. Participants’ perceived outcomes of the mentoring intervention (RQ3) are evaluated through 14 items drawn from the TJSQ Factor 1: Supervision (Lester, 1987b). In keeping with the revisions made to other TJSQ items, the MMASQ adapted the original 5-point agree-disagree response scale for these

items to range from *not at all true* to *completely true* to reduce response biases and patterns (Eley & Stecher, 1997; Gehlbach & Artino, 2018; McIntyre & Gehlbach, 2014). Reverse-scored items were revised to be directly-worded for enhanced reliability (Barnette, 1997; Barnette, 2001; Gehlbach & Artino, 2018; Swain et al., 2008), and resulted in no duplicates requiring deletion. Because the items in this factor were used to evaluate participants' interactions with and perceptions of their direct mentors, the original term *immediate supervisor* (Lester, 1987b) was restated as *mentor*. Higher scores on items in this section indicate more positive perceived intervention outcomes.

MMASQ structure and validation. The resultant MMASQ instrument consists of 67 item statements evaluating three main constructs, most containing multiple factors, as displayed in Table 3.3. Although expected to retain similar validity and reliability to the instruments from which the survey items are drawn, additional validation of the MMASQ was conducted following pre- and post-intervention data collection to further ensure the rigor and trustworthiness of the results.

Structure and item presentation. Section 1 of the instrument contains 25 items related to job satisfaction (RQ2), as measured by four factors: (1) colleagues, (2) working conditions, (3) responsibility, and (4) work itself. Section 2 contains 28 items representing potential predictors of attrition (RQ1), as measured by three factors: (1) job satisfaction and relation with students, (2) school management and support, and (3) workload. Section 3 consists of 14 item statements relating to participants' perceptions of the mentoring intervention (RQ3). This section was administered during the post-intervention survey for novice and mentor teachers, as well as the prospective mentors'

single interaction with the survey, through a branching question that guided participants to the Section 3 version worded appropriately for their participant group.

Within each section, the order of the item statements was randomized using a computerized random order generator. Given the moderate length of the survey, it is possible that respondents could be less energetic and focused during later questions. Therefore, randomizing the item order to ensure that no factor is disproportionately addressed at either the beginning or the end of a section mitigated the potential reliability threat of response fatigue (Gehlbach & Artino, 2018).

Respondents to the MMASQ were asked to rate their responses on a 5-point scale. This format is in keeping with the original instruments from which the survey items were drawn, in an effort to maintain reliability. It also aligns with evidence that response scales with greater than four values provide greater reliability (Gehlbach & Artino, 2018). The values on the MMASQ response scale were labeled as: *1 – not at all true*, *2 – a little bit true*, *3 – somewhat true*, *4 – mostly true*, and *5 – completely true*. A *not applicable (N/A)* option was also provided.

The MMASQ was distributed using Qualtrics, in which the response scale was displayed directly beside each item statement in horizontal format, with ascending numeric values written from left to right. This enhanced readability and minimized threats to reliability from the primacy effect, which was additionally reduced by the use of direct-scored items (Barnette, 2001). The *N/A* option was visually separated from the numeric rating options, so as to avoid inadvertent nonsubstantive responses and visually distinguish the midpoint of the numeric scale (Gehlbach & Artino, 2018).

Table 3.3
Alignment of MMASQ Items

Construct	Factor	Items	Source
Future plans for attrition, migration, or retention	Job satisfaction and relation with students	I experience little satisfaction in my job as a teacher I don't enjoy teaching much Students are poorly motivated Job contents fall short of expectations Students' learning outcomes are insufficient Students' progress in learning is minimal I have made a wrong study choice I have difficulties with class management and discipline My expectations are disappointed I feel little enthusiasm for teaching I feel insecure in the classroom I am bullied by students	TMLPM
	School management and support	I get little support from my principal I feel little support from the school community I have conflicts with the principal and/or colleagues I have little contact with colleagues I experience less autonomy compared to experienced colleagues I often have to justify my actions in class to other school personnel I am given annoying tasks and/or difficult classes I experience little guidance and support as a beginning teacher I feel little engagement in the school's policy I experience little recognition and respect as a teacher	TMLPM

Job satisfaction	Workload	I have too much work outside of school hours I have too little time to adequately prepare lessons Time pressures and stress in education are too high Too much administrative work is associated with my job I cannot handle my job I am emotionally tired and burned out	TMLPM
	Colleagues	I like the people with whom I work My colleagues seem reasonable to me I get along well with my colleagues I get cooperation from the people I work with My colleagues stimulate me to do better work My colleagues are highly supportive of one another I have made lasting friendships among my colleagues My interests are similar to those of my colleagues My colleagues provide me with suggestions or feedback about my teaching	TJSQ
	Working conditions	Working conditions in my school are good Working conditions in my school are comfortable Physical surroundings in my school are pleasant The administration in my school communicates its policies clearly	TJSQ
	Responsibility	I get along well with my students I try to be aware of the policies in my school I do have responsibility for my teaching My students respect me as a teacher I am responsible for planning my daily lessons Teaching provides me the opportunity to help my students learn	TJSQ
	Work itself	Teaching is very interesting work	TJSQ

		Teaching encourages me to be creative Teaching provides me the chance to develop new methods Teaching provides an opportunity to use a variety of skills I have the freedom to make my own decisions The work of a teacher is very pleasant	
Perceptions of the mentoring intervention	Mentoring	My mentor gives me assistance when I need help My mentor praises good teaching My mentor provides assistance for improving instruction I receive recognition from my mentor My mentor backs me up My mentor explains what is expected of me My mentor is willing to listen to suggestions My mentor treats everyone equitably My mentor makes me feel comfortable When I teach a good lesson, my mentor notices My mentor offers suggestions to improve my teaching My mentor makes available the material I need to do my best My mentor encourages teachers to collaborate I receive meaningful information from my mentor	TJSQ

Note. Items pertaining to the Mentoring factor were only administered post-intervention.

Validation. The MMASQ was expected to retain similar validity and reliability to the TMLPM and TJSQ factors from which its items were drawn, due to the minimal nature of the item modifications. This was confirmed by evaluating the internal consistency of each of the three main sections, as well as the factor subscales within each section, through calculation of Cronbach's alpha (Tavakol & Dennick, 2011). Alpha levels of greater than $\alpha = .7$ were considered an acceptable threshold for reliability, in keeping with the literature (Taber, 2018; Tavakol & Dennick, 2011).

With the consideration that the majority of modifications made from the original published instruments were related to the specific item wording, the readability and ease of understanding each written item is of primary concern to validity of the MMASQ. The Flesch Reading Ease Scale and Flesch-Kincaid Grade Level Formula, a readability index which equates the difficulty level of a written passage to a school grade level (Flesch, 1948), were used to evaluate the readability of the MMASQ items prior to administration. Analysis of the full item list resulted in a Flesch Reading Ease score of 60.6, and Grade Level of 6.6, indicating that it is considered very easy to read and could likely be understood by most secondary students. Therefore, it is reasonable to conclude that the study participants, who were all adult college graduates, had no difficulty interpreting the text independently.

Qualitative Data

This study utilized interviews to collect qualitative information regarding participants' job satisfaction and plans related to attrition, as well as their experiences with the intervention itself. The small sample size of this study enabled one-on-one, semi-structured interviews with each novice and mentor teacher participating in the

intervention, as well as several prospective mentors, providing in-depth information representative of each participant group in the study (Boyce & Neale, 2006). A long tradition of using interviews as a primary data collection method exists in nearly all branches of qualitative research (Polit & Beck, 2006), and was employed in this case to supplement and expand upon the MMASQ survey data.

Interviews. Participant interviews took the form of a semi-structured design (Whiting, 2007), in which the conversation was guided by a series of predetermined, open-ended prompts (DiCicco-Bloom & Crabtree, 2006). Individual 30-minute interviews were completed by each novice and mentor teacher participant with the researcher before and after completing the mentoring intervention, and by prospective mentors on one occasion during the same academic semester. Interviews were conducted via the Zoom video conferencing platform, due to the geographical separation of participants and quarantine recommendations related to the COVID-19 pandemic during the data collection period. The overall aim of the interviews was to obtain more detailed and nuanced insight into the three main study constructs of future plans for attrition, migration, or retention; job satisfaction; and perceptions of the mentoring intervention, as a method for more completely answering the research questions. Alignment between the research questions, study constructs, and interview prompts is displayed in Table 3.4.

Complete interview protocols can be found in Appendix E. Prompts for each of the main constructs were developed using several existing instruments as a framework, including the Turnover Intentions Measure (Xu & Payne, 2014c), Teaching Satisfaction Scale (Ho & Au, 2006a), Mentor's Interview (Doyle, Jacobs, & Ryan, 2016b), and Satisfaction with Mentoring Measure (Xu & Payne, 2014b).

Table 3.4
Alignment of Interview Prompts

Research question	Construct	Interview prompts
1. How does a virtual content-specific mentoring program impact DE arts teachers' intentions to remain in their teaching positions?	Future plans for attrition, migration, or retention	What are your plans with regard to your job/career for next school year? What are your plans with regard to your job/career for the future beyond next school year? What led to your decision? What impact, if any, do you expect/did the mentoring program have on your intention to remain in this teaching position in the future?
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in DE?	Job satisfaction	How does your job compare to your perception of an ideal career? How do you feel about the overall environment at your school? How would you describe your current satisfaction with your job? What aspects of your job have the most impact on your satisfaction? What impact, if any, do you expect/did the mentoring program have on your level of satisfaction with your job?
3. How can DE arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?	Perceptions of the mentoring intervention	How well do you expect mentoring to meet your needs? (pre) Describe your overall level of satisfaction with the mentoring program (post) What type of structure for mentoring activities do you feel would be/have been most helpful (e.g., meeting frequency, tasks, evaluations, etc.)? Do you think it will be/was helpful that your mentor has similar professional experiences to yours (e.g., grade, content)? How so? Other than distance and technology use, how do you expect/how was the virtual mentoring experience distinct from in-person mentoring? From your perspective, what makes mentoring a quality experience? Describe your position and school setting/suggestions for future programming.

Note. Pre = pre-intervention. Post = post-intervention. Items with / contain slight alterations between pre- and post- wording.

Future plans for attrition, migration, or retention. Interview prompts related to participants' likelihood of leaving or remaining in their teaching position (RQ1) were based on items from the Turnover Intentions Measure (Xu & Payne, 2014c), found in Appendix M. The original use of this measure was a study intended to analyze the interactions between attrition, job satisfaction, and both the quality and quantity of mentorship. This study supported evidence in the literature linking participation in a mentoring program to increased job satisfaction and lowered likelihood of attrition (Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007). The researchers further concluded that the variance in individuals' job satisfaction and likelihood of attrition extended beyond that which could be explained by differences in the quality of mentoring programs (Xu & Payne, 2014a).

The original measure consists of three items, rated on a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*. Each of the items centers around respondents' future intentions to either remain in their current position or pursue a different job. For the purposes of this study, these items were adapted as open-ended interview prompts that addressed participants' short- and long-term intentions with regard to their teaching positions.

Job satisfaction. Interview prompts related to participants' job satisfaction (RQ2) were based on items from the Teaching Satisfaction Scale (TSS) (Ho & Au, 2006a), found in Appendix N. This measure was selected as a framework due in large part to its global approach to job satisfaction. Many measures of job satisfaction, such as the TJSQ, and subsequently, the MMASQ developed for this study, assess overall job satisfaction in terms of specific facets or factors contributing to an overall satisfaction level (Lester,

1987a). A potential limitation of this approach is the possibility that participants may be impacted by factors not specifically included in the measure. The global approach of the TSS “produces an integrated response” (Ho & Au, 2006b, p. 173) with no limit to which factors a participant may elect to consider in their perspective.

The original TSS consists of five items, rated on a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*. A measure of internal consistency produced Cronbach’s alpha of $\alpha = .77$, with two-week test-retest reliability of $\alpha = .76$, which are considered to be both sufficient (Taber, 2018; Tavakol & Dennick, 2011) and in line with other published job satisfaction instruments. Interview items for this study were developed as open-ended prompts based on the first four items of the TSS. A prompt was not developed to align with Item 5, which demonstrated a substantially lower factor pattern coefficient ($\alpha = .51$) and item-total correlation ($\alpha = .34$) than the other four items (Ho & Au, 2006b).

Perceptions of the mentoring intervention. Interview prompts related to participants’ perception of the mentoring intervention (RQ3) were based on items from the Satisfaction with Mentoring Measure (Xu & Payne, 2014b) and the Mentor’s Interview (Doyle et al., 2016b), found in Appendix O and Appendix P, respectively.

Satisfaction with Mentoring Measure. The Satisfaction with Mentoring Measure (Xu & Payne, 2014b) was created and implemented for the same study that developed the Turnover Intentions Measure (Xu & Payne, 2014c) and analyzed interactions between attrition, job satisfaction, and mentorship quality and quantity. While this study concluded that both job satisfaction and attrition can be improved by exposure to a higher quality and quantity of mentorship, mentees’ satisfaction levels and their perceived

quality of the intervention are significantly more impactful than its actual quality (Xu & Payne, 2014a).

The original measure consists of three items, rated on a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*. These items ask respondents to share their overall level of satisfaction with the mentoring intervention, as well as how well they believe the intervention has met their needs and expectations (Xu & Payne, 2014b). For the purposes of this study, these items were adapted as open-ended interview prompts, to be used during pre-intervention interviews as predictors (e.g., “How well do you expect the mentoring program to meet your needs?”) and during post-intervention interviews as evaluations (e.g., “Describe your overall level of satisfaction with the mentoring program”).

Mentor’s Interview. The Mentor’s Interview is a semi-structured interview protocol developed for use as a reflective tool following the implementation of a mentoring intervention (Doyle, Jacobs, & Ryan, 2016a). Intended to be used after conclusion of the program, the interview protocol consists of 11 open-ended question prompts, some containing follow-ups, asking mentors to share their opinions and evaluations of various components of the intervention. Examples of elements evaluated include frequency of mentor-mentee interaction, technology use, structure, and motivation (Doyle et al., 2016b).

For the purposes of this study, interview prompts measuring participants’ perceptions of the mentoring intervention were based generally on items from the Mentor’s Interview. Each item was adapted to the current research questions and reworded to apply to the mentee, rather than the mentor. Five of the original items (Items

1, 6, 7, 8, and 11) were eliminated because they were overly specific or inapplicable to the current study. Two items (Items 2 and 5) were combined into a single prompt due to similarity and interrelatedness. Item 10 was combined with Item 1 from the Satisfaction with Mentoring Measure due to their similarity. During pre-intervention interviews, the resultant prompts were offered in terms of predictions (e.g., “What type of structure for mentoring activities do you feel would be most helpful?”), and during post-intervention interviews, as evaluations (e.g., “What type of structure for mentoring activities do you feel would have been most helpful?”).

Structure and presentation. Prompts related to attrition and job satisfaction remained consistent for both the pre- and post-intervention interviews, in order to most closely isolate any changes that may have occurred as a result of participation in the intervention. Prompts related to participants’ perceived outcomes of the mentoring intervention differed slightly between pre- and post-intervention protocols and were treated as predictors or evaluations, respectively. Pre-intervention interviews included a brief background question to establish context for each participant’s teaching position and setting, while in the post-intervention interviews, this question was replaced with the opportunity to offer suggestions for improvements to the intervention.

All interviews were video recorded, with transcription taking place after each round of interviews. Real-time field notes were also taken by the researcher and used as needed for clarification of transcripts. During the interviews, participants were allowed to decline to answer a prompt, yet continue with the interview, if they believed a specific prompt to relate to material of a sensitive nature. Participants were provided with access to all transcripts and field notes upon request.

Validation. Although differing substantially in structure and presentation from the nature of a participant interview, the use of previously-validated quantitative instruments, such as the Turnover Intentions Measure (Xu & Payne, 2014c), TSS (Ho & Au, 2006a), and Satisfaction with Mentoring Measure (Xu & Payne, 2014b), provided an established framework for the interview content itself. Drafts of the resultant pre- and post-intervention interview protocols were subjected to peer debriefing reviews by multiple subject matter experts, including arts educator colleagues and university faculty not affiliated with the research, for increased validity (Creswell & Creswell, 2018; Mertler, 2017; Patton, 2002). In the course of these reviews, the prompt order was revised, some prompts in earlier drafts of the protocols were deleted for perceived redundancy, and others were reworded for increased clarity or to elicit more substantial participant responses.

Research Question Alignment

The research questions of this study were addressed by both quantitative and qualitative data collection and analysis, as depicted in Table 3.5. Quantitative pre- and post-intervention MMASQ results identified changes in future plans regarding attrition (RQ1) and levels of job satisfaction (RQ2) throughout the intervention period for novice and mentor teachers. Descriptive statistics from the post-intervention MMASQ quantified participants' perceptions of the intervention itself (RQ3) and provided a snapshot of attrition likelihood and job satisfaction levels for prospective mentors as a point of comparison.

Qualitative interview data were subjected to open coding for inductive analysis to provide information on participants' perceived outcomes of the intervention (RQ3),

levels of job satisfaction (RQ2), and likelihood of attrition (RQ1), based on emergent themes. Interactions between participants' experiences in the intervention and the dependent variables of job satisfaction and plans for attrition (RQ3) were also addressed by interview data. All analysis procedures are described in detail in Chapter 4. Each research question was addressed through multiple data sources to provide opportunities for a deeper understanding of each variable and triangulation of data (Watts et al., 2017).

Table 3.5
Alignment of Data Analysis Methods

Research question	Data sources	Data analysis
1. How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?	Pre- and post-MMASQ results	Descriptive statistics (M , SD)
	Interviews	Inductive analysis
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?	Pre- and post-MMASQ results	Descriptive statistics (M , SD)
	Interviews	Inductive analysis
3. How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?	Post-intervention MMASQ results	Descriptive statistics (M , SD)
	Interviews	Inductive analysis

Note. M = mean; SD = standard deviation

Procedures and Timeline

The delivery of the VPA Mentoring Program intervention and collection of data occurred over a period of approximately six months, followed by data analysis. As detailed in Table 3.6, the intervention procedures and data collection components were divided into four phases: Phase I: Participant Identification and Recruitment; Phase II:

Pre-Intervention Data Collection; Phase III: Intervention Activities; and Phase IV: Post-Intervention Data Collection.

Table 3.6
Timeline of Intervention Procedures and Data Collection

Phase	Procedure	Timeline
Phase I	Recruit and train potential mentors Identify novice teachers Pair mentors-mentees Obtain informed consent	4 weeks
Phase II	Administer pre-intervention MMASQ Conduct pre-intervention interviews Transcription and initial coding	2 weeks
Phase III	Weekly mentor-mentee conferences Two-way observation/feedback cycles 1–4	16 weeks
Phase IV	Administer post-intervention MMASQ Conduct post-intervention interviews Transcription and initial coding	2 weeks

Phase I: Participant Identification and Recruitment

The identification and recruitment of study participants began with the 2020–2021 school year, over the course of approximately four weeks. Mentor teachers who expressed interest and were determined by DDOE to be qualified participated in the required training module and verified their completion through a training assurance form prior to the state deadline for pairing mentors and mentees. New visual and performing arts teachers were identified through communication with their district-level Site Coordinators and matched with a qualified mentor from the same content area (dance, media art, music, theater, or visual art) and grade band (elementary, middle, or high

school). Because more potential mentors were identified than newly-hired novice arts teachers throughout the state, experienced teachers who were not paired with a mentee were retained on a prospective mentor list for future school years. These prospective mentors, as well as mentors and novice teachers participating in the VPA Mentoring Program, were contacted to request participation in the data collection components of the study and to obtain informed consent.

Phase II: Pre-Intervention Data Collection

Pre-intervention data collection for mentor and novice teachers occurred throughout a two-week period in January 2021, in order to allow novice teachers to first gain sufficient experience in their positions to have formed a perception of their job satisfaction and intentions to remain in teaching for the future. At the time of data collection, novice and mentor teacher participants received a link and personalized PIN code via email inviting them to complete the pre-intervention MMASQ electronically through Qualtrics. Individual pre-intervention interviews were then scheduled with each participant. Transcription began immediately following these interviews, to facilitate the ability to engage in member checking for increased rigor (Mertler, 2017)

Phase III: Intervention Activities

During the spring semester of the 2020–2021 school year, mentor-mentee pairs engaged remotely in synchronous weekly meetings. Novice teachers and their mentors also completed four cycles of two-way observations and feedback. Mentors conducted a total of four remote observations of their mentee’s classroom, providing non-evaluative feedback at the weekly meetings following each observation. Novice teachers also engaged in four remote observations of their mentor or another experienced teacher’s

classroom. These activities were scheduled to require approximately 16 weeks to complete; however, the observations were allowed to be conducted in any order and scheduled at participants' convenience. All four observation cycles were required to be completed prior to the post-intervention data collection deadline.

Phase IV: Post-Intervention Data Collection

Post-intervention data collection began in May 2021, after novice and mentor teacher participants had completed all mentoring activities, and also included prospective mentors. All participants received a link and PIN code via email inviting them to complete the post-intervention MMASQ electronically. Individual post-intervention interviews were scheduled with each novice and mentor teacher participant, and with prospective mentors who opted-in for a follow-up interview. In keeping with Phase II procedures, a two-week window was provided to account for the scheduling of all participant interviews, completion of the MMASQ, and transcription of interview data.

Data Analysis

Following the completion of all intervention activities and data collection procedures, data analysis commenced. During this period, quantitative MMASQ data were analyzed for descriptive statistics including mean and standard deviation. Initial codes were established from qualitative interviews in Phases II and IV and organized into categories (Creswell & Creswell, 2018; Miles, Huberman, & Saldaña, 2014), which were subsequently grouped into emergent themes (Bazeley, 2013; Saldaña, 2016). Analysis of all data was complete by November 2021.

Rigor and Trustworthiness

The quality of research is inseparable from its *rigor*, “the systematic approach to research design and data analysis, interpretation, and presentation” (Hays, Wood, Dahl, & Kirk-Jenkins, 2016, p. 173). As outlined in the description of data collection methods, all quantitative instruments used in development of the MMASQ had been previously evaluated for validity and reliability prior to their involvement in this research (Lester, 1987a; Struyven & Vanthournout, 2014a). Additionally, the MMASQ itself was tested for internal consistency through the calculation of Cronbach’s alpha (Tavakol & Dennick, 2011), the results of which are detailed in Chapter 4. Several strategies to ensure the rigor and trustworthiness of the study’s qualitative components were also incorporated, including triangulation, rich description, member checking, and peer debriefing.

Triangulation

Each of the research questions in this study was addressed by both quantitative and qualitative data collection methods. The resultant information was integrated through the process of *triangulation*, the use of multiple data points to gather information on a common topic and evaluate the convergence between each source (Watts et al., 2017). Any corroborating evidence that is discovered in the course of this process can assist in supporting the analysis and conclusions (Varpio, Ajjawi, Monrouxe, O’Brien, & Rees, 2017). Specifically, the qualitative interview data collected in this study provided greater detail and explanation of the quantitative MMASQ results, while the numerical MMASQ data aided in presenting a scientific, evidence-based lens through which to interpret participants’ narratives (Maxwell, 2010).

Rich Description

Interview responses were reported through rich, detailed *description* in order to convey a realistic and nuanced picture of participants' experiences and enhance validity (Creswell & Creswell, 2018). This included direct quotes, exemplars of *in vivo* terms, and a precise depiction of the setting and phenomenon (Shenton, 2004; Bernard, Wutich, & Ryan, 2017), as well as an explanation of procedures, methods, and code development to allow for replication while clarifying the limitations of generalizability (Buss & Zambo, 2014; Roberts, Dowell, & Nie, 2019; Watts et al., 2017). These descriptions also afforded the opportunity to represent what Maxwell (2010) calls "the diversity of actions, perceptions, or beliefs in the setting or group studied" (p. 478) and which are frequently referred to as negative cases (Mertler, 2017), by considering both similar and discrepant participant perspectives (Buss & Zambo, 2014).

Member Checking

At multiple points throughout the research process, *member checking* was employed by providing interview subjects with access to transcripts and data presentations (Hays et al., 2016; Varpio et al., 2017). This helped to not only ensure the accuracy of the data, but also to confirm the validity of the perspectives represented and engage participants as active members of the research process (Frost, Gibson, Harris-Golesworthy, Harris, & Britten, 2018). In this study, participants were provided the opportunity to review the interview transcripts and associated inductive analysis to confirm accuracy as well as offer additional thoughts on any emergent themes. Sometimes cited as the most important method for assuring credibility, this usage of

member checks ensured that participants' experiences are authentically represented without the influence of researcher bias (Amankwaa, 2016; Shenton, 2004).

Peer Debriefing

The strategy of *peer debriefing*, a review or critique of the research by an independent peer or colleague (Mertler, 2017), was utilized during and after data collection and analysis in order to enhance the validity of the study (Creswell & Creswell, 2018; Patton, 2002). The inclusion of individuals not directly connected to the research “may allow them to challenge assumptions made by the investigator, whose closeness to the project frequently inhibits his or her ability to view it with real detachment” (Shenton, 2004, p. 67), and may take the form of collaboration, questioning, or critical review. Peer debriefing by both arts educator colleagues and peer researchers not connected to the study was implemented to aid in the development of the interview protocols and ensure usability of the MMASQ delivery method, and continued throughout the data analysis and reporting stages of the study. Additionally, debriefing took place as a component of discussion with the dissertation chairperson and committee members.

Plan for Sharing and Communicating Findings

The importance of communicating the findings of this study is threefold: to actively engage participants in the research process (Frost et al., 2018), to educate and involve local administrative stakeholders in the practical implications of the study intervention (Creswell & Creswell, 2018), and to promote the future development of innovative solutions to this problem of practice (Mertler, 2017). At the practical level, the sharing of these findings may inform future iterations of the statewide novice teacher

mentoring program; on a theoretical level, future cycles of this action research may examine additional facets of novice arts teacher development or address areas of limitation of the current study. Sharing and communicating the findings of this study will take place through participant reflection, sharing with administrative stakeholders, and plans for future presentation, all of which occur with consideration for protecting participants' identities.

Participant Reflection

The results from this research were initially communicated with study participants for the purpose of engaging in a final round of member checking (Creswell & Creswell, 2018; Hays et al., 2016; Varpio et al., 2017), to ensure that participants' experiences and perspectives were fairly and accurately represented and to provide a sense of reciprocity (Mertler, 2017) and shared ownership (Frost et al., 2018). Each participant had the opportunity to review both their own raw data, including interview transcripts and questionnaire results, as well as the aggregated conclusions, if requested. Participants' reflections on the experience of engaging in virtual mentoring and their suggestions for future versions of the program will be included in the reporting of data and recommendations to other stakeholders.

Administrative Stakeholders

A complete summary of the study results and conclusions will be first shared with the Education Associates overseeing the Comprehensive Induction Program and Visual and Performing Arts content areas at DDOE, who have supported the implementation of this research. Recommendations for revisions to Year One and Year Two of the VPA Mentoring Program and expansion to include novice arts teachers in each of their first

four years will be negotiated to determine procedures for developing the necessary components for implementation in future school years. If DDOE staff plan to implement parallel content-specific programs for other academic subjects, study materials may be used to train and develop Lead Mentors for other content areas. A similar summary, including DDOE's implementation plans for future school years, will be provided to local districts' Directors of Novice Educator Development and Supervisors of Unified Arts, for the purpose of preparing future mentor staffing needs.

Future Presentation

Immediate plans for sharing the study findings with a wider audience include submitting a proposal for presentation at the Delaware Music Educators' Association state conference in the fall of 2022, where new and experienced teachers, as well as district- and state-level administrators, will have the opportunity to learn about the study results and conclusions. Journal publication of the research findings may also be sought following completion of the study, in a publication focused on either action research, arts education, educational technology, or educator development, a goal which influences the overall academic tone of these materials (McAteer, 2013).

Given the limitations of this study, future action research cycles relating to this content are likely to target a larger sample size of novice and mentor arts teachers, as well as expanding to develop a comprehensive content-specific mentoring and induction program that includes novice arts teachers beyond only their first or second year of employment (Mertler, 2017). Future research cycles will also further differentiate between mentors' and mentees' experiences in the program and investigate how novice and experienced teachers may benefit differently.

Protecting Participant Identities

Throughout the process of sharing and communicating the research findings, all participants' identities and personal information will continue to be protected (Creswell & Creswell, 2018). Participants verified their completion of the MMASQ using a personalized PIN code, such that their identities are not discernible to outside individuals. Quantitative MMASQ data were downloaded and securely stored on a personal, password-protected computer not accessible by DDOE or a school organization (McAteer, 2013). Numeric MMASQ results are presented anonymously and in aggregate form, such that individual responses are neither distinguishable nor identifiable to anyone beyond the researcher.

Qualitative data, including interview recordings, transcripts, and peer group artifacts, are also securely stored on a password-protected, personal computer, only accessible by the researcher (McAteer, 2013). Pseudonyms were assigned to all participants at the time of transcription and were used on all memos, reports, and other documents, to avoid accidental exposure of participant identities throughout the data analysis or reporting process (Creswell & Poth, 2018). School buildings, districts, and other individuals referenced during interviews were also assigned pseudonyms to further protect the identities of participants (Mertler, 2017). The document identifying the masking scheme of participant and school names, PIN codes, and pseudonyms remains confidential and is stored separately from other study materials.

Although school administrators and select DDOE staff members were given access to the list of novice and mentor teachers who participated in the VPA Mentoring Program for licensure and stipend purposes, individual participant responses or other

data, if requested in the future, will be shared anonymously or using pseudonyms only (Creswell & Creswell, 2018). At the regional or national level, DDOE's support of the research makes anonymization of the state itself impossible. However, the state of Delaware employs a sufficiently large arts teacher population that all participants' individual identities and places of employment will remain confidential through judicious limitation of specific descriptions (Mertler, 2017).

CHAPTER 4

ANALYSIS AND FINDINGS

The purpose of this action research was to implement a virtual content-specific mentoring program for visual and performing arts teachers enrolled in the Comprehensive Induction Program during their first two years of employment, and to evaluate its impacts on teachers' job satisfaction and intentions to remain in their teaching positions. Both quantitative and qualitative data were collected and analyzed to answer the following research questions:

1. How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?
2. What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?
3. How can Delaware arts teachers' experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?

Study participants were classified in three groups: novice teachers participating in the VPA Mentoring Program intervention ($n = 4$), mentor teachers also participating in the intervention ($n = 6$), and prospective mentor teachers ($n = 37$). A total of 47 participants responded to the quantitative questionnaire, and 23 of those individuals opted in to participate in more in-depth qualitative interviews. This chapter provides a description of the (a) quantitative analysis and findings and (b) qualitative findings and interpretation.

Quantitative Analysis and Findings

Quantitative data were gathered through participant responses to the version of the Mentor/Mentee Attrition and Satisfaction Questionnaire (MMASQ) corresponding to their participant group. Novice and mentor teachers participating in the intervention completed the questionnaire at both the start and finish of the first semester of the mentoring program, and prospective mentor teachers completed the questionnaire once during that same semester. The following sections include (a) participant demographics, (b) a report of internal consistency, (c) analytic procedures, and (d) a presentation of findings.

Participant Demographics

All study participants were teachers in Delaware K-12 schools with a full-time teaching position in the visual and performing arts, defined as dance, media arts, music, theater, or visual art (DDOE, 2017). Teachers with part-time status, or who also taught in a content area outside the arts, were excluded from this study. Participant teaching experience is displayed by group in Table 4.1.

Table 4.1
Participant Teaching Experience

Years of Experience	Novice	Mentor	Prospective
0-5 years	4	-	-
6-10 years	-	2	5
11+ years	-	4	32

Participants in the novice group were all in their first or second year of teaching, and teachers eligible to be mentors or prospective mentors had five or more years of teaching

experience, as required by state guidelines (DDOE, 2017). The large majority of mentors or prospective mentors had 11 or more years of teaching experience, placing them in the *third-stage teacher* category of their careers (Conway & Eros, 2016). Interestingly, these participants self-identified as being interested in or willing to mentor, contradicting assumptions in the literature that third-stage teachers are unwilling to embrace new challenges or changes (Eros, 2011; Kirkpatrick, 2007).

All visual and performing arts content areas were represented, with the exception of dance. A matrix of participants by content and grade level is displayed in Table 4.2.

Table 4.2
Participant Groups by Content Area and Grade Level

Content and Grade	Novice	Mentor	Prospective
Media arts			
Elementary (K-5)	-	-	-
Middle (6-8)	-	-	-
High (9-12)	0	0	1
Multiple levels	0	0	0
Music			
Elementary (K-5)	1	3	10
Middle (6-8)	0	0	0
High (9-12)	0	0	4
Multiple levels	1	1	4
Theater			
Elementary (K-5)	-	-	-
Middle (6-8)	-	-	-
High (9-12)	0	0	2
Multiple levels	0	0	2
Visual art			
Elementary (K-5)	1	0	9
Middle (6-8)	0	1	1
High (9-12)	0	0	3
Multiple levels	1	1	1

Note. Dashes indicate content area/grade level combinations for which teacher certification is not granted in the state of Delaware (14 DE Code § 1505).

Most participants taught either music or visual art, as expected, as these two subjects are more widely offered at the K-12 level in Delaware schools. The grade levels and content areas of the novice and mentor participant groups were largely similar to one another, as mentors in the intervention program were deliberately matched with mentees based on these variables. In total, 2% of participants taught media arts, 51% taught music, 9% taught theater, and 38% taught visual art. The distribution of participants by grade level showed that 51% taught elementary grades, 4% taught middle school, 21% taught high school, and 23% were assigned to positions teaching multiple levels.

Internal Consistency

Participant responses from both the pre- and post-intervention administrations of the MMASQ instrument were evaluated for reliability using Cronbach's alpha to measure internal consistency. This evaluation was completed using the JASP (2013) statistical software package and was run on each of the three main sections of the MMASQ, as well as each subscale contained within Sections 1 and 2, with a confidence interval (CI) of 95% used throughout. A test of internal consistency across multiple sections was not conducted, given that each section is intended to measure discrete constructs and the resulting statistic would therefore be less meaningful (Taber, 2018).

For all three sections on both administrations of the MMASQ, Cronbach's alpha was within the accepted reliability range of $\alpha = .70-.95$ (Tavakol & Dennick, 2011). The pre-intervention administration resulted in alpha levels of $\alpha = .94$, CIs [0.86, 0.98] for the job satisfaction section and $\alpha = .89$, CIs [0.74, 0.96] for the attrition section. The post-intervention administration resulted in alpha levels of $\alpha = .91$, CIs [0.87, 0.94] for job satisfaction, $\alpha = .89$, CIs [0.84, 0.93] for attrition, and $\alpha = .90$, CIs [0.85, 0.93] for

perceptions of the mentoring intervention. Within these sections, only one subscale (Job Satisfaction Factor 3: Responsibility) fell outside of this range on the post-test administration only, with an internal consistency of $\alpha = .61$, CIs [0.43, 0.75]. A full summary of section and subscale internal consistency is provided in Table 4.3.

Table 4.3
Internal Consistency of MMASQ Sections and Subscales

MMASQ Section	Pre-intervention		Post-intervention	
	α	95% CI	α	95% CI
Job satisfaction	.94	0.86, 0.98	.91	0.87, 0.94
Colleagues	.94	0.85, 0.98	.89	0.83, 0.93
Working conditions	.73	0.34, 0.91	.79	0.66, 0.88
Responsibility	.75	0.06, 0.95	.61	0.43, 0.75
Work itself	.76	0.27, 0.93	.74	0.59, 0.84
Attrition	.89	0.74, 0.96	.89	0.84, 0.93
Job satisfaction and relation with students	.80	0.54, 0.93	.79	0.69, 0.87
School management and support	.87	0.62, 0.96	.81	0.72, 0.88
Workload	.82	0.62, 0.93	.80	0.70, 0.87
Perceptions of mentoring intervention	--	--	.90	0.85, 0.93

Note. α = Cronbach's alpha; CI = confidence interval. Perceptions of mentoring intervention section not administered pre-intervention.

Analytic Procedures

Participant responses to the pre- and post-intervention administrations of the MMASQ were analyzed for descriptive statistics including mean and standard deviation (Creswell & Creswell, 2018). Because of the small sample size of this study, these descriptors are valuable in determining the confidence with which quantitative results can be interpreted (Buss & Zambo, 2014). The same panel of descriptive statistics containing

mean and standard deviation (Creswell & Creswell, 2018) were used to analyze Section 3 of the MMASQ after its post-intervention administration to all three participant groups, as a method for quantifying participants' perceptions about novice teacher mentoring.

Composite scoring. The three sections of the MMASQ represent three distinct constructs: job satisfaction, likelihood of attrition, and perceptions of mentoring. Additionally, Section 2: Attrition is reverse-scored, with higher numeric values indicating less favorable outcomes, while Sections 1 and 3 are direct-scored, with higher numeric values indicating more positive outcomes. As such, the scores from each of these three sections were considered independently and not combined into a single composite score. Because each section's score represents a unique construct, a composite score for the complete MMASQ would not lead to a valid overall conclusion (Chow & Ki, 1996).

Section 1: Job Satisfaction and Section 2: Attrition contain multiple subscales, each of which have demonstrated significant influence on participants' overall attitudes toward these variables (Lester, 1987a; Struyven & Vanthournout, 2014a). Therefore, subscale scores within each section were combined, resulting in overall composite scores for Sections 1, 2, and 3. This method is believed to have the greatest overall efficiency given the circumstances of this study, in which the intervention is new and untested, and therefore the subscales which may be most significantly impacted are unknown (Vickers, 2009). Without the existence of evidence to indicate that a single subscale is predicted to have substantially more influence than others, it is reasonable to assume that composite scores for each section accurately represent the results, despite possible variance between the subscales within each section (Chow & Ki, 1996).

Missing data. Although every effort was made to visually present the MMASQ in such a way that participants were guided to answer each item, it was possible for participants to inadvertently fail to input response values for individual items. In these instances, the missing data points were considered to be Missing Completely At Random (MCAR), an appropriate category when omission is unlikely to be related to the item content or study variables (Kang, 2013). When participants skip items deliberately, particularly if they feel uncomfortable sharing certain information, missing data points are more appropriately categorized as Missing At Random (MAR) or Missing Not At Random (MNAR) (Myers, 2011). Based on the confidential and non-harmful nature of the data collected by the MMASQ, missing data points in this study were considered to be MCAR.

Although deletion strategies are the most common and traditional method for handling missing data points (Kang, 2013), they are among the least statistically valid (Myers, 2011). Deletion is particularly less than optimal in studies where the sample is small, and has performed poorly in comparison to more modern approaches (Cheema, 2014; Fox-Wasylyshyn & El-Masri, 2005; Myers, 2011). This study utilized the *person mean substitution* method to handle missing data points, which was developed specifically for use with Likert-style items and originally validated using quantitative surveys on job satisfaction (Downey & King, 1998).

Person mean substitution is a method in which missing values are replaced by the mean of the individual participant's response values from items within the same factor (Downey & King, 1998). As the instruments on which the MMASQ is based demonstrated strong internal consistency (Knox & Anfara, 2013; Shabbir et al., 2014), it

was predicted that single items within each factor in the MMASQ would be given similar ratings by an individual participant. In such cases, particularly those in which less than 20% of the data are missing, person mean substitution performs more reliably than item mean substitution or overall mean substitution (Downey & King, 1998). Of the 3,679 quantitative data points in this study, only 0.87% were missing, making person mean substitution an ideal methodology.

Presentation of Findings

Prior to participating in the intervention, novice and mentor teacher participants completed the pre-intervention MMASQ, which contained two sections focusing on job satisfaction and likelihood of attrition, respectively. Near the end of the first semester of the mentoring intervention, all participants, including prospective mentors, completed the post-intervention MMASQ. This version contained the same job satisfaction and attrition items as the pre-intervention version, and added a third section surrounding participants' perceptions of mentoring. Prior to beginning the third section, participants were asked a branching question to indicate their participant group. This response directed them to the corresponding version of the mentoring perception section. All items were scored on a Likert-style scale containing values from 1 to 5, and all items within the section on attrition were reverse-scored, such that lower scores indicated more positive responses.

Pre-intervention MMASQ. Descriptive statistics (*M*, *SD*) from the pre-intervention administration of the MMASQ to novice and mentor teacher participants showed moderately positive levels of job satisfaction and relatively low likelihood of attrition, displayed in Table 4.4. The median scores for all factors in the job satisfaction section were no lower than 4, and the medians for factors in the reverse-scored attrition

section were no higher than 2. The standard deviation of scores was less than 1 for all but one factor, suggesting that the calculated statistics were minimally influenced by outlier values.

Table 4.4
Pre-Intervention MMASQ Descriptive Statistics

MMASQ section by participant group	<i>M</i>	<i>SD</i>
<i>Novice Teachers</i>		
Section 1: Job satisfaction	4.74	0.49
Factor 1: Colleagues	4.64	0.49
Factor 2: Working conditions	4.5	0.63
Factor 3: Responsibility	4.88	0.34
Factor 4: Work itself	4.92	0.41
Section 2: Attrition	1.16	0.46
Factor 1: Relation with students	1.17	0.43
Factor 2: School management/support	1.08	0.27
Factor 3: Workload	1.29	0.69
<i>Mentor Teachers</i>		
Section 1: Job satisfaction	4.43	0.80
Factor 1: Colleagues	3.98	0.90
Factor 2: Working conditions	4.33	0.87
Factor 3: Responsibility	4.92	0.28
Factor 4: Work itself	4.69	0.53
Section 2: Attrition	1.63	0.86
Factor 1: Relation with students	1.33	0.75
Factor 2: School management/support	1.60	0.64
Factor 3: Workload	2.25	1.05

Note. *M* = mean; *SD* = standard deviation

Novice teacher participants reported higher job satisfaction ($M = 4.74$, $SD = 0.49$) and lower likelihood of attrition ($M = 1.16$, $SD = 0.46$) than mentor teachers' responses to the job satisfaction ($M = 4.43$, $SD = 0.80$) and attrition ($M = 1.63$, $SD = 0.86$) sections. Within the job satisfaction portion, the *colleagues* factor showed a larger between-group difference than the other three factors, with novice teachers rating their collegial

relationships more positively (novice $M = 4.64$, $SD = 0.49$; mentors $M = 3.98$, $SD = 0.90$). Both groups rated the factors *responsibility* and *work itself* as the most positive aspects of their work.

In the attrition portion, responses to the *workload* factor accounted for the largest between-group disparity (novice $M = 1.29$, $SD = 0.69$; mentor $M = 2.25$, $SD = 1.05$), indicating that mentor teachers were more distressed by their workload than their novice counterparts. This particular difference may be the result of the unusual circumstances of the 2020-2021 school year related to the COVID-19 pandemic, as experienced teachers recognized the dramatic increase in professional expectations compared to a typical school year. Despite this difference, workload represented the factor rated most negatively by both groups.

Post-intervention MMASQ. Descriptive statistics (M , SD) from this three-part version of the MMASQ (Table 4.5) yielded similar distributions. For novice and mentor teachers, all standard deviations were less than 1, with the exception of one factor. Prospective mentor teachers' standard deviations on the *attrition* and *perceptions of mentoring* sections were also slightly higher than 1 ($SD = 1.09$ and 1.07 , respectively).

Novice and mentor teachers. Post-intervention MMASQ responses from these two participant groups showed that novice teachers' overall job satisfaction had decreased throughout the year ($M = 4.55$, $SD = 0.59$), but was still generally positive. Mentor teachers' job satisfaction scores increased slightly ($M = 4.50$, $SD = 0.71$), remaining generally stable. Within the job satisfaction section of the instrument, the *colleagues* factor again showed the largest difference between novice ($M = 4.44$, $SD = 0.61$) and mentor ($M = 4.17$, $SD = 0.89$) teachers. However, this difference was smaller

than at the outset of the study, as both means became more centralized at the time of the post-intervention assessment. In keeping with their pre-intervention responses, both the novice and mentor teacher groups rated *responsibility* and *work itself* more highly than other job satisfaction components.

A similar pattern occurred in participant responses related to attrition. The scores of novice teachers, who had initially indicated very low likelihood of attrition, increased throughout the year ($M = 1.35$, $SD = 0.77$), while mentor teachers' scores remained stable ($M = 1.64$, $SD = 0.98$). The *workload* factor, on which group responses had differed strongly during the pre-intervention assessment, continued to represent the largest between-group disparity of the entire questionnaire. Both groups indicated more distress caused by their workload (novice $M = 1.83$, $SD = 1.37$; mentor $M = 2.33$, $SD = 1.10$), despite the fact that this assessment was administered near the end of the school year, typically a lower-stress time for teachers. For both groups, this factor was rated more negatively than any other sub-scale on the entire instrument.

Both the novice and mentor teacher participants reported positive overall perceptions of the mentoring intervention at the conclusion of the semester. Novice teachers found it the most beneficial ($M = 4.66$, $SD = 0.96$), and mentor teachers indicated similarly positive experiences ($M = 4.42$, $SD = 0.81$).

Table 4.5
Post-Intervention MMASQ Descriptive Statistics

MMASQ section by participant group	<i>M</i>	<i>SD</i>
<i>Novice Teachers</i>		
Section 1: Job satisfaction	4.55	0.59
Factor 1: Colleagues	4.44	0.61
Factor 2: Working conditions	4.31	0.79
Factor 3: Responsibility	4.71	0.46
Factor 4: Work itself	4.71	0.46
Section 2: Attrition	1.35	0.77
Factor 1: Relation with students	1.19	0.39
Factor 2: School management/support	1.25	0.44
Factor 3: Workload	1.83	1.37
Section 3: Perceptions of mentoring	4.66	0.96
<i>Mentor Teachers</i>		
Section 1: Job satisfaction	4.50	0.71
Factor 1: Colleagues	4.17	0.89
Factor 2: Working conditions	4.54	0.51
Factor 3: Responsibility	4.83	0.38
Factor 4: Work itself	4.64	0.59
Section 2: Attrition	1.64	0.98
Factor 1: Relation with students	1.28	0.79
Factor 2: School management/support	1.64	0.88
Factor 3: Workload	2.33	1.10
Section 3: Perceptions of mentoring	4.42	0.81
<i>Prospective Mentors</i>		
Section 1: Job satisfaction	4.44	0.75
Factor 1: Colleagues	4.24	0.83
Factor 2: Working conditions	4.26	0.73
Factor 3: Responsibility	4.84	0.37
Factor 4: Work itself	4.45	0.75
Section 2: Attrition	1.81	1.09
Factor 1: Relation with students	1.48	0.81
Factor 2: School management/support	1.80	1.05
Factor 3: Workload	2.49	1.31
Section 3: Perceptions of mentoring	4.04	1.07

Note. *M* = mean; *SD* = standard deviation. Section 3 of the MMASQ did not contain any sub-factors.

Prospective mentors. Responses of prospective mentor participants related to job satisfaction ($M = 4.44$, $SD = 0.75$) were very similar to those of their experienced colleagues who had participated as mentors. Like the mentor group, prospective mentors rated *responsibility* ($M = 4.84$, $SD = 0.37$) as the most positive aspect of their work and *colleagues* ($M = 4.24$, $SD = 0.83$) as the most negative, an area in which veteran teachers' responses differed from those of novice teacher participants.

The prospective mentor participant group indicated a higher risk of attrition ($M = 1.81$, $SD = 1.09$) than either of the other two groups. Responses to all three factors within this section were rated more negatively than any other group. Like participants in the intervention, prospective mentors rated *workload* more negatively than any other subscale on the instrument ($M = 2.49$, $SD = 1.31$).

Prospective mentor participants were also asked about their attitudes toward novice teacher mentoring programs. One prospective mentor participant failed to complete this section of the questionnaire, so results were calculated based on the remaining participants' responses ($n = 36$). Overall, prospective mentors demonstrated positive attitudes toward mentoring ($M = 4.04$, $SD = 1.07$), though less so than novice or experienced intervention participants. It should be noted that these participants should be considered already likely to hold favorable views toward mentoring, given their elective participation in the study.

Qualitative Findings and Interpretations

Qualitative data were gathered through individual, semi-structured interviews of participants in the novice, mentor, and prospective mentor groups. Novice and mentor teachers participating in the intervention were interviewed at both the start and finish of

the first semester of the mentoring program, and prospective mentors were interviewed once during that same semester. A total of 30 interviews were conducted with 23 participants. Four themes emerged from the interview data:

1. Arts teachers believe that the opportunity to network and collaborate with other arts colleagues is vital, along with factors such as administrative support, connection to students, physical resources, and schoolwide support, which impact job satisfaction.
2. Teachers of the arts perceive themselves as having unique identities, perspectives, and professional demands, compared to non-arts teachers, which contribute to feelings of isolation, marginalization, and burnout, and influence future career plans.
3. Arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors.
4. Participants view virtual delivery as a viable strategy for some aspects of state-mandated mentoring, and prefer a hybrid model that includes non-evaluative, two-way observations and an emphasis on practical application.

The following section describes the (a) participant demographics, (b) qualitative data analysis process, and (c) presentation of the qualitative findings.

Participant Demographics

A total of 30 individual, semi-structured interviews were conducted with 23 participants. All novice and mentor teacher intervention participants engaged in interviews both before and after their first semester in the mentoring program, with a total of 10 participants completing 20 interviews. Prospective mentors who completed the

MMASQ during this same semester were offered the choice to opt-in to complete a follow-up interview. Of the 37 prospective mentors who completed the MMASQ, 13 elected to engage in a follow-up interview.

Table 4.6
Interview Participant Demographics

Demographic variables	Novice	Mentor	Prospective
Sex			
Male	0	1	2
Female	4	5	11
Race/Ethnicity			
Black	2	0	0
Hispanic/Latinx	1	0	1
White	1	6	12
Years of experience			
0-5	4	-	-
6-10	-	2	1
11-15	-	2	1
16-20	-	1	7
21-25	-	0	3
26-30	-	0	1
31+	-	1	0
District/school setting			
Rural	0	3	7
Suburban	0	1	2
Urban	4	2	4
Content area			
Music	2	4	7
Visual art	2	2	6
Grade level			
Elementary (K-5)	3	3	7
Middle (6-8)	0	1	0
High (9-12)	0	0	5
Multiple levels	1	2	1

Participants from all three groups who completed interviews shared information about their teaching position, such as content area, grade level, and school setting, as well as

self-reported demographic characteristics including sex, race/ethnicity, and years of teaching experience. Overall, the demographics of the participant subset who engaged in interviews were representative of the participant group overall. Detailed demographics are displayed in Table 4.6. Interviews were originally scheduled to last for 30 minutes each. A total of 1,115.70 interview minutes occurred, with the average interview lasting for 37.19 minutes.

Qualitative Data Analysis

Qualitative data were analyzed from individual participant interviews with teachers from all three participant groups. Interviews with all study participants were conducted virtually, recorded via Zoom, and later transcribed in Microsoft Word (Bernard et al., 2017). Researcher field notes indicating notable non-verbal events (e.g., body language, facial expression, tone, laughter) were added to the transcripts as bracketed notes. Pseudonyms were assigned for participant names, schools, and districts at the time of transcription, and this masking scheme was recorded in a separate document to maintain confidentiality of identifying information (Creswell & Poth, 2018). The transcripts were imported into the CAQDAS tool Delve for initial coding of the raw data and to later aid in data retrieval for narrative description of the results; however, all codes and larger categories were researcher-generated. The analysis process consisted of four iterative cycles of coding that established hierarchical outlines of the data (Bernard et al., 2017; Miles et al., 2014; Thomas, 2006). The number of codes yielded by each round of coding is summarized in Table 4.7.

Table 4.7
Quantity of Qualitative Codes

Coding Cycle	Number of Codes
1 st cycle (eclectic)	421
Following 1 st cycle: refining/classifying	397
2 nd cycle: Round 1	33
2 nd cycle: Round 2	45
3 rd cycle (categories)	14
4 th cycle (themes)	4

Data from participant interviews were subjected to inductive analysis in three stages: preparing and organizing, reducing and coding, and representing the data (Creswell & Poth, 2018). The primary purposes of the inductive coding process in this situation were to condense the raw interview data into a concise summary, establish a framework for understanding important elements of participant experiences and attitudes, and explain links between the data and the study research questions (Thomas, 2006). The inductive form of analysis allowed for methodological flexibility, enabling the development of codes and themes based on the data, rather than a predetermined set of expectations. This approach was selected for its ability to provide descriptive data as a complement to the quantitative MMASQ results (Liu, 2016).

First cycle coding. The first coding cycle began with a round of line-by-line coding for “pragmatic eclecticism” (Saldaña, 2016, p. 70), in which initial data are coded for meaning prior to determining the most appropriate methods of analysis. Considering each complete thought as a unit of analysis, the coding process also noted *in vivo* terms present in participants’ language “to capture the meanings inherent in people’s experiences” (Stringer, 2014, p. 140). Separate from the analytical codes, this round also

included attribute coding of inherent categories (Vaughn & Turner, 2016) to connect participant demographics to responses. All codes were added to the interview transcripts using Delve (2019), examples of which are displayed in Figure 4.1.

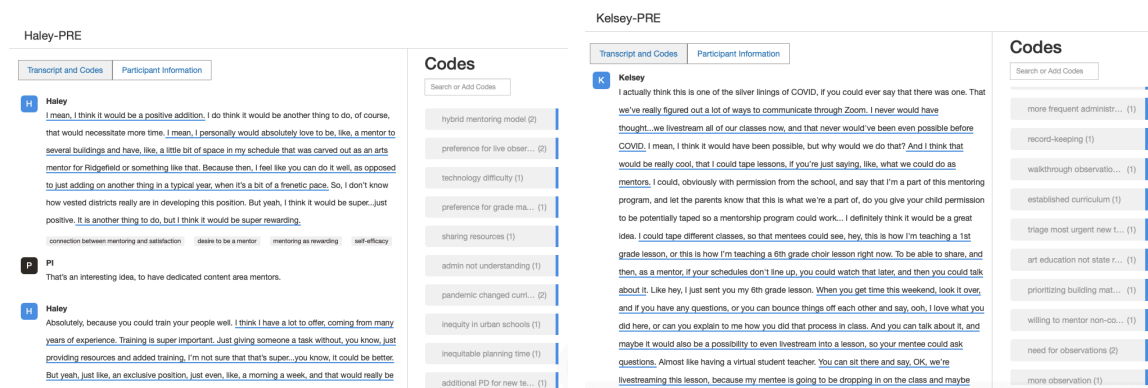


Figure 4.1. Cycle 1 coding in Delve.

Subsequent first cycle coding rounds. Following the initial round of coding, the list of codes was exported from Delve as a Microsoft Excel spreadsheet. This originally included 1,963 coded items, resulting in 421 unique codes. In the second round of first cycle coding, each code was reviewed to clarify meaning. Codes with overtly similar meanings were combined; for example, the codes *desire for more observations* and *desire for increased observations* were combined into a single code.

The third round of first cycle coding established the code types in use, which included concept, descriptive, emotion, evaluation, process, structural, and values codes (Miles et al., 2014; Saldaña, 2016), as well as some items that received multiple codes. As a result, the codes were refined to better align with the most dominant code types. Following this round, the 397 resultant codes included concept, descriptive, emotion, structural, and values codes, as displayed in Table 4.8.

Table 4.8
First Cycle Code Types

Code Type	Quantity
Concept	66
Descriptive	158
Emotion	24
Structural	35
Values	114
Total	397

Second cycle coding. In order to assist with visual organization and manipulation of the data points, various analog and digital tools were employed (Bernard et al., 2017; Saldaña, 2016). Each first cycle code was color-coded by type, written on a sticky note, and displayed (Figure 4.2).

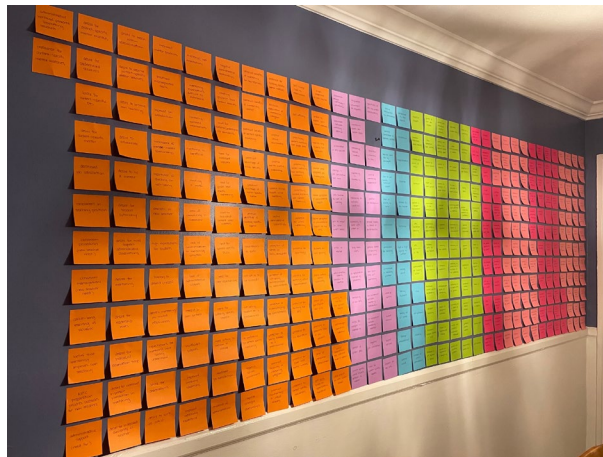


Figure 4.2. Cycle 1 coding visualization.

The codes were then visually grouped by topic (Miles et al., 2014), resulting in 33 different groupings, examples of which are shown in Figure 4.3. Each grouping was assigned a topical title (Saldaña, 2016), and this organization of the data was photographed and digitized using a spreadsheet (Figure 4.4).



Figure 4.3. Visualizations of Cycle 2 code groupings. Group titles appear on yellow sticky notes.

feelings of collegial support	positive collegial relationships	coworker support	treated as an equal	feeling valued	feeling cared for by colleagues	feeling heard
need for content-specific PD and support	need for content-specific support	one-size-fits-all mentoring	non-content mentoring	PD not content-specific	lack of content-specific PD	generic mentoring as limited effectiveness
components of professional isolation	lack of student interactions	difficulty of teaching arts online	itinerant positions	workload prevents collaboration	one-person department	no one available to provide answers
arts content specialization issues	teaching assignment outside specialization	broadness of certification	teaching assignment within specialization	teaching assignment outside content area	variety within content area	variety of music methodologies
importance of admin support	administrative support connected to retention	positive job satisfaction	administrators set building culture	administrative support for mentoring	teacher perception of admin support for arts	administrative support (need for)
desire for professional respect and autonomy	desire for teacher autonomy	desire for increased flexibility as teacher	perception of being treated as a professional	desire for increased observation time	improved working conditions	scaffolded PD
components of positive school environment	school as a community	support for the arts	support from school community	support from parents	community involvement	positive school environment
components of negative school environment	need for additional staff in department	underdeveloped arts programs	lack of consistency in staff	student discipline	schedule changes	negative school environment
lack of administrative support	administrative workload prevents supporting Ts	perception of micromanaging by admin	negative administrative relationships	lack of administrative support	mistrust of administration	desire for more frequent admin observations
arts teacher marginalization	impact of standardized testing	feeling disrespected by administrators	feeling misunderstood	fear of not having sufficient support	marginalization	arts education not state requirement
connection to students	student buy-in	value of arts for students	arts provide opportunities for students	student engagement	student interaction	student learning
added demands for arts teachers	performance focus	growth of own arts program	barriers to student involvement in arts	expectation to run extracurriculars	arts education advocacy	arts as unique (vs. other content areas)
teacher burnout	exhaustion	feeling out of control	overwhelmed	fight-or-flight response to conflict	burnout	unmanageable workload
excessive new teacher workload	walkthrough observations ineffective	limitations of DPAS structure	unnecessary paperwork	paperwork for new teachers	need for additional PD for new teachers	DPAS
collaboration with arts colleagues	collaboration with arts teachers	relationships with other arts teachers	related arts team	difficulty finding time to meet	collaborative nature of music	relationship-building
teacher stress and mental health	importance of checking on well-being	stress	frustration	teacher mindset	teacher mental health	
networking	mentoring as networking	networking with fellow new teachers	PLCs	networking with experienced teachers		

Figure 4.4. Digitized Cycle 2 code groupings in Excel. Group titles appear in gray.

The second cycle coding process was repeated to create a new set of groupings, representing a different interpretation of the data (Thomas, 2006). This second round resulted in 45 different groupings, which were again assigned titles, photographed, and digitized. A third round of second cycle coding was initially planned; however, data saturation was reached following the second round, and so a third round was not completed.

Third cycle coding. Because the quantity of groupings formed during second cycle coding was too numerous to effectively form concise themes, an additional cycle of combining categories was conducted. Conceptually-related Cycle 2 categories, displayed on sticky notes, were connected visually to one another with tape and string, a process which ultimately resulted in 15 larger categories, with examples shown in Figure 4.5.



Figure 4.5. Cycle 3 code category visualizations. Cycle 2 grouping titles appear on light green sticky notes, connected with string to form Cycle 3 categories.

One of the categories was determined to contain data that were more akin to analytic memos on study limitations (Stuckey, 2015), which are discussed in Chapter 5. The remaining 14 categories were each visually grouped (Figure 4.6), given a Cycle 3 category title, photographed, and digitized in a spreadsheet (Figure 4.7).

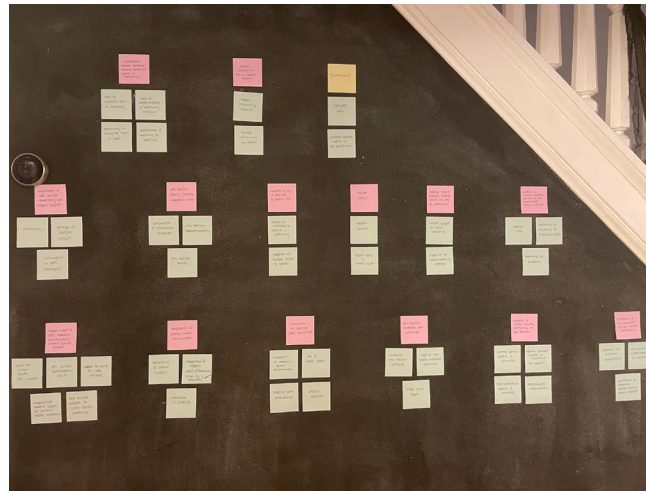


Figure 4.6. Cycle 3 categories in analog format. Cycle 2 groupings appear in light green, with Cycle 3 categories in light pink.

teacher burnout	teacher stress and mental health	importance of checking on well-being	stress	frustration	teacher mindset	teacher mental health
	teacher burnout	exhaustion	feeling out of control	overwhelmed	fight-or-flight response to conflict	burnout
new teacher obstacles and challenges	excessive new teacher workload	walkthrough observations ineffective	limitations of DPAS structure	unnecessary paperwork	paperwork for new teachers	need for additional PD for new teachers
	negative new teacher emotional experiences	overwhelmed as new teacher	reality shock	thrown in	self-worth based on administrative evaluation	not set up to be successful
	urban school issues	no pref. for content-specific mentoring	desire for district-specific mentor matches	perceived advantage of district-specific mentor	perceived advantage of building-specific mentor	prioritizing building over content matching
positive teacher attitudes toward virtual delivery of mentoring	preference for virtual mentoring meetings	technology-facilitated options	focused discussions	discussion topics	regular mentoring meetings	initial in-person meeting
	teacher support of virtual mentoring	similarity of in-person + virtual mentoring	virtual mentoring differences	perceived advantage of virtual delivery	perceived flexibility of mentoring program	positive attitude toward virtual mentoring
benefits of content-specific mentoring for experienced teacher mentors	mentor roles	sounding board	providing meaningful feedback	modeling positive attitude	organization (mentor trait)	openness (mentor trait)
	mentoring as opportunity for professional growth	opportunities for growth	changes in job satisfaction over time	recognition for good teaching	learning from mentees	personal growth
	mentoring as rewarding	refreshing	mentee growth	lightbulb moment	mentoring as contributing to future of profession	self-efficacy
benefits of content-specific mentoring for new teachers	mentees' perceived benefits of intervention	shared pedagogical resources	pedagogical resources	pedagogical discussions	collaboration on lesson ideas	teaching pitfalls to be avoided
	mentors' perceived benefits of intervention (for mentees)	classroom environment	teaching strategies	differentiated instruction	special-needs students	mentee FAQ list
	informal/emotional benefits of intervention	mentoring reduces new teacher stress	mentoring reduces isolation	self-confidence	informal mentoring	open communication with mentor
	mentor-mentee collaboration	collaboration to propose solutions	collaborative viewing of observation videos	m/m collaboration to share ideas	m/m collaborative problem-solving	m/m collaboration to share best practices
importance of non-evaluative two-way content observations	preference for in-person observations	difficulty of virtual observations	technology learning curve	hybrid mentoring model	technology difficulty	desire for increased in-person interactions
	non-evaluative content observations of mentees	non-evaluative observations	observations of mentee	mentor observations of mentee	desire for credentialed observers	preference for content-specific evaluations
	observation of content-specific veteran teachers	guest instructor as mentoring activity	two-way observations	virtual observations	technology-facilitated observations	observations of mentor

Figure 4.7. Cycle 3 categories in digital format. Cycle 2 groupings appear in light green, with Cycle 3 categories in light pink.

Fourth cycle coding. The final coding cycle distilled the 14 categories into four overarching themes (Bazeley, 2013) that represent a synthesis of participants' experiences (Madison, 2005). During this process, groupings of sticky notes were again connected with tape and string to visually represent conceptual links (Figure 4.8), before being photographed and digitized in a spreadsheet (Figure 4.9).

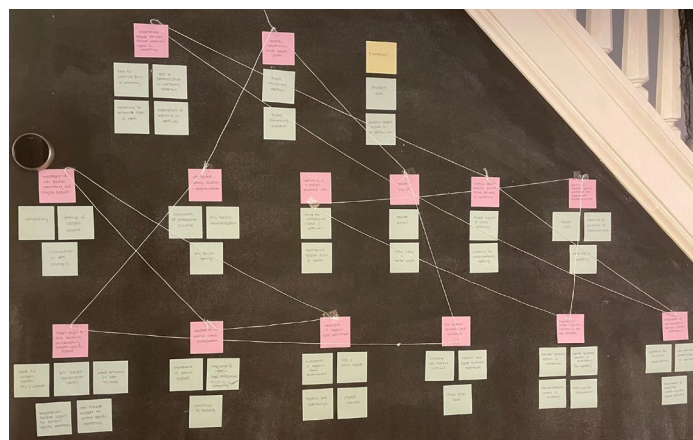


Figure 4.8. Analog visualization of Cycle 4 themes.

Arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors.	mentoring as a desired leadership role	desire for professional respect and autonomy	desire for teacher autonomy	desire for increased flexibility as teacher	perception of being treated as a professional
		experienced teacher desire to mentor	desire for leadership roles	desire to be a mentor	previous experience as a mentor
	benefits of content-specific mentoring for experienced teacher mentors	mentor roles	sounding board	providing meaningful feedback	modeling positive attitude
		mentoring as opportunity for professional growth	opportunities for growth	changes in job satisfaction over time	recognition for good teaching
		mentoring as rewarding	refreshing	mentee growth	lightbulb moment
	benefits of content-specific mentoring for new teachers	mentees' perceived benefits of intervention	shared pedagogical resources	pedagogical resources	pedagogical discussions
		mentors' perceived benefits of intervention (for mentees)	classroom environment	teaching strategies	differentiated instruction
		informal/emotional benefits of intervention	mentoring reduces new teacher stress	mentoring reduces isolation	self-confidence
		mentor-mentee collaboration	collaboration to propose solutions	collaborative viewing of observation videos	m/m collaboration to share ideas
	positive teacher attitudes toward virtual delivery of mentoring	preference for virtual mentoring meetings	technology-facilitated options	focused discussions	discussion topics
Participants view virtual delivery as a viable strategy for some aspects of state-mandated mentoring, and prefer a hybrid model that includes non-evaluative, two-way observations and an emphasis on practical application.		teacher support of virtual mentoring	similarity of in-person + virtual mentoring	virtual mentoring differences	perceived advantage of virtual delivery
	importance of non-evaluative two-way content observations	preference for in-person observations	difficulty of virtual observations	technology learning curve	hybrid mentoring model
		non-evaluative content observations of mentees	non-evaluative observations	observations of mentee	mentor observations of mentee
		observation of content-specific veteran teachers	guest instructor as mentoring activity	two-way observations	virtual observations
	experienced teacher attitudes toward continued needs in mentoring	mentoring for multiple types of needs	new to the school	mentoring for teachers who migrate	multiple mentors for different needs
		expectations of mentoring as beneficial	expectations for mentoring program	intervention implemented with fidelity	mentoring program organization
			desire for changes in	practical application of	hands-on experiences in

Figure 4.9. Digital visualization of Cycle 4 themes.

Theme statements were composed to represent each of the four larger concepts (Thomas, 2006), and these were reviewed during peer debriefing sessions with the dissertation adviser to provide an outside view of the data (Shenton, 2004). Member checking was also employed at multiple points throughout the data collection and analysis process to verify accuracy and engage participants in the process (Frost et al., 2018). During the interviews, member checking was frequently used in the form of asking for clarification of participants' meanings. Following the intervention period,

participants were also provided the opportunity to review their interview transcripts and add any additional thoughts. Two participants, Gina and Mia, elected to review their transcripts. Both asked logistical questions about the future of the VPA Mentoring Program, but neither chose to add to or edit their responses.

Presentation of Findings

Throughout the participant interview process and analysis of the qualitative data, four themes emerged, each of which aligns with one or more of the study's research questions (RQ):

1. Arts teachers believe that the opportunity to network and collaborate with other arts colleagues is vital, along with factors such as administrative support, connection to students, physical resources, and schoolwide support for the arts, which impact their job satisfaction. (RQ2, RQ3)
2. Teachers of the arts perceive themselves as having unique identities, perspectives, and professional demands, compared to non-arts teachers, which contribute to feelings of isolation, marginalization, and burnout, and influence future career plans. (RQ1, RQ3)
3. Arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors. (RQ1, RQ2, RQ3)
4. Participants view virtual delivery as a viable strategy for some aspects of state-mandated mentoring, and prefer a hybrid model that includes non-evaluative, two-way observations and an emphasis on practical application. (RQ3)

Table 4.9

Final Qualitative Themes with Component Categories and Subcategories

Theme / Category / Subcategory

1. **Arts teachers believe that the opportunity to network and collaborate with other arts colleagues is vital, along with factors such as administrative support, connection to students, physical resources, and schoolwide support for the arts, which impact their job satisfaction.**
 - a. Importance of arts teacher networking and collegial support
 - i. *Collaboration with arts teacher colleagues*
 - ii. *Networking*
 - iii. *Feelings of collegial support*
 - b. Components of positive school environment
 - i. *Importance of administrative support*
 - ii. *Connection to students*
 - iii. *School as a supportive community*
 - c. Components of negative school environment
 - i. *Negative school environment*
 - ii. *Lack of administrative support*
 - iii. *Negative peer relationships*
 - iv. *Physical resources*

2. **Teachers of the arts perceive themselves as having unique identities, perspectives, and professional demands, compared to non-arts teachers, which contribute to feelings of isolation, marginalization, and burnout, and influence future career plans.**
 - a. Issues unique to arts teaching necessitating content-specific support
 - i. *Need for content-specific PD and support*
 - ii. *Arts content specialization issues*
 - iii. *Experienced teacher support for content mentoring*
 - iv. *New teacher support for content mentoring*
 - v. *Added demands for arts teachers*
 - b. Arts teacher identity, isolation, and marginalization
 - i. *Components of professional isolation*
 - ii. *Arts teacher marginalization*
 - iii. *Arts teacher identity*
 - c. New teacher obstacles and challenges
 - i. *Excessive new teacher workload*
 - ii. *Negative new teacher emotional experiences*
 - iii. *Issues unique to urban schools*
 - d. Teacher burnout
 - i. *Teacher stress and mental health*
 - ii. *Teacher burnout*

- e. Factors influencing future career plans
 - i. *Factors influencing migration*
 - ii. *Factors influencing retention*
 - 3. Arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors.**
 - a. Mentoring as a desired leadership role
 - i. *Desire for professional respect and autonomy*
 - ii. *Experienced teacher desire to mentor*
 - b. Benefits of content-specific mentoring for experienced teacher mentors
 - i. *Mentor roles*
 - ii. *Mentoring as an opportunity for professional growth*
 - iii. *Mentoring as rewarding*
 - c. Benefits of content-specific mentoring for new teachers
 - i. *Mentees' perceived benefits of intervention*
 - ii. *Mentors' perceived benefits of intervention (for mentees)*
 - iii. *Informal/emotional benefits of intervention*
 - iv. *Mentor-mentee collaboration*
 - 4. Participants view virtual delivery as a viable strategy for some aspects of state-mandated mentoring, and prefer a hybrid model that includes non-evaluative, two-way observations and an emphasis on practical application.**
 - a. Positive teacher attitudes toward virtual delivery of mentoring
 - i. *Preference for virtual mentoring meetings*
 - ii. *Teacher support of virtual mentoring*
 - b. Importance of non-evaluative two-way content observations
 - i. *Preference for in-person observations*
 - ii. *Non-evaluative content observations of mentees*
 - iii. *Observations of content-specific veteran teachers*
 - c. Experienced teacher attitudes toward continued needs in mentoring
 - i. *Mentoring for multiple types of needs*
 - ii. *Expectation of mentoring as beneficial*
 - iii. *Need for practical focus in mentoring*
 - iv. *Lack of communication in mentoring program*
-

Each theme is discussed in detail in this section. Participants and their schools are referred to using pseudonyms to protect confidentiality (Creswell & Poth, 2018; Mertler, 2017). Detailed descriptions and verbatim quotes are included to most accurately convey participants' experiences (Bernard et al., 2017; Shenton, 2004) and represent diverse

perspectives (Maxwell, 2010). Final themes, and the second and third cycle categories contained within them, are displayed in Table 4.9.

Theme 1: Collaboration and job satisfaction (RQ2, RQ3). In participants' discussions of their job satisfaction, the following theme emerged: *Arts teachers believe that the opportunity to network and collaborate with other arts colleagues is vital, along with factors such as administrative support, connection to students, physical resources, and schoolwide support for the arts, which impact their job satisfaction.* In particular, when describing their experiences in the mentoring program, participants overwhelmingly emphasized the importance of collaborations with arts teacher colleagues as a tool for making teaching responsibilities more manageable. As Emma summarized, "let's work together, figure this out, so that we're all...making things better, instead of working on our own and then just making it barely, because we don't have that kind of time." The theme drawn from these statements includes (a) the importance of arts teacher networking and collegial support, (b) components of a positive school environment, and (c) components of a negative school environment.

Arts teacher networking and collegial support. Participant responses highlighted the importance of collaboration with arts-specific colleagues (Charner-Laird et al., 2016) as a vital part of developing a supportive professional culture (Ado, 2013). Some participants pointed to the lack of opportunity to network with arts colleagues, primarily because, as Kelsey noted, "everybody is so busy with their teaching schedules during the day." Several participants pointed to this as a negative element of their teaching experience:

Gina: More interaction would be nice, but just finding the time...is not always possible.

Ashley: I know how much trouble it is to get together with my counterparts at different schools. We hardly ever see each other.

Kim: I didn't have any support in terms of other art teachers...and we didn't really have the opportunities to speak to anyone from other schools either.

Others noted how increased focus on, and time for, collaboration, due to the mentoring program, as well as the flexibility of online teaching, had improved their practice:

Julie: We got to meet most of the time, almost every week. And with the Zoom component, now that we can all Zoom, it's so much more convenient.

Brittany: I'm getting to meet weekly with the arts teachers in my district, because of those virtual meetings, when I didn't have that before.

Haley: My team, we're just strategizing great ways to do what we do online, and it's just been a really great educating experience.

Natalia: It keeps me reflecting on my own practices and not getting jaded, and not getting rusty.

Components of positive school environment. Overall, participants held positive or neutral views of their jobs, with many describing themselves as “happy” or “satisfied”. When asked about the aspects of their job with the most impact on satisfaction (Interview Protocol question 9, as found in Appendix E), administrative support was cited, nearly

without exception, as the most impactful factor. Several participants described various ways in which their administrators supported the arts specifically:

Ashley: [My principal] is very trustworthy, and he believes that his teachers know what they're doing, and will do what's expected of them if he lets them have that time.

Courtney: I also feel like, as we're starting to plan for next school year, our...building-level admin has been very open and ensuring that they're including related arts as a part of the discussion.

Brittany: I've always sought out a place that had an administration that was supportive, so that I feel like they're going to let me run my program. So, I have some...ownership in what I do here.

This administrative support was described as a main contributor to the concept of *school as a supportive community*. Teachers who described their job in this way emphasized elements that included the *perception of school as a family atmosphere* (Kelsey, Kim, Natalia), *feeling comfortable in [their] teaching position* (Gina, Julie), *support from the school community* (Ben, Margaret), and *value placed on the arts* (Jessica, Michelle, Tiffany). Another commonly-named factor included elements of building connections to students, such as student *motivation, buy-in, engagement, interactions, and learning*, as well as teacher beliefs such as *students as the first priority, value of the arts for students, and student growth as meaningful to teacher*.

Components of negative school environment. For those participants who perceived their school as a negative environment, *lack of administrative support* was a

common catalyst. These teachers recalled administrators placing little value on the arts, as Gina summed up:

I just don't know that it will ever be a priority, and that breaks my heart, that all the different content areas aren't treated equally in the education system. That's not something that they teach you in college. They teach you how to advocate, but they don't teach you how it's really going to be in practice.

Some described their administrators as simply not understanding the arts; as Kim said, "they come up with these plans, and they don't think of anyone other than the core classes." Several participants (Courtney, Margaret, Mia, Michelle) reported being required to teach outside of their certification area as a negative contributor to job satisfaction, a practice that is not uncommon, but almost entirely unique to teachers of the arts (Abril & Bannerman, 2015). One novice teacher, Tracy, recounted her experience with an administrator who was so deeply convinced that music was a class "where you play and you just relax" that she directed the school's custodial staff to throw away the collection of school-owned percussion instruments without Tracy's knowledge.

Separate from administrative relationships, other elements that contributed to teachers' negative perceptions included *student discipline*, *schedule changes*, and *negative collegial relationships*. Secondary teachers in particular reported difficulty obtaining the necessary physical and human resources, citing dissatisfaction with *budget quantity* and the *number of staff in [their] department* as contributing to an underdeveloped arts program.

Theme 2: Arts teacher identity (RQ1, RQ3). A second theme centered around arts teachers' professional identities and the professional experiences contributing to and

resulting from them: *Teachers of the arts perceive themselves as having unique identities, perspectives, and professional demands, compared to non-arts teachers, which contribute to feelings of isolation, marginalization, and burnout, and influence future career plans.*

When participants described their teaching experiences, many referenced tasks, priorities, and experiences that are unique to teachers of the arts. As Judith explained:

We need a little bit of grace and a little bit of flexibility. And it's not because we're being defiant or we don't want to improve our teaching; it's because our teaching doesn't work the same as anyone else's.

The concept of arts teachers' experiences as defined by identities and challenges specific to their content areas emerged as a major theme, including (a) issues unique to arts teaching, (b) novice teacher obstacles and challenges, (c) arts teacher identity, isolation, and marginalization, (d) teacher burnout, and (e) factors influencing future career plans.

Issues unique to arts teaching. Participants who taught music in particular emphasized elements of their positions beyond the typical expectations of general classroom teachers.

Ben: Our job's just different. And I hate to use the word harder, but I think it's harder. Because there's so much more time involved. But that's the other thing. Nobody that I work with who teaches social studies, teaches social studies from six to nine on Monday and Thursday.

Tiffany: I see 700 kids, and it's just me.

Kelsey: Every single second of my day was go-go-go, and I would have a three-year-old class walk out and a high school class walk in.

Doug: This job of traveling between all different schools, and having, like, no free time...I'm worried about time, always.

Natalia: Even our other related arts teachers...we're all kind of on the same playing field, but definitely not with the same balls.

Job responsibilities in addition to those of a non-arts teacher included *budget management, scheduling, alignment with feeder programs, curriculum development, performances, special arts events, expectation to run extracurriculars, and arts education advocacy*. Several teachers (Ashley, Ben, Doug, Gina, Philip) noted that the pandemic-related limitations placed on public performances and after-school activities during the 2020-2021 school year actually enabled them to work less unpaid overtime hours than during a typical year. However, secondary music teachers, whose programs are largely dependent on student elective involvement, expressed concerns over *student recruitment and retention* and the *challenges of rebuilding programs post-pandemic*.

Another common concern expressed mainly by music teachers was the likelihood of working in a position either partially or completely outside of their artistic specialization, a common but detrimental practice for arts teachers (Abril & Bannerman, 2015; Conway, 2002) that often occurs in states, including Delaware, that offer generic K-12 arts teaching certifications (14 DE Code § 1505). Although not specifically asked about sub-content specialization, five of the 13 music teachers interviewed (Alexis, Doug, Kelsey, Philip, Tiffany) described working in specializations in which they had not been explicitly trained during their teacher preparation programs.

Experienced participants noted the needs for *content-specific support, content-specific PLCs, and guidance from content teachers*, elements that are lacking for teachers

of the arts across the country (Gallo, 2018; Schneckenburger, 2014). Some teachers shared their perspective on the lack of content-specific teacher supports:

Mia: It feels like, in Delaware, our supervisors are really spread thin and don't always have the arts background. So, I kind of wish districts, if not shared by districts, would make that investment and make sure they're adequately supporting their arts teachers this way.

Emma: It's hard, because nothing is really geared towards us. We have to take what they give the [general education] or [special education] people, and then we have to figure out how to fit that into our life. And sometimes it doesn't.

They also criticized the *one-size-fits all* structure of the state-mandated mentoring program that does not account for differences between arts or other specialized teachers and their general education counterparts:

Ashley: I definitely think it's necessary to be paired with somebody who teaches something similar to what you teach, or at least the subject matter. And I don't know if that always happens with the mentoring program.

Doug: I've never been in a district that had a program where you're actually assigned a mentor who's an arts teacher elsewhere in the district. And I wish that that had existed.

Novice teacher obstacles and challenges. With these arts-specific needs in mind, veteran teacher participants pointed to *excessive new teacher workload* as a significant concern for novice teachers, acknowledging that additional professional development is needed for new teachers, but that the current DPAS-II(R) teacher evaluation system

results in *excessive paperwork for new teachers* and the sense of completing professional learning purely for the purpose of *fulfilling requirements*.

Novice teacher participants, who were less aware of the differences in DPAS-II(R) requirements, spoke about their negative emotional experiences. Cynthia stated, “as a new teacher, I don’t know if I’m doing it right”, while Jessica pointed out, “you don’t have relationships with anyone.” Some described feeling *idealistic as a new teacher*, then experiencing what researchers have termed *reality shock* (Ensign & Woods, 2017; Van Overschelde et al., 2017). Novice and experienced participants alike recounted their first years of teaching as feeling that they were *thrown in*, (Gina, Kelsey, Kim), “thrown to the wolves” (Judith), or *not set up to be successful*, resulting in feeling *overwhelmed as a new teacher* and recognizing a *need for increased support*. As Cynthia summarized, “I felt, in general, I was pretty much on my own.”

Arts teacher identity, isolation, and marginalization. The extent to which arts teachers are consumed by arts-specific issues in their teaching positions, coupled with the fact that many are working artists themselves, led to an arts-centric sense of teacher identity for many participants. Experienced teachers in particular expressed the perception of their own professional identity as an *arts teacher*, rather than simply a *teacher*, and several indicated that they would not consider teaching as a career if they could not teach within their arts content area:

Carolyn: I have just always introduced myself as the messy art teacher.

Tracy: I’m so happy I don’t have to teach a core subject!

Courtney: If I was not a music teacher, I’m not sure I’d be working in the education field.

This arts-specific teacher identity resulted for some participants in feelings of professional isolation within their school community. Many explicitly described being a *one-person department* (Ben, Brittany, Courtney, Emma, Jessica, Judith, Julie, Michelle) with *no one available to provide answers* (Kelsey, Kim) within their own building, yet indicated that their *workload prevents collaboration* with other arts teachers. As Ben said:

I don't do well when I over-commit, and I have a hard time saying no...so then I say yes, yes, yes, and then I kind of end up – pardon the expression – half-assing stuff, because I just don't have the time to do it right.

This isolation was compounded for some by *marginalization* within their school communities, described by Emma as, “You don't feel like you belong to the school.” Participants described an overall *devaluing of the arts* within their schools, evidenced by arts teachers being given *inequitable planning time*, feeling *misunderstood* and *disrespected by administration*, the *lack of an established curriculum*, and *not being treated as a professional*. As Judith summed up, “you've hired us to be experts in our fields, so treat us as such.”

Teacher burnout. The demanding nature of teaching, combined with feelings of professional isolation and marginalization, led many participants to describe feelings of “we're just burning people out” (Gina), warning of its danger for new teachers if working conditions do not improve:

Doug: We have to acknowledge that it is a profession that keeps pushing people to the brink.

Judith: We put a lot of pressure on people, and I think that's why you see the burnout rate that you do.

Kelsey: You just become overwhelmed and frustrated, and burnout happens a lot faster, I think.

Factors influencing future career plans. Despite these challenges, none of the participants indicated an immediate plan to leave the teaching profession. However, many expressed the desire to migrate or advance within arts education, such as by changing schools, or transitioning from elementary to secondary, or secondary to higher education. Those who considered migrating cited largely personal factors, such as a spouse's work (Brittany, Courtney), commute time (Cynthia, Doug, Judith), or childcare and family obligations (Haley, Julie, Kelsey, Natalia). Overall, the majority of participants indicated that they intended to remain in their current teaching positions, at least for the coming school year.

Theme 3: Perceptions of mentoring (RQ1, RQ2, RQ3). In analyzing participant responses surrounding their perceptions of the mentoring intervention itself, the following theme emerged: *Arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors.* All participants who were interviewed stated the belief that novice teacher mentoring is beneficial, even those who pointed out areas of necessary improvement to the content-specific mentoring intervention and the standard state-mandated program. The importance of content-specific, grade level-specific, and building- or district-specific mentor matching was at the root of many participant statements:

Julie: I was able to tell her some resources, she actually shared resources with me, and I feel like we had that same interest. So, we automatically took to each other because of that.

Margaret: If you say anything about what I said, it's definitely have them with [mentors in] their content.

The advantages identified by participants included both (a) benefits of content-specific mentoring for experienced teacher mentors and (b) benefits of content-specific mentoring for novice teachers.

Benefits for experienced teacher mentors. Participants who served as mentors described the experience as *rewarding* and characterized it as an *opportunity for professional growth*:

Mia: It made me feel connected to my actual profession. And I didn't have that at the beginning of the year. So, that was important.

Philip: Being considered as a mentor just, to me, shows...recognition that I am seen as someone that would be viewed as a mentor, my style and how I approach education...so that was kind of rewarding.

Gina: It has definitely made me feel...confident in a lot of things. This has helped me also build my own confidence in what I can do.

They described mentoring as *mutually beneficial*, saying:

Courtney: As much as I hope to help them, they often help me.

Julie: As a mentor, I gain just as much as they do, because I bounce ideas off of them, see how it works for them, why do they do certain things.

Mentors reported taking on multiple *mentor roles* throughout the program, describing their responsibilities as *providing guidance, modeling a positive attitude, providing meaningful feedback*, and acting as a *sounding board* for ideas.

Mentoring as a desired leadership role. The veteran teachers who were interviewed expressed favorable attitudes toward serving as content-specific mentors, often comparing the experience to mentoring pre-service student teachers or practicum students:

Kelsey: I think it gives me...I don't want to say motivation, but just kind of like when I had a student teacher, I was excited about it.

Kim: I think I would like having...someone to help through the first couple years, because I know I would have appreciated that.

Many experienced teachers (Ben, Brittany, Courtney, Emma, Judith, Mia, Michelle, Natalia, Philip, Tiffany) emphasized their *desire for professional respect and autonomy*, and stated that the content-specific mentoring program improved their *perception of being treated as a professional* and allowed them to individualize the mentoring experience for their mentees. As Ben said:

For me to walk away at the end of a mentoring experience and say that it was worthwhile, I would have to feel like there was definitely a level of personal interaction that made it something that nobody else could have done. Maybe not nobody else could have done, but somebody who wasn't subject-specific couldn't have done.

Benefits for novice teachers. Both novice and experienced teacher participants expressed beliefs that the content-specific mentoring intervention was beneficial for novice teacher mentees. As Alexis, a novice teacher, shared:

Having a music mentor was just great, because Mia would share with me different situations or problems she had, but she was able to conquer or overcome those obstacles...just having that support, and having somebody there to just listen and understand that what I might be facing that day or that week, they faced that too. Mentees' perceived benefits of the program were largely practical, including concepts such as *shared pedagogical resources, pedagogical discussions, lesson planning, classroom management, instructional technology, and sharing common experiences among teachers*. In addition to these more immediate needs, mentors and prospective mentors identified larger-scale concepts about which mentees could gain knowledge and skill through mentoring, such as *vertical alignment, differentiated instruction, developing realistic goals, and culturally responsive pedagogy*.

Nearly all participants in the intervention pointed out informal or emotional benefits of mentor support, such as:

Brittany: Having someone who, it's kind of their job, their expectation, to be your person is kind of a safety net.

Jessica: Just having that person that you can go to when there is stuff that you really don't know, or there have been times where I went in asking questions, not expecting to get much out of it, but then they thought about things before I even thought of them.

Gina: Having somebody they can really confide in, and it's not an admin that's gonna breathe down their neck about whatever they're doing, it's that full support.

Tracy: She says, I got you...and she literally does have me. And I'm ecstatic about that part.

Doug: I really think that the main purpose of the mentoring program is just to give them somebody to talk to...I'm telling you all this because a proper mentor would have changed a lot of this for me. I didn't have anyone to talk to.

Theme 4: Preferred mentoring structures (RQ3). The final emergent theme centered around participants' discussions of their desired elements and delivery methods for future mentoring programs: *Participants view virtual delivery as a viable strategy for some aspects of state-mandated mentoring, and prefer a hybrid model that includes non-evaluative, two-way observations and an emphasis on practical application.* Participant attitudes surrounding virtual delivery of mentoring elements varied considerably, likely due to the extreme diversity in teaching settings occurring between different schools and districts during the 2020-2021 school year. At the time the interviews were conducted, most participants were teaching in a hybrid setting due to the COVID-19 pandemic. However, some shared that they were teaching remotely (Cynthia, Doug, Emma, Haley, Julie, Philip), while others were fully in person (Gina, Judith, Kelsey), or even required to teach outdoors (Mia). However, common statements and experiences emerged, including (a) positive teacher attitudes toward virtual mentoring, (b) the importance of non-

evaluative two-way content observations, and (c) experienced teacher perceptions of continued needs in the mentoring program.

Positive attitudes toward virtual mentoring. Undoubtedly, the climate of constantly-changing virtual, hybrid, and in-person instruction in place throughout the 2020-2021 school year had some influence on teachers' attitudes toward virtual delivery of the mentoring intervention. While it was originally anticipated that difficulty with technology use would be a primary obstacle to the intervention, it was nearly non-existent. Many participants indicated a preference for weekly mentoring meetings to continue to be conducted virtually, citing the more convenient scheduling it provided. As Gina explained:

It made it easier for access; it made it easier for sharing, without having to get coverage. Without having to navigate, like, how are we going to meet in person. We don't have to with these tools, and I feel like it's something we should definitely continue for those weekly meetings.

Although Kelsey described being "intimidated by [technology] at first", Brittany echoed the sentiment of many participants, saying, "it's opened up a lot of avenues that I feel like were closed before." Jessica expressed surprise at how similar the virtual mentoring experience had been to her previous in-person mentorship. Experienced teachers Ashley and Doug stated that they would be more willing to serve as mentors in the future if the program were delivered virtually, due to its increased flexibility.

Non-evaluative two-way content observations. One element of mentoring about which nearly all participants were in agreement was the necessity of non-evaluative two-

way observations between novice and experienced teachers in the same content area, which Haley described as “absolutely crucial”:

Judith: I do think peer observations are wonderful...where mentors go in to mentees, and mentees go in to mentors, and see that kind of stuff.

Ashley: I think that would be the most valuable, or one of the most valuable, things you could do, is have online Zoom meetings where you are having a lesson.

Julie: It should be more of a peer-to-peer interaction, and I think those [DPAS] rubrics kind of remove that and make it more an “I caught you” kind of thing.

Ben: I like the idea of observations, but we have to crack that wall of that, it’s always somebody out to get you...we need to return to the notion that we can be observed by colleagues in a non-threatening way.

Despite participants’ positive attitudes toward virtual delivery overall, many stated that they would prefer the observation component to occur in person. Gina and Julie each suggested a hybrid format, in which weekly mentoring meetings would occur virtually, but observations would be in person, with mentors and mentees being given periodic release time to visit each other’s classrooms throughout the year.

Continued needs in mentoring. The experienced teachers interviewed expressed multiple suggestions for continued improvements to be made to the mentoring program. Many of these centered around ways to reduce the amount of paperwork required of novice teachers. As Gina said, “more paperwork is not going to prove that you’re a better teacher.” Several participants emphasized the need to make mentoring more practical for

novice teachers. Judith stressed the need for “usable, implementable things”, while Natalia recommended “hands-on practical experience and observation”, and Alexis desired the ability to “just focus on my craft and what I’m teaching.”

Some novice teachers (Cynthia, Jessica) requested increased communication about requirements and procedures in the VPA Mentoring Program, while experienced teachers (Courtney, Gina) emphasized the need for shared objectives between DDOE administrators of the program and mentor teacher participants. As Ashley explained, “trying to figure out how best people can learn in this situation, so that they can be better teachers, and feel good about what they do, and stay in the profession.”

Chapter Summary

Data were gathered from a total of 47 participants in three groups: novice teachers, mentor teachers, and prospective mentors. All participants completed the MMASQ quantitative instrument, and 23 participants opted to engage in semi-structured follow-up interviews. Novice and mentor teachers who participated in the mentoring intervention were surveyed and interviewed at the beginning and end of the intervention’s first semester. Prospective mentors completed the questionnaire and interview once during that same semester.

Quantitative results indicated generally positive job satisfaction and low likelihood of attrition across all three participant groups. Novice teachers’ satisfaction decreased, and risk of attrition increased, throughout the course of the school year, while mentors’ responses remained consistent. Both novice and mentor teachers who participated in the study intervention responded more favorably than prospective mentors who did not participate. For all groups, *responsibility* and *work itself* were rated as the

most positive aspects of their jobs, while *workload* was rated the most negatively. All sections and subscales of the quantitative instrument demonstrated acceptable internal consistency, though results should be regarded with consideration of the study's small sample size.

Qualitative interviews were transcribed and inductively coded, resulting in 1,963 coded items and 421 unique codes. After four rounds of coding, these were distilled into four larger themes, centered around the necessity of professional relationships and networking, arts teacher identity, mentoring as mutually beneficial, and the viability of virtual delivery for mentoring, respectively. Participants overwhelmingly emphasized their feelings of professional isolation and the necessity for connections with arts teacher colleagues through mentoring. As Philip summarized, "I always knew that the mentoring program was good, because it's all about sharing, and that's really how we learn."

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND LIMITATIONS

This chapter positions the study results within the current literature on teacher attrition, job satisfaction, and mentoring. The purpose of this action research was to implement a virtual content-specific mentoring program for visual and performing arts teachers enrolled in the Comprehensive Induction Program during their first two years of employment, and to evaluate its impacts on teachers' job satisfaction and intentions to remain in their teaching positions. Both quantitative and qualitative data were collected and analyzed using the researcher-developed MMASQ instrument and individual semi-structured participant interviews, respectively. The sections that follow include the (a) discussion, (b) implications, and (c) limitations of the study, and a (d) conclusion that summarizes this research.

Discussion

The following section synthesizes the quantitative and qualitative results as they relate to each of the study's three research questions (RQs) and situates these findings within the context of the extant literature.

RQ1: How does a virtual content-specific mentoring program impact Delaware arts teachers' intentions to remain in their teaching positions?

The aim of this research question was to determine the likelihood of Delaware arts teachers to leave their positions by migrating to a different teaching position or leaving the K-12 classroom altogether. The qualitative interview questions and

subfactors within the attrition section of the quantitative instrument further endeavored to isolate specific influences on attrition likelihood. Adhering to Gallant and Riley's (2014) conceptualization of attrition as "a process, not an event" (p. 575), identifying these factors is an important first step in determining if and how mentoring might serve as a mitigating factor in this context. The resultant data provide (a) measurement of attrition intentions as well as (b) insight into two prominent factors influencing attrition: workload and arts teacher identity.

Attrition intentions. In their responses during qualitative interviews, all participants indicated plans to return to their current position for the following school year. When asked about their long-term intentions, responses varied: most expressed a desire to continue working in education, but aspired to transition to a different teaching position, either in K-12 or higher education. Reasons for these planned transitions included wanting to leave a negative school environment, the desire to teach different (higher) grade levels, and personal factors such as commuting distance and family responsibilities. However, no participants indicated a desire to teach a content area outside the arts.

The quantitative survey results on the reverse-scored attrition section provided additional insight: prior to the mentoring intervention, novice teacher participants indicated that they were less likely to leave teaching ($M = 1.16$, $SD = 0.46$) than mentor teacher participants ($M = 1.63$, $SD = 0.86$). This particular finding is surprising, given that teachers within their first five years of employment are at the highest risk for attrition and migration (Hughes, 2012; Ingersoll et al., 2014; Perda, 2013), with some researchers suggesting that up to 50% of novice teachers leave during this time (Gallant & Riley,

2014; Smith & Ingersoll, 2004). By the end of the school year, novice teacher participants' attrition likelihood had climbed ($M = 1.35$, $SD = 0.77$), while mentors' responses remained stable ($M = 1.64$, $SD = 0.98$). Both of these groups indicated a lower likelihood of attrition than prospective mentors who had not participated in the mentoring intervention ($M = 1.81$, $SD = 1.09$). Although these quantitative findings alone must be regarded cautiously given the sample size ($n = 47$), there is ample literature to support the conclusion that the mentoring intervention positively impacted participants' likelihood to remain in teaching in comparison to those who did not engage in mentoring (Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007; Xu & Payne, 2014a).

Factors influencing attrition. To answer the research question of how the mentoring intervention can impact arts teacher attrition, it is first necessary to examine the factors causing attrition to occur. The literature on this topic divides these into personal and institutional factors (Schaefer et al., 2012; Sikma, 2019), and this study focused on the influence of institutional factors that contribute to job satisfaction (Ford et al., 2018), such as working conditions, teacher burnout, and school setting (Gardner, 2010; Ingersoll et al., 2014). While these factors, particularly feelings of burnout and challenges faced by participants in urban and high-poverty school settings, were discussed at length during many interviews, two unanticipated foci emerged from the data more prominently than any others: workload and arts teacher identity.

Workload. The MMASQ contained three reverse-scored subscales related to attrition: *relation with students*, *school management/support*, and *workload*. Prior to the mentoring intervention, both the novice ($M = 1.29$, $SD = 0.69$) and mentor ($M = 2.25$, $SD = 1.05$) groups rated workload as the most negative aspect of their jobs. Following the

mentoring intervention, participants in the novice ($M = 1.83$, $SD = 1.37$), mentor ($M = 2.33$, $SD = 1.10$), and prospective mentor ($M = 2.49$, $SD = 1.31$) groups again rated workload negatively in comparison to other attrition factors. This end-of-year workload rating was not only the most negatively-rated subscale on the entire instrument, but scores from the novice and mentor groups had also worsened in comparison to their pre-intervention scores.

In comparing perceptions of workload across the three participant groups, two notable findings emerge. First, both of the participant groups containing veteran teachers (mentors and prospective mentors) rated workload considerably more negatively than the novice teacher group. This may be attributable to the cumulative effects of teacher burnout over time, leading to emotional disengagement (Aloe et al., 2013), which novice teachers have yet to experience.

Second, the mentor group rated workload less negatively than the prospective mentor group. This implies that the additional responsibility of serving as a mentor did not negatively impact participants' perceptions of their workload. Analysis of the qualitative interview data suggests that this may be due to mentors' perceptions of the VPA Mentoring Program as *mutually beneficial*, *rewarding*, and an *opportunity for professional growth*. The need for content-specific support is well-documented in the literature (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Conway, 2015; Stanley et al., 2014; White & Mason, 2006) and echoed in this study's qualitative data, in particular the *importance of arts teacher networking and collegial support* and the perception that mentoring, especially in a virtual context, provides time and opportunity for this content-specific support to occur.

Arts teacher identity. Several veteran teacher participants (Ashley, Ben, Brittany, Emma, Judith, Kelsey) emphasized the experience of teaching in an arts content area as significantly different from teachers in secondary core subjects, such as English, math, science, and social studies, or elementary general education classrooms. Yet, many experienced participants described rarely or never receiving content-specific training or support through their school or district, a claim supported by previous research (Gallo, 2018; Schneckenburger, 2014). As Judith recalled, “I’ve sat through so many [professional developments] geared towards anything but what we do.”

In addition to not receiving content-specific support, nearly half of the participants described *devaluing of the arts* as part of their school culture, feeling that, as Kelsey stated, “the arts aren’t as appreciated.” Mia described perceiving arts content areas as being “pushed to the side”, while Cynthia shared that they are “considered as fluff”, and Tracy’s school treats them as “relaxing playtime.” These statements are representative of a widespread trend of placing lower value on arts subjects (Becher & Orland-Barak, 2018) and arts teachers (Abril & Bannerman, 2015), which may contribute to a unique professional experience among arts teachers that includes feeling isolated and marginalized within their school buildings (Gaudreault et al., 2017).

These participants’ statements were part of a larger theme that emerged from the qualitative data: *Teachers of the arts perceive themselves as having unique identities, perspectives, and professional demands, compared to non-arts teachers, which contribute to feelings of isolation, marginalization, and burnout, and influence future career plans.* Although the concept of *arts teacher identity* was not initially a consideration in this study, its prevalence in the data is too prominent to ignore as a significant contributor to

professional isolation and marginalization, which are known risk factors for poor job satisfaction among arts teachers (Gaudreault et al., 2017; Verdi, 2016).

Considering the established connections in the literature between professional isolation and job satisfaction (Clark, 2012; Ensign & Woods, 2017), and job satisfaction and attrition (Abril & Bannerman, 2015; Charner-Laird et al., 2016), this study's data provide one additional link in the chain of arts teacher attrition. The results imply that the experiences which lead to development of a unique arts teacher identity also contribute to participants' feelings of professional isolation. Professional isolation lowers job satisfaction (Stanley, 2011; Verdi, 2016), and poor job satisfaction is the single biggest predictor of teacher attrition (Callahan, 2016; Ford et al., 2018). Therefore, the development of a distinct arts teacher identity may ultimately represent the beginning stages of the attrition process for Delaware visual and performing arts teachers.

RQ2: What is the impact of a virtual content-specific mentoring program on the job satisfaction of arts teachers in Delaware?

The data related to this research question provide a description of Delaware arts teachers' job satisfaction levels during the 2020-2021 school year, along with insight into factors impacting satisfaction and how they may relate to content-specific mentoring. With support from the literature to indicate that mentoring improves teacher effectiveness (Charner-Laird et al., 2016; Villar & Strong, 2007), and effectiveness is tied to self-efficacy (Sinclair et al., 2015), which influences job satisfaction (Blackburn et al., 2017; Ford et al., 2018; Van Overschelde et al., 2017), this study hypothesized a connection between mentoring and job satisfaction. The data discussed here include (a) measurement of participants' job satisfaction and (b) significant factors impacting

participants' satisfaction levels; namely, administrative support, responsibility, and networking with arts colleagues.

Participant job satisfaction. The job satisfaction section of the quantitative MMASQ instrument provided a composite score from 1 to 5 for each participant group, compiled from four subscales: *colleagues*, *working conditions*, *responsibility*, and *work itself*. On the pre-intervention administration of the survey, novice teacher participants reported higher job satisfaction ($M = 4.74$, $SD = 0.49$) than experienced mentor participants ($M = 4.43$, $SD = 0.80$). However, by the end of the school year, novice teachers' satisfaction had decreased measurably ($M = 4.55$, $SD = 0.59$), while mentor teachers' levels increased slightly ($M = 4.50$, $SD = 0.71$). Both the novice and mentor groups engaged in the VPA Mentoring Program reported higher job satisfaction at the end of the intervention than prospective mentors ($M = 4.44$, $SD = 0.75$) who had not participated. Despite these differences, satisfaction levels for all three groups can be considered relatively high.

When asked about “current satisfaction” with their jobs (Interview Protocol question 7, as found in Appendix E), several participants (Courtney, Kelsey, Mia, Natalia, Philip) laughed openly at the question. Carolyn responded, “I don’t think you can really answer that this year”, and others asked for clarification on whether their answer should reflect, as Brittany termed, “pre-COVID or post-COVID.” When prompted to provide any response they felt compelled to share, nearly all the participants reported extremely positive feelings about their jobs. However, many elaborated to describe caveats to their positive statements as a result of instability caused by the COVID-19 pandemic. In Tiffany’s opinion, “I don’t think anyone’s satisfied this year. I

think we're just doing the best that we can." Despite the challenges unique to the 2020-2021 school year, the responses of experienced teachers in particular reflected a belief that these challenges were temporary and not reflective of their typical job satisfaction.

Factors influencing job satisfaction. In examining the aspects of arts teachers' jobs that influenced their satisfaction, several findings were expected based on the literature, including administrative support (Gardner, 2010; Krueger, 2000), self-efficacy (Hanson, 2017; Mishra & Koehler, 2006; Romar & Frisk, 2017), classroom management (Aloe et al., 2013; Ben-David, 2017), and professional isolation (Becher & Orland-Barak, 2018; Verdi, 2016). This study's data revealed three prominent factors supporting the extant literature and providing new information about the connection between job satisfaction and mentoring for Delaware arts teachers: (a) administrative support, (b) responsibility, and (c) networking with arts colleagues.

Administrative support. During their interviews, participants were asked about factors having the strongest impact on their job satisfaction (Interview Protocol question 9, as found in Appendix E). Nearly every participant in the study singled out *administrative support* as the most influential factor contributing to either a positive or negative overall school environment and connected this closely with whether or not their school community placed value on the arts content areas. Those who perceived their administrators as valuing the arts described their school buildings as a *supportive community* or *family atmosphere* that enabled them to take what Brittany termed "ownership" of their programs. In contrast, those whose administrators and school communities devalued the arts discussed isolating experiences. Among them were

Emma, who claimed “we’re not seen” and Kim, who described “not feeling understood by my peers and the administration.”

Responsibility. Of the four subscales in the job satisfaction section of the MMASQ, *responsibility* was the most highly rated overall. Although the novice teacher group rated *responsibility* ($M = 4.88$, $SD = 0.34$) slightly lower than *work itself* ($M = 4.92$, $SD = 0.41$) on the pre-intervention administration, they rated these two factors as equivalent at the end of the year ($M = 4.71$, $SD = 0.46$ for both subscales). Both the mentor (Pre: $M = 4.92$, $SD = 0.28$; Post: $M = 4.83$, $SD = 0.38$) and prospective mentor ($M = 4.84$, $SD = 0.37$) participant groups consistently rated *responsibility* more favorably than any other job satisfaction factor.

When interviewed, novice teachers tended to discuss their job responsibilities in terms of concrete, student-centered elements, such as *classroom instruction*, *lesson planning*, and *managing student behavior*. Experienced teachers included conceptual responsibilities beyond these day-to-day tasks, such as *curriculum development*, *vertical alignment*, and *program recruitment and retention*. Those who had participated as mentors in the VPA Mentoring Program also discussed their responsibilities as mentors, which they described as *rewarding* and an *opportunity for professional growth*. This view of their mentoring responsibilities implies that they were able to engage in a collaborative mentoring approach and valued their own ability to learn and grow, in addition to improving mentees’ skills (Langdon, 2017).

From this interview data, the theme *arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors* emerged. This theme contained categories of data such as *desire for*

professional respect and autonomy and *mentoring as a desired leadership role*, which were developed from individual codes that included *desire for increased flexibility*, *perception of being treated as a professional*, and *desire for increased observation time*. These results are in line with findings from the literature that confirm experienced teachers' desires to seek out leadership opportunities (Conway & Eros, 2016), along with widespread failure by school systems to provide sufficient opportunities for professional growth (Gallant & Riley, 2014). Numerous experienced teacher participants discussed feeling a sense of professional responsibility to be a mentor, viewing it as "valuable" (Courtney, Doug, Haley), helping the "next generation" of arts teachers (Kelsey, Mia), and even describing it as "your civic duty" (Ben) to contribute to the future of the profession. Given this perception of mentoring as a leadership role, the importance of providing Delaware arts teachers with increased and equitable opportunities to assume these roles is clear (Battersby & Verdi, 2015; Iannucci et al., 2019; Krueger, 1999).

Networking with arts colleagues. The final element that emerged prominently from the data surrounding job satisfaction related to the *importance of arts teacher networking and collegial support*. Peer networking is a vital component in developing a supportive professional culture (Ado, 2013) and decreasing isolation for arts teachers (Charner-Laird et al., 2016). Both novice and experienced teacher participants in this study asserted that the opportunity to collaborate with arts colleagues made teaching responsibilities more manageable, and numerous teachers pointed out the advantages of virtual delivery, which enabled interactions and collaborations that would have been otherwise impossible due to barriers of time and location.

Nearly all the participants described mentoring as a form of networking and collaboration with other arts teachers, emphasizing the importance of meeting arts colleagues (Ben, Brittany, Cynthia, Emma, Kelsey, Michelle, Tracy), building relationships (Carolyn, Courtney, Doug, Gina, Judith, Julie, Kim), and, as Alexis described, “seeing how the mentors and mentees actually have the same problems, or they might be going through the same situation.” The most effective mentoring programs emphasize this collaborative relationship (Bautista et al., 2019), which reduces isolation (Sparks et al., 2017) through a network of professional support. With the VPA Mentoring Program functioning as a form of collaboration and the established connection between collaborative learning and job satisfaction (Battersby & Verdi, 2015; Gaudreault et al., 2017), it is unsurprising that the overall job satisfaction of prospective mentors who did not participate in mentoring ($M = 4.44$, $SD = 0.75$) was lower at the end of the year than either the novice ($M = 4.55$, $SD = 0.59$) or mentor ($M = 4.50$, $SD = 0.71$) teacher participants, and that their end-of-year likelihood of attrition ($M = 1.81$, $SD = 1.09$) was higher than those novice ($M = 1.35$, $SD = 0.77$) and mentor ($M = 1.64$, $SD = 0.98$) teachers who engaged in the intervention.

RQ3: How can Delaware arts teachers’ experiences in a virtual content-specific mentoring program explain changes in job satisfaction and attrition?

This research question aims to evaluate participants’ perceptions of the VPA Mentoring Program, with a focus on identifying and explaining connections between content-specific mentoring, job satisfaction, and attrition. The literature widely affirms that participation in mentoring reduces teacher attrition (Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007; Xu & Payne, 2014a), namely through impacting job

satisfaction (Blackburn et al., 2017; Ford et al., 2018; Van Overschelde et al., 2017).

These positive impacts are greatly strengthened when the mentoring intervention is content-specific (Callahan, 2016; Smith & Ingersoll, 2004; White & Mason, 2006). The data collected in this study revealed (a) participants' perceptions of mentoring, (b) connections between mentoring and job satisfaction, and (c) connections between mentoring and attrition.

Perceptions of mentoring. The composition of the study sample provided a unique comparison of mentoring intervention perspectives. The novice teacher group participated only in the VPA Mentoring Program. The mentor teachers were also involved in this program, but had previously completed the generic state-mandated Comprehensive Induction Program as novice teachers. The prospective mentors had expressed interest in the VPA Mentoring Program, but they only had direct experience with the state-mandated version.

The MMASQ Perceptions of Mentoring section, as found in Appendix D, asked novice and mentor teacher participants about their direct experiences with the VPA Mentoring Program, with slightly different wording for prospective mentors to ask about their attitudes toward serving as a content-specific mentor. Items were direct-scored on a 5-point Likert-style scale, and this section was included only on the post-intervention administration of the instrument. Novice teacher participants rated their experiences in the VPA Mentoring Program extremely highly ($M = 4.66$, $SD = 0.96$). Mentor teachers also expressed favorable opinions ($M = 4.42$, $SD = 0.81$), more so than prospective mentor teachers who did not have the opportunity to participate in the intervention ($M = 4.04$, $SD = 1.07$).

Benefits. Interview data surrounding participants' perceptions of the VPA Mentoring Program resulted in a major theme: *Arts teachers experience content-specific mentoring as mutually beneficial, for both novice teachers and experienced teachers who work as mentors.* Mentor teacher participants perceived mentoring as a *desired leadership role* that helped to fulfill their *desire for professional respect and autonomy.* Both the mentors and prospective mentors framed the mentor role as beneficial, in that they considered it *rewarding* and an *opportunity for professional growth.* These findings support evidence in the literature that experienced teachers are likely to seek out leadership roles (Conway & Eros, 2016) and that serving as a mentor can function as a method of fulfilling this professional need (Bierema & Merriam, 2002; Chong et al., 2020).

The benefits of content-specific mentoring for novice arts teachers were widely discussed by novice and experienced participants alike. Novice teacher participants in the VPA Mentoring Program tended to focus on concrete assistance they received from their mentors, such as guidance on *lesson planning, instructional technology,* and strategies for *classroom management* as forms of *collaboration to propose solutions* or, as Jessica described, having “somebody to bounce ideas off of.” Novices also noted the importance of observing and being observed by a mentor teaching the same content and grade level, as Cynthia emphasized: “having that direct kind of feedback, one-to-one, art project versus art project, and art students versus other art students, made a significant difference, because it was relevant to what I was doing.”

Experienced teacher participants also pointed out benefits of content-specific mentoring for novice teachers, identifying more abstract needs in addition to concrete

activities, such as *vertical alignment*, *differentiated instruction*, and *developing realistic goals*, which Ben termed “grounding myself in reality.” Music teachers in particular discussed developing what Philip referred to as “pipelines” to create “continuity” of instruction for students moving from elementary to middle and high school programs. Many veteran teacher participants recounted their own negative experiences undergoing the generic state-mandated mentoring program as former novice teachers. Commonly, they reported being paired with a teacher in a different content area who, as Haley described, “couldn’t answer any of my questions.” One music teacher mentor in the intervention, Philip, had also previously worked as a mentor in the state-mandated program. At that time, he was paired with a non-music novice teacher, and described the difficulty of providing support without understanding his mentee’s content area: “I just coached her on more of the classroom management...that’s what most of our conversations were about. Not the actual content of the lesson plan.”

Virtual delivery. Despite the widespread frustration expressed by experienced teachers when reflecting on their own past non-content mentorships, many also acknowledged that this difficulty was caused by their status as one-person departments, a common practice in the arts content areas (Abril & Gault, 2008; Bautista et al., 2019; Stanley, 2011). As Kelsey stated, “there’s no one else like me in the building.” This realization contributed to participants’ attitudes toward virtual delivery of mentoring that emerged as a major theme from the data: *Participants view virtual delivery as a viable strategy for some aspects of state-mandated mentoring, and prefer a hybrid model that includes non-evaluative, two-way observations and an emphasis on practical application.* Data supporting this theme included observations about the convenience of virtual

delivery; as Julie noted, “that makes it more likely that you’ll meet every week”, while Judith observed that “it would give me more flexibility, to be able to do things digitally.” Some participants further indicated greater enthusiasm to serve as mentors in a virtual setting, saying, in Emma’s words, “in a mentorship that is virtual, it might be a lot easier to implement something like [content-specific]”, and according to Doug, “I would actually be more willing to participate in this program if it was virtual.”

Some participants did express reservations toward virtual delivery, but these were largely related exclusively to virtual observations. Courtney described virtual observations as “the most challenging part”, while Gina noted that they felt less “authentic”, and Mia described the experience as “not seeing the nuances of what is happening in the classroom.” Independently of one another, both Gina and Julie suggested a hybrid mentoring model that delivers mentor-mentee meetings, observation preparation and debriefing, and content-related professional development workshops virtually, but allows periodic release time for novice teachers and their mentors to travel to one another’s buildings to conduct in-person classroom observations.

Connections to job satisfaction. Perhaps the most compelling connection between the mentoring intervention and job satisfaction emerged in the form of *informal/emotional benefits of intervention*, which included codes such as *mentoring reduces new teacher stress*, *mentoring reduces isolation*, and *open communication*. Both novice and mentor teacher participants described *emotional support* and *encouragement* as central to the mentor-mentee relationship, as Gina observed stark differences between the VPA Mentoring Program and her own mentoring experience as a novice teacher, saying, “I wish the program had given me tools to feel safe to talk about failures.” As

expected, based on existing literature (Ben-David, 2017; Sikma, 2019), these supports resulted in improved feelings of self-efficacy for novice teachers, which both Jessica and Tracy described as being “more confident in the classroom.” Mentor teachers noted that, as Judith observed, “self-confidence plays a huge role” for novice teachers, and several described seeing their mentees’ confidence improve throughout the year. Likewise, mentor teachers themselves reported, in Emma’s words, “it’s built my confidence level up”, as many others discussed feeling re-affirmed in the quality of their own teaching abilities and experiencing a *sense of professional accomplishment* through the process of guiding a novice teacher.

Given the prominence of self-efficacy in the data and its known connections to teacher job satisfaction (Blackburn et al., 2017; Hanson, 2017), this should be considered as one of the major mechanisms linking mentoring and job satisfaction for teachers in this study. Although mentoring may improve the actual effectiveness of novice teachers (Bautista et al., 2019; Kane & Francis, 2013; Sikma, 2019; Villar & Strong, 2007), particularly when it is content-specific (Abramo & Campbell, 2016; Clark, 2012; Ensign & Woods, 2017; White & Mason, 2006), its impact on their feelings of self-efficacy alone is more closely tied to job satisfaction than their actual abilities (Ford et al., 2018). This influence on self-efficacy, combined with participants’ perceptions of mentoring as *rewarding*, providing *opportunities for growth*, and *mutually beneficial* form a compelling argument in support of content-specific mentoring as a vehicle for improving Delaware arts teacher job satisfaction.

Connections to attrition. Mentoring remains the most common retention strategy in use for novice teachers nationwide (Carver & Feiman-Nemser, 2009; Clark,

2012; Villar & Strong, 2007) and is widely believed to be more impactful when it is content-specific (Abramo & Campbell, 2016; Callahan, 2016; Clark, 2012; Conway, 2015; Ensign & Woods, 2017; Smith & Ingersoll, 2004; Stanley et al., 2014; White & Mason, 2006). In the context of Delaware arts teachers who are geographically isolated from one another, a partially or fully virtual mentoring program can enable this content-specific networking and support in a manner that would not be possible without the inclusion of technology.

Based on the emergent qualitative themes from the study data, arts teacher participants experience a strong sense of having a unique *arts teacher identity*, which contributes to feelings of *professional isolation* and *marginalization*, particularly in school communities where *devaluing of the arts* is common. Emma described this as “you don’t feel like you belong to the school”, while Kelsey stated, “the arts aren’t as appreciated.” Experiences of professional isolation and marginalization contribute to lowered job satisfaction for arts teachers (Becher & Orland-Barak, 2018; Gaudreault et al., 2017; Verdi, 2016), which places them at risk for attrition (Abril & Bannerman, 2015; Clark, 2012; Ensign & Woods, 2017). This phenomenon was explicitly embodied by Mia’s statement: “if they continue to push music to the side, then I’m going to be looking elsewhere.”

In contrast, the content-specific mentoring intervention was viewed by participants as a form of *networking* that, as Julie stated, “makes you feel like you’re not alone” and functions as “an open dialogue across the state between performing arts teachers”, according to Gina. The *importance of arts teacher networking and collegial support* emerged as a major category in the data contributing to participant job

satisfaction. This opportunity for networking, combined with the intervention's impacts on teacher self-efficacy, imply that it had a positive impact on participants' job satisfaction and is therefore likely to reduce their future risk of attrition (Blackburn et al., 2017; Ford et al., 2018; Van Overschelde et al., 2017).

Implications

As this study was conducted through a partnership with the Delaware Department of Education (DDOE) and participants who were novice and experienced arts teachers from schools throughout the state of Delaware, it carries meaningful implications for the future of arts teacher professional development and mentoring at the statewide level, as well as further research on this topic. This section discusses (a) the local implications of this study's findings, (b) recommendations for future DDOE professional development and mentoring programming for arts teachers, and (c) implications for future research.

Local Implications

The findings of this study provide valuable insight to stakeholders that include DDOE administrators overseeing novice teacher credentialing and induction at the state level and school district administrators who directly implement policy and programming to comply with DDOE regulations. The implications of this study for these stakeholder groups encompass knowledge about (a) Delaware arts teachers and (b) arts teacher mentoring needs.

Delaware arts teachers. Both the quantitative and qualitative data in this study indicate that Delaware arts teachers are generally satisfied with their jobs and wish to remain in the education field. However, the *workload* for both new and experienced arts teachers is unsustainable, partially due to extra responsibilities that are *unique to the arts*,

and which contribute to the development of a distinct *arts teacher identity*. This identity is often associated with feelings of professional isolation and marginalization (Gaudreault et al., 2017; Verdi, 2016). However, these negative experiences can be mitigated by providing sufficient opportunities for arts teacher networking and collaboration (Charner-Laird et al., 2016), which study participants report are currently inhibited by their workload. Administrative support is key to reducing marginalization by cultivating a school culture that places value on the arts (Becher & Orland-Barak, 2018) and providing opportunities for arts teachers to receive non-evaluative, content-specific feedback and support.

Although the study participants expressed intentions to remain in their teaching positions for the upcoming school year, many experienced teacher participants in particular indicated *intentions to migrate* to a different position within education in the future. The most frequently-cited reasons for this desire were to pursue increased challenges and leadership positions, as is common among teachers who have gained pedagogical knowledge and become comfortable in their teaching positions (Conway & Eros, 2016). Evidence from this study indicates a strong desire among experienced Delaware arts teachers to work as mentors and a belief among novice arts teachers that having a content-specific mentor is useful. Providing opportunities for arts teachers to engage in leadership through mentoring could therefore present a desired professional challenge to experienced teachers, without the need for teacher migration.

Arts teacher mentoring. The qualitative responses from teachers who participated in the mentoring intervention illuminate specific characteristics of mentoring that Delaware arts teachers find to be effective. Namely, participants indicated a desire

for revisions to the state-mandated mentoring program to place greater emphasis on practical skills and shared lesson planning, necessitating content-specific mentor-mentee pairings. Experienced teachers widely believe the mentoring program should decentralize the DPAS teacher evaluation rubric to reflect the collaborative, rather than evaluative, nature of the program and reduce excessive paperwork for already overburdened novice teachers. This reflects recent developments in the literature on teacher mentoring that suggest the need for a shift toward collaborative conversations and reflective self-assessment (Gürgür, 2016; Stanulis et al., 2019) as a mode of increasing novice teachers' self-efficacy (Ladipo, 2013).

Content-specific two-way observations were almost universally regarded as the most useful aspect of the program and were highlighted by numerous participants as absolutely vital to its success. The limited existing research on content-specific mentoring in the arts supports the participant data indicating that two-way observations are critical (Ensign & Woods, 2017; Sparks et al., 2017), and that these observations are more effective when they are content-specific, thereby underscoring the need for content-specific mentors (Bautista et al., 2019). Furthermore, experienced teacher participants in this study largely observed that they would not feel confident in their abilities to effectively mentor a novice teacher outside of their arts content area, yet it is standard practice in Delaware to provide novice arts teacher with a non-content mentor. The results of this study, coupled with support from the literature, clearly demonstrate the need for this practice to change.

Recommendations for DDOE

The findings of this study lead to several recommendations for DDOE and Delaware school district administrators, directed toward improving job satisfaction and reducing attrition likelihood for Delaware arts teachers. These recommendations encompass (a) novice teacher mentoring, (b) professional development for arts teachers, and (c) administrative support.

Novice teacher mentoring. There is ample academic research to support the recommendation that DDOE should adopt a content-specific model for its novice teacher mentoring program (Abramo & Campbell, 2016; Callahan, 2016; Charner-Laird et al., 2016; Clark, 2012; Ensign & Woods, 2017; Smith & Ingersoll, 2004; Stanley et al., 2014; White & Mason, 2006). This is particularly necessary for arts teachers in Delaware, who are likely to be physically isolated from one another (Battersby & Verdi, 2015; Tollefson-Hall, 2015) and are in need of content-specific support (Whitaker, 2000; Xie et al., 2017). One of the initial concerns expressed by DDOE administration at the outset of this study was that there would not be a sufficient pool of qualified and interested arts mentors to support a comprehensive content-specific intervention for novice teachers. However, recruitment efforts resulted in an enthusiastic response from potential mentors, even beyond those who ultimately participated in the study, and greatly surpassed the number of mentors actually needed to pair with each newly-hired arts teacher.

Many arts teachers in this study reported that they are one-person departments within their buildings, as is common in the arts content areas (Abril & Gault, 2008; Bautista et al., 2019; Stanley, 2011). Therefore, utilizing technology tools to deliver mentoring elements virtually is a necessity to enable content-specific support in this

context. Virtual mentoring has been shown to be a cost-effective model (Ault et al., 2019; Donne & Lin, 2013), and will perhaps be even more so in the future, given the recent investments in video conferencing and other technology that many schools have already made in response to the COVID-19 pandemic (Hash, 2020). In particular, Delaware's statewide adoption of the Schoology learning management system in its public and charter school systems could be leveraged to efficiently distribute information, store resources, and submit required documentation for the mentoring program.

Regular mentor-mentee meetings for collaboration, observation debriefing, and generalized support should be conducted in a synchronous virtual format to provide increased flexibility for educators with varied daily schedules. However, feedback from participants suggests that DDOE should support a hybrid mentoring format in future school years to enable in-person observations. This could be accomplished by providing a half day of release time each marking period for all mentors and mentees to visit each other's classrooms to observe their teaching in person, a negligible financial investment from professional development funding.

The most prevalent criticism about the VPA Mentoring Program from those who participated in the intervention was a lack of clear communication and conflicting messaging about requirements for novice teachers. This is largely due to the current administrative structure that divides decision-making responsibilities among the DDOE Education Associate overseeing the Comprehensive Induction Program, Lead Mentors for content areas, Site Coordinators for each district, and individual mentors (Green, 2019). During the course of this study, district-level Site Coordinators made varying decisions about requirements for novice teachers in their own districts, but often failed to

communicate this information to the arts content Lead Mentor or the Education Associate, resulting in conflicting messaging for participating teachers. In the instance of a continued content-specific intervention, the Lead Mentor, who possesses content-specific expertise, would naturally be responsible for many tasks that have traditionally been the purview of the Site Coordinator, such as assigning mentor-mentee pairings and selecting professional development topics. Therefore, it is recommended that these roles be consolidated to form a direct chain of command from DDOE Education Associate, to Lead Mentor, to individual teacher mentors, and to create a more equitable experience for novice arts teachers across all Delaware school districts.

Professional development for arts teachers. The importance placed on arts teacher networking and collaboration opportunities by the study participants leads to the recommendation that DDOE and school district administrators should enable increased opportunities for both novice and experienced arts teachers to engage in content-specific professional learning. The single existing statewide professional development day each year has been customarily used by school districts to release their arts teachers to attend the state-level conferences of their respective professional organizations, but even this is not universal throughout all districts, and no other statewide arts-specific opportunities are offered (DDOE, 2020). It is essential that professional development experiences be sustained over time rather than single-session (Gallo, 2018; Penuel et al., 2007; Torff & Byrnes, 2010) and focused on specific academic content (Garet et al., 2001; Schneckenburger, 2014; Stanley et al., 2014) in order to be effective. Administrative stakeholders at both the state and district level must commit to providing arts teachers with more valuable professional development as a method of improving both their

instructional practices (Duran et al., 2006; Gallo, 2018; Gürgür, 2016) and perceptions of self-efficacy (Ado, 2013; Sinclair et al., 2015; White & Mason, 2006).

One potential solution suggested by study participants is to implement a scaffolded professional development structure. Experienced teacher participants described repeatedly attending sessions on the same topics across multiple school years, leading to disengagement. Differentiating professional development offerings according to teacher experience level, content area, grade level, and/or teacher choice as needed could provide equity for arts teachers (Conway, 2011; Gallo, 2018; Schneckenburger, 2014) and make professional development more effective overall by enabling increased relevance to its context (Sinclair et al., 2015). Given the efficacy of collaborative (Battersby & Verdi, 2015; Duran et al., 2006; Meadows, 2017; West, 2015; Xie et al., 2017) and teacher-led professional learning (Bautista et al., 2019; Stanley et al., 2014; Torff & Byrnes, 2010), a professional development structure that relies on teacher leaders to deliver differentiated offerings is likely to both produce more impactful learning and serve as a desired leadership role for experienced teachers (Conway & Eros, 2016).

Administrative support. The need for building- and district-level administrators throughout Delaware to better support the arts is an expected finding of this study that aligns with extant research (Abril & Bannerman, 2015; Green & Muñoz, 2016; Krueger, 2000), producing the question of how DDOE can promote a culture of support that begins at the statewide level. Administrative resistance to interventions such as content-specific mentoring and differentiated professional development has historically stemmed from beliefs that all teachers should be treated identically (T. Green, personal communication, January 29, 2020) and that content-specific supports are too difficult or costly to

implement (Ensign & Woods, 2017; Garet et al., 2001; Villar & Strong, 2007). Although some study participants expressed the belief that their building administrators support the arts in a theoretical sense, this is rarely demonstrated through tangible evidence such as sufficient departmental funding or staffing (Baker, 2012).

The unexpected prominence of the *arts teacher identity* concept in the study data, with its associated professional experiences and responsibilities unique to arts teachers, spotlights a fundamental mode of support for state and local administrators; that is, to simply understand that the arts are different, and arts teachers are different.

Administrative stakeholders cannot interpret this study data without acknowledging that Delaware arts teachers perceive their professional experiences and identities to be unlike those of their general education or core subject colleagues, and more importantly, must follow this awareness with actions that provide equity, rather than equality, in supporting arts teachers' continued development.

Equity for arts teachers in this context involves multi-level administrative acceptance that mentoring and professional development do not need to be identical for all teachers, in all content areas, at all levels of experience. While a secondary math teacher may be able to experience collaborative, context-specific professional development by attending a department meeting within their own school building, the same is unlikely to be true for a music teacher (Gallo, 2018; Schneckenburger, 2014), who may need to be excused from a building-based faculty meeting to instead gather virtually with members of the arts department for relevant professional learning. Similarly, a novice second grade teacher may be paired with an experienced mentor in their own building who also teaches second grade and can provide support by

collaboratively planning lessons, designing assessments, and sharing curricular resources. However, a visual art teacher may need to be paired with a mentor who holds a similar position in a different building or district in order to receive equitable benefits from their mentoring experience (Callahan, 2016; Charner-Laird et al., 2016). Enabling these beneficial opportunities by allowing content-specific differentiation in mentoring and professional development is a vital, yet low-cost, step that administrators can take at the state and local levels.

Implications for Future Research

For those who intend to devote future academic research efforts to topics related to content-specific virtual mentoring for arts teachers, this study holds implications for replication and expansion of the findings.

Replication. The research design of this study utilized convergent mixed methods (Creswell & Creswell, 2018), primarily due to its aim of gathering both objective and descriptive data points (Rudestam & Newton, 2007) in an effort to add quantitative support to a topic that has previously been studied exclusively qualitatively (Bautista et al., 2019; Eliahoo, 2009; Penuel et al., 2007; Smith & Israel, 2010). Although descriptive statistics were calculated from the quantitative data, the participant sample was too small to enable valid inferential analyses (Buss & Zambo, 2014). Therefore, it is recommended that this study be replicated with a larger sample size in each participant group to enable the use of inferential tools such as paired samples *t*-tests to evaluate the impact of the mentoring intervention (Mertler, 2017) and correlation coefficients to determine the strength and direction of any relationships that exist among

the dependent variables of job satisfaction and attrition (Gravetter & Wallnau, 2007; NCSS, 2020).

McQuade, Davis, and Nash (2015) suggest that the research on virtual mentoring interventions is still lacking empirical evaluation of their effectiveness. Although this study's action research design was advantageous in its focus on an existing problem of practice (Reeves & Oh, 2017) in the local context (Hinchey, 2008), empirical support may provide added pragmatic value to a wider variety of stakeholders (Greenwood & Levin, 2007). The addition of longitudinal data points measuring short- and long-term participant attrition could also provide insight into the intervention's practical impact. A final recommendation for replication, whether action or empirical research, should be to implement the study intervention and generate future results for increased validity in a time when outcomes are not influenced by a global pandemic.

Expansion. The study findings present several opportunities to further extend future related research. The *arts teacher identity* concept that emerged in the data was an unexpected finding related to job satisfaction, as it had not been discussed in any of the related literature reviewed in preparation to designing the study. Its prominence in the results suggests that it may warrant further study to more intentionally examine the nuances of its relationship to teacher job satisfaction.

A second area recommended for future study would address questions of how to evaluate mentor quality in this context, and how that quality may impact the outcomes of the VPA Mentoring Program. Ample research exists exploring the manner in which mentor quality is influenced by teacher career stages (Conway & Eros, 2016), mentor traits (Abramo & Campbell, 2016; Abrams, 2016; Hanson, 2017; Stanulis et al., 2019),

and mentoring styles (Bain et al., 2017; Kemmis et al., 2014; Langdon, 2017; Sinclair et al., 2015; Weasmer & Woods, 2003), but very little is specific to the arts content areas (Conway, 2015). Several existing studies indicate that mentoring improves novice teacher attrition regardless of its quality (Smith & Ingersoll, 2004; Sparks et al., 2017; Villar & Strong, 2007; Xu & Payne, 2014a), but additional research may be warranted to examine the interaction of mentor quality variables in this specific context.

Finally, this study confirms that common challenges faced by arts teachers, such as professional isolation (Abril & Gault, 2008; Stanley, 2011; Verdi, 2016), marginalization (Becher & Orland-Barak, 2018; Gaudreault et al., 2017), and insufficient administrative support (Ford et al., 2018; Gardner, 2010; Green & Muñoz, 2016) are also present within the context of arts teachers in Delaware schools. Future research should move beyond simply re-affirming the existence of these problems, toward developing, implementing, and evaluating practical solutions.

Limitations

As in all research, this study includes several limitations. Some of these are inherent within the study design and methodology, while others are limitations of the findings themselves.

Methodology

The nature of this study as action research may be considered both an advantage and limitation. This researcher-as-practitioner model enabled an authentic understanding of the problem of practice (Herr & Anderson, 2005; Mertler, 2017) and provided a unique perspective from which to develop and test a pragmatic, customized intervention (Creswell & Creswell, 2018; Legette, 2013; Penuel et al., 2007). However, as the design

of the intervention was unique to the study context, the results may not be considered generalizable to other settings or accepted as theoretical knowledge without additional research (Greenwood & Levin, 2007; Reeves & Oh, 2017).

The participant recruitment and data collection methods each contain the potential for bias. Participation in the mentoring intervention was in many cases requested or recommended for novice teachers by their district supervisors, and incentivized for mentors through a stipend paid by DDOE, which may have influenced their positive outlook toward the program. However, participation in the research study itself was voluntary for teachers in all three participant groups, and not all teachers who participated in the intervention agreed to take part in the study. Therefore, the data are not based on a true random sample and may reflect selection bias from unobserved characteristics (Goos & Salomons, 2017) that differ from the greater arts teacher population (Showalter & Mullet, 2017).

Additionally, the data collection components of this study utilized a self-reporting instrument and interviews, which carry the potential for bias due to the possibility of participants' inability to accurately recall events or tendency to provide answers that are perceived as more socially desirable (Althubaiti, 2016). In this case, many of the participants had preexisting professional relationships with the researcher that may have influenced their interview responses. Participants also may have been reluctant to admit their intentions to leave their positions, given the researcher's status as a representative of DDOE. However, these limitations were somewhat mitigated by triangulation of interview data with the quantitative survey data (Park, Chun, & Lee, 2016).

Findings

The most apparent limitation of this study's findings is due to its small sample size, particularly in consideration of its quantitative elements. The overall number of participants was not only small ($n = 47$), but was also split into three unequal groups of novices ($n = 4$), mentors ($n = 6$), and prospective mentors ($n = 37$). It was therefore determined that inferential statistics could not be run on the quantitative results with any reasonable amount of validity. Although the quantitative data collected in this study were useful in supporting qualitative themes, a future study with a larger participant group could be valuable.

Finally, it must be acknowledged that the timing of this study's data collection relative to world events may have influenced its results. The virtual mentoring intervention implemented here was originally conceived of in 2018, closely followed by the study's research design. Participant recruitment was planned for fall 2020, with the intervention and data collection slated for spring 2021. By the time the 2020-2021 school year began, the global COVID-19 pandemic had caused nearly all Delaware schools to operate on a hybrid schedule or fully remotely, with these settings changing frequently and unpredictably throughout the entire school year. There were certain advantages to this situation: perhaps most notably, that all participants were already well-versed in conducting virtual meetings and recording their teaching, with very little difficulty in using the technology involved in the study. However, this school year also saw an increase of nearly 10% in voluntary teacher attrition nationwide, largely due to stress and burnout (Steiner & Woo, 2021; Zamarro, Camp, Fuchsman, & McGee, 2021). Therefore,

the study findings related to participants' attitudes toward job satisfaction and their future career plans must be situated within this context.

Conclusion

This action research study of the implementation of a virtual content-specific mentoring program for Delaware arts teachers has meaningful implications for state and local stakeholders with the potential to impact teacher attrition and job satisfaction. Analysis of the study data brings to light important factors influencing Delaware arts teacher attrition, including workload and arts teacher identity, and elements that are vital to their job satisfaction, such as administrative support and opportunities for networking and collaboration with arts teacher colleagues. Its qualitative components also provide insights into participants' perceptions of content-specific mentoring and the virtual delivery of mentoring components, with the unique perspective of direct comparison to the state-mandated Comprehensive Induction Program.

Implications of this study include new knowledge about Delaware arts teachers' professional identities and their needs and attitudes related to content-specific virtual mentoring. The pragmatic research paradigm within which this study is situated suggests that these implications should lead to real-world application (Creswell & Creswell, 2018; Mertens, 2009; Morgan, 2007); therefore, several actionable recommendations are offered for future improvements to novice arts teacher mentoring, arts teacher professional development, and ongoing administrative support for the arts across the state of Delaware. Although these recommendations alone cannot purport to solve all problems related to the attrition and job satisfaction of Delaware arts teachers, they should be regarded as significant advancements toward ameliorating these perennial

challenges. In the words of study participant Ben: “mentoring, it’s not a panacea; it’s not going to fix everything. But it’s a really good first step.”

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL



OFFICE OF RESEARCH COMPLIANCE

INSTITUTIONAL REVIEW BOARD FOR HUMAN RESEARCH DECLARATION of NOT RESEARCH

Rachel Hoke
College of Education
Wardlaw College
820 Main Street
Columbia, SC 29208 USA

Re: **Pro00105798**

Dear Ms. Rachel Hoke:

This is to certify that research study entitled ***The Impact of Content-Specific Virtual Mentoring on Job Satisfaction and Attrition: A Mixed Methods Study of Novice Arts Teachers*** was reviewed on **11/13/2020** by the Office of Research Compliance, which is an administrative office that supports the University of South Carolina Institutional Review Board (USC IRB). The Office of Research Compliance, on behalf of the Institutional Review Board, has determined that the referenced research study is not subject to the Protection of Human Subject Regulations in accordance with the Code of Federal Regulations 45 CFR 46 et. seq.

No further oversight by the USC IRB is required. However, the investigator should inform the Office of Research Compliance prior to making any substantive changes in the research methods, as this may alter the status of the project and require another review.

If you have questions, contact Lisa M. Johnson at lisaj@mailbox.sc.edu or (803) 777-6670.

Sincerely,



Lisa M. Johnson
ORC Assistant Director and IRB Manager

Comprehensive Induction Program for New Arts Teachers

GUIDE FOR NEW TEACHERS

Rachel Hoke

DELAWARE DEPARTMENT OF EDUCATION |
[HTTPS://WWW.DOE.K12.DE.US/DOMAIN/522D](https://www.doe.k12.de.us/domain/522D)

Table of Contents

<u>PROGRAM OVERVIEW:</u>	ERROR! BOOKMARK NOT DEFINED.
<u>INITIAL STEPS FOR NEW TEACHERS:</u>	223
<u>PROGRAM REQUIREMENTS: YEAR ONE</u>	225
<u>SUMMARY OF YEAR ONE ACTIVITIES</u>	225
<u>DETAILED PROCEDURES, FORMS, & SUGGESTED DEADLINES</u>	225
1. <u>Weekly Mentor Meetings</u>	225
2. <u>Professional Learning Workshops</u>	225
3. <u>Ethics Course</u>	225
4. <u>Observation #1</u>	225
5. <u>Post-Observation Meeting #1</u>	226
6. <u>Veteran Teacher Observations #1 AND #2</u>	226
7. <u>Observation #2</u>	226
8. <u>Post-Observation Meeting #2</u>	226
9. <u>Pre-Observation Meeting for Observation #3</u>	227
10. <u>Observation #3</u>	227
11. <u>Post-Observation Meeting #3</u>	227
12. <u>Veteran Teacher Observations #3 AND #4</u>	227
13. <u>Observation #4</u>	228
14. <u>Post-Observation Meeting #4</u>	228
15. <u>Verification/Year One Sign-Out</u>	228
<u>DOCUMENTATION OF YEAR ONE COMPLETION</u>	228
<u>PROGRAM REQUIREMENTS: YEAR TWO</u>	229
<u>SUMMARY OF YEAR TWO ACTIVITIES</u>	229
<u>DETAILED PROCEDURES, FORMS, & SUGGESTED DEADLINES</u>	229
1. <u>Weekly Mentor Meetings</u>	229
2. <u>Professional Learning Workshops</u>	229
3. <u>Observation #1</u>	229
4. <u>Post-Observation Meeting #1</u>	229
5. <u>Veteran Teacher Observations #1 AND #2</u>	230
6. <u>Observation #2</u>	230
7. <u>Post-Observation Meeting #2</u>	230
8. <u>Pre-Observation Meeting for Observation #3</u>	230
9. <u>Observation #3</u>	231
10. <u>Post-Observation Meeting #3</u>	231
11. <u>Veteran Teacher Observations #3 AND #4</u>	231
12. <u>Observation #4</u>	231
13. <u>Post-Observation Meeting #4</u>	231
14. <u>Verification/Year Two Sign-Out</u>	232
<u>DOCUMENTATION OF YEAR TWO COMPLETION</u>	232
<u>PROGRAM REQUIREMENTS: YEAR THREE</u>	233

<u>SUMMARY OF YEAR THREE ACTIVITIES</u>	233
<u>DETAILED PROCEDURES, FORMS, & SUGGESTED DEADLINES</u>	233
1. <u><i>Initial PLC Team Setup</i></u>	233
2. <u><i>PLC Team Meeting #1</i></u>	234
3. <u><i>Preparation for Meeting #2</i></u>	234
4. <u><i>PLC Team Meeting #2</i></u>	234
5. <u><i>PLC Team Meeting #3</i></u>	234
6. <u><i>PLC Team Meeting #4</i></u>	234
7. <u><i>PLC Team Meeting #5</i></u>	234
8. <u><i>PLC Team Meeting #6</i></u>	234
9. <u><i>PLC Team Meeting #7</i></u>	235
10. <u><i>PLC Team Meeting #8</i></u>	235
11. <u><i>PLC Team Reflection Meeting</i></u>	235
12. <u><i>Verification/Year Three Sign-Out</i></u>	235
<u>DOCUMENTATION OF YEAR THREE COMPLETION</u>	235
<u>PROGRAM REQUIREMENTS: YEAR FOUR</u>	236
<u>SUMMARY OF YEAR FOUR ACTIVITIES</u>	236
<u>DETAILED PROCEDURES, FORMS, & SUGGESTED DEADLINES</u>	236
1. <u><i>Review</i></u>	236
2. <u><i>Conduct Self-Analysis of Content Knowledge and Pedagogy</i></u>	236
3. <u><i>Introduction to Action Research</i></u>	236
4. <u><i>Develop Professional Growth Plan</i></u>	236
5. <u><i>Implement Professional Growth Plan</i></u>	237
6. <u><i>Collect Evidence</i></u>	237
7. <u><i>Review Clock Hours</i></u>	237
8. <u><i>Verification/Year Four Sign-Out</i></u>	237
<u>DOCUMENTATION OF YEAR FOUR COMPLETION</u>	237
<u>IMPORTANT INFORMATION</u>	238

Comprehensive Induction Program *for* New Visual & Performing Arts Teachers

Program Overview:

The purpose of the Comprehensive Induction Program (CIP) is to provide new arts educators with the support necessary to become familiar with school and district policies and procedures, hone their professional skills, help them evaluate and reflect upon their own professional performance, and develop an individualized growth plan to improve their effectiveness.

The Comprehensive Induction Program (CIP) for Arts Teachers strives to meet the following objectives:

1. Empower and support LEAs to plan and implement comprehensive mentoring and induction programs that meet the specific needs of new arts educators and align with state and local initiatives.
2. Establish a statewide collaborative community of arts education practitioners who willingly and openly share resources, assistance, and ideas that increase the support provided to new educators.
3. Support LEAs in the selection and training of highly effective content-specific mentors.
4. Assist LEAs in the development of “assessment literate” educators who can review student data and use that data to drive instruction specific to an arts classroom.
5. Build reflective practitioners who review their present level of professional performance and use that data to set personal professional development goals.

Initial Steps for New Teachers:

During the first few weeks of school, you will be paired with a Mentor who teaches in the same or similar content area and/or grade level, but likely works in a different building. *One of your first steps after being introduced to your Mentor should be to determine the best way to meet together on a regular basis (face-to-face or through a virtual meeting platform).* Your individual Mentor and the Lead Mentor for the Visual and Performing Arts will help you to become familiar with state curriculum and requirements, while your building’s Site Coordinator will be available to help you understand building-specific policies and procedures. Your Mentor will also help to ensure that you have completed the registration process and licensure application on DEEDS and submitted all documents as required by the certification office so that your Initial or Provisional License can be issued and activated as soon as possible.

During this time, your Mentor can assist you with the following:

- Becoming familiar with district and state policies and procedures.
- Securing materials, such as supplies, curricular guides, assessments, and other resources.
- Confirming that you have access to and understanding of the appropriate technology.
- Discussing specific guidelines, responsibilities, and events unique to the arts.
- Organizing a binder or other record keeping system for your CIP materials, which must be kept for a period of three (3) years after completing the program.

- Other needs as identified by you or your school.

Your Mentor may also be able to help you to secure or locate resources you may need to set up your classes and be effective in your new position. You may use the [School and District Resource Record](#) to ensure that pertinent information is easily accessible for use throughout your first school year.

Program Requirements: Year One

Year One of the CIP for arts teachers focuses on classroom environment, lesson preparation and planning, and instruction. During Year One, your Mentor should support you as you establish an environment conducive to learning, strengthen your ability to select and organize lesson content and skills, and deliver instruction that engages students in the process of learning and involves them in decisions when possible.

Summary of Year One Activities

- Weekly conversations with your Mentor (conducted face-to-face or virtually)
- Four (4) observation/feedback cycles conducted by your Mentor
- Four (4) observations of your Mentor or other veteran teachers conducted by you
- Participate in two (2) professional learning workshops
- Complete online ethics course

Detailed Procedures, Forms, & Suggested Deadlines

Please note: these activities do not have specific deadlines. However, it is important to spread the observations throughout the year to allow time for growth. Be proactive in working with your Mentor to develop a schedule for when you will complete these activities.

1. Weekly Mentor Meetings: ongoing throughout the year

You should plan to meet with your Mentor at least one time per week, face-to-face or virtually. These meetings should be tracked using the [Mentor Log](#). Both you and your Mentor should keep a copy of the log to ensure accurate record keeping.

2. Professional Learning Workshops: anytime during Year One

At some point during Year One, you will attend a minimum of two (2) professional learning workshops. Districts/charter schools have flexibility in how they address this requirement. Some may ask all new teachers to participate in the same workshops, while others may allow you to choose. Check with your Site Coordinator to find out about your school or district's requirements. Be sure to keep documentation of your participation to present to the Lead Mentor or Site Coordinator at the end of the year as evidence of having met this requirement.

3. Ethics Course: anytime during Year One

Your Site Coordinator will provide information to access ETS's ProEthica online ethics course. You will be required to complete the course during your first year. Please keep a copy of the Certificate of Completion to present to the Lead Mentor or Site Coordinator at the end of the year as evidence of having met this requirement. Please note, there is no cost for you to complete this course.

4. Observation #1: complete before the end of the first marking period

Your Mentor will observe at least 30 minutes of your instruction. Discuss with your mentor how/when you will be observed. This may be achieved by using a virtual meeting program for a live video observation, taking a video of your teaching to send to your Mentor, or having your Mentor visit your classroom in person. If using a video

option, be sure to check with your building's Lead Mentor or administrator about any special permissions you might need. *If your building does not allow students to be videotaped, you may be able to arrange the recording device to capture only your teaching, with the students not visible.* Your Mentor will use [Observation Form 1: Year 1](#) to make notes about the lesson.

5. Post-Observation Meeting #1: your next Mentor meeting after Observation #1

Before this meeting, review the [Guiding Questions for Classroom Environment](#). This document provides potential questions that may be asked by your Mentor or an administrator. *You are not required to provide written responses to these questions.* Think about how you would respond to these questions, and note any questions you might need to clarify with your Mentor. During this meeting, you and your Mentor will discuss the observed lesson, and together you will complete [Discussion Log 1: Year 1](#). The purpose of the Discussion Log is to celebrate your successes, identify your areas for growth, and determine what support and resources you may need to become more effective in this component. Both you and your Mentor should keep a copy of the completed Discussion Log. After identifying the evidence of your practice in [Component Two: Classroom Environment](#), you will select one criterion from Component Two as your area of focus. At the conclusion of this meeting, you and your Mentor should determine any supports or resources you will need related to this criterion and agree as to how and when they will be provided.

6. Veteran Teacher Observations #1 AND #2: complete before winter break

You will observe your Mentor's instruction on 2 separate occasions for at least 30 minutes each. Discuss with your Mentor how/when you will be observing. This may be achieved by using a virtual meeting program for live video observation, receiving videos from your Mentor of their teaching, or visiting your Mentor's classroom in person. During and after these observations, make notes on the [New Teacher Observation Form](#) to guide discussions between you and your Mentor, being sure to focus on the Component Two criterion you selected.

7. Observation #2: at least 2-4 weeks after Observation #1, before end of second marking period

Schedule a time for your Mentor to observe your instruction for a second time and record notes on [Observation Form 2: Year 1](#). These notes should focus specifically on the Component Two criterion you selected as an area of focus.

8. Post-Observation Meeting #2: your next Mentor meeting after Observation #2

During this meeting, you and your Mentor will discuss the observed lesson, and together you will complete [Discussion Log 2: Year 1](#). You and your Mentor will also review the [Component Rubrics for Teachers](#) and highlight your current level of performance on each of the criteria for Component Two: Classroom Environment, which will determine your next steps in the mentoring process. If it is determined that your current level of performance is in the "Effective" range, you should move on to the next area of focus. If

you still identify as “Needs Improvement”, you may want to continue focusing on this area with your Mentor.

9. Pre-Observation Meeting for Observation #3: weekly Mentor meeting prior to Observation #3

Schedule a date/time for your Mentor to conduct Observation #3, and determine when you will meet prior to this observation. Before this meeting, review the [Guiding Questions for Planning and Preparation](#). *You are not required to provide written responses to these questions.* Think about how you would respond to these questions, and note any questions you might need to clarify with your Mentor. Choose or develop the lesson plan that you will be implementing during the observed lesson, and bring it to this meeting to share with your Mentor. This meeting will be a Pre-Observation Meeting much like the procedure you will follow when being observed by your administrator. Use [Discussion Log 3: Year 1](#) to make notes as you review the lesson plan together. After your discussion, highlight your current level of performance on each of the criteria of [Component One: Planning and Preparation](#).

10. Observation #3: at least 2-4 weeks after Observation #2, before end of third marking period

Have your Mentor observe your instruction on the scheduled date/time when you will be implementing the lesson you reviewed together. Your Mentor will record notes on [Observation Form 3: Year 1](#), which focuses specifically on Component Three: Instruction.

11. Post-Observation Meeting #3: your next Mentor meeting after Observation #3

Before your Post-Observation Meeting, review the [Guiding Questions for Instruction](#). *You are not required to provide written responses to these questions.* Think about how you would respond to these questions, and note any questions you might need to clarify with your Mentor. During this meeting, you and your Mentor will discuss your performance on the component of instruction. After considering the criteria of [Component Three: Instruction](#), you will select one criterion from Component Three as your area of focus. At the conclusion of this meeting, you and your Mentor should determine any supports or resources you will need related to this criterion and agree as to how and when they will be provided.

12. Veteran Teacher Observations #3 AND #4: complete before spring break

You will observe instruction by your Mentor OR another veteran teacher on 2 separate occasions for at least 30 minutes each. Discuss with your Mentor how/when you will be observing. This may be achieved by using a virtual meeting program for live video observation, receiving videos from your Mentor of their teaching, or visiting your Mentor’s classroom in person. During and after these observations, make notes on the [New Teacher Observation Form](#) to guide discussions between you and your Mentor, being sure to focus on the Component Three criterion you selected.

13. Observation #4: at least 2-4 weeks after Observation #3, before end of fourth marking period

Schedule a time for your Mentor to observe your instruction for a final time and record notes on [Observation Form 4: Year 1](#). These notes should focus specifically on the Component Three criterion you selected as an area of focus.

14. Post-Observation Meeting #4: your next Mentor meeting after Observation #4

During this meeting, you and your Mentor will discuss your observation and review the conversation on [Discussion Log 4: Year 1](#). Together, you will review the [Component Rubrics for Teachers](#) and highlight your current level of performance on each of the criteria for Component One: Planning and Preparation and Component Three: Instruction, which will determine your next steps in the mentoring process.

15. Verification/Year One Sign-Out: end of year

At the end of Year One, you must complete the [Verification of Services Form for New Teachers: Year One](#). ***This is a personal statement, and should not be completed during a meeting with your Mentor.*** You only need to check off the statements and sign the form. If you feel that you need to be matched with a different Mentor for your remaining time in the CIP, please contact your Lead Mentor directly. Send the completed Verification of Services form to your Lead Mentor and Site Coordinator as indicated by your school or district. Your Mentor will also complete a [Verification of Services Form for Mentors](#).

Documentation of Year One Completion

You will be issued a Certificate of Completion for Year One, which must be kept for a period of three (3) years.

Please keep copies of the following as documentation for Year One:

- Certificate of Completion for Year One
- [Verification of Services Form for New Teachers: Year One](#)
- Certificate of Completion for the online ethics course
- Documentation (training assurance, certificate of completion or participation, etc.) of professional learning workshops

Program Requirements: Year Two

Year Two of the CIP for arts teachers focuses on refining your skills related to classroom environment, lesson preparation and planning, and instruction. During Year Two, your mentor will support you as you continue to hone your ability to establish an environment conducive to learning, strengthen your ability to select and organize lesson content and skills, and deliver instruction that engages students in the process of learning and involves them in decisions when possible.

Summary of Year Two Activities

- Weekly conversations with your Mentor (conducted face-to-face or virtually)
- Four (4) observation/feedback cycles conducted by your Mentor
- Four (4) observations of your Mentor or other veteran teachers conducted by you
- Participate in two (2) professional learning workshops

Detailed Procedures, Forms, & Suggested Deadlines

Please note: these activities do not have specific deadlines. However, it is important to spread the observations throughout the year to allow time for growth. Be proactive in working with your Mentor to develop a schedule for when you will complete these activities.

1. Weekly Mentor Meetings: ongoing throughout the year

You should plan to meet with your Mentor at least one time per week, face-to-face or virtually. These meetings should be tracked using the [Mentor Log](#). Both you and your Mentor should keep a copy of the log to ensure accurate record keeping.

2. Professional Learning Workshops: anytime during Year Two

At some point during Year One, you will attend a minimum of two (2) professional learning workshops. Districts/charter schools have flexibility in how they address this requirement. Some may ask all new teachers to participate in the same workshops, while others may allow you to choose. Check with your Site Coordinator to find out about your school or district's requirements. Be sure to keep documentation of your participation to present to the Lead Mentor or Site Coordinator at the end of the year as evidence of having met this requirement.

3. Observation #1: complete before the end of the first marking period

Your Mentor will observe at least 30 minutes of your instruction. Discuss with your mentor how/when you will be observed. This may be achieved by using a virtual meeting program for a live video observation, taking a video of your teaching to send to your Mentor, or having your Mentor visit your classroom in person. If using a video option, be sure to check with your building's Lead Mentor or administrator about any special permissions you might need. *If your building does not allow students to be videotaped, you may be able to arrange the recording device to capture only your teaching, with the students not visible.* Your Mentor will use [Observation Form 1: Year 2](#) to make notes about the lesson.

4. Post-Observation Meeting #1: your next Mentor meeting after Observation #1

Before this meeting, review the [Guiding Questions for Classroom Environment](#). This document provides potential questions that may be asked by your Mentor or an administrator. *You are not required to provide written responses to these questions.* Think about how you would respond to these questions, and note any questions you might need to clarify with your Mentor. During this meeting, you and your Mentor will discuss the observed lesson, and together you will complete [Discussion Log 1: Year 2](#). The purpose of the Discussion Log is to celebrate your successes, identify your areas for growth, and determine what support and resources you may need to become more effective in this component. Both you and your Mentor should keep a copy of the completed Discussion Log. After identifying the evidence of your practice in [Component Two: Classroom Environment](#), you will select one criterion from Component Two as your area of focus. At the conclusion of this meeting, you and your Mentor should determine any supports or resources you will need related to this criterion and agree as to how and when they will be provided.

5. Veteran Teacher Observations #1 AND #2: complete before winter break

You will observe your Mentor's instruction on 2 separate occasions for at least 30 minutes each. Discuss with your Mentor how/when you will be observing. This may be achieved by using a virtual meeting program for live video observation, receiving videos from your Mentor of their teaching, or visiting your Mentor's classroom in person. During and after these observations, make notes on the [New Teacher Observation Form](#) to guide discussions between you and your Mentor, being sure to focus on the Component Two criterion you selected.

6. Observation #2: at least 2-4 weeks after Observation #1, before end of second marking period

Schedule a time for your Mentor to observe your instruction for a second time and record notes on [Observation Form 2: Year 2](#). These notes should focus specifically on the Component Two criterion you selected as an area of focus.

7. Post-Observation Meeting #2: your next Mentor meeting after Observation #2

During this meeting, you and your Mentor will discuss the observed lesson, and together you will complete [Discussion Log 2: Year 2](#). You and your Mentor will also review the [Component Rubrics for Teachers](#) and highlight your current level of performance on each of the criteria for Component Two: Classroom Environment, which will determine your next steps in the mentoring process. If it is determined that your current level of performance is in the "Effective" range, you should move on to the next area of focus. If you still identify as "Needs Improvement", you may want to continue focusing on this area with your Mentor.

8. Pre-Observation Meeting for Observation #3: weekly Mentor meeting prior to Observation #3

Schedule a date/time for your Mentor to conduct Observation #3, and determine when you will meet prior to this observation. Before this meeting, review the [Guiding](#)

[Questions for Planning and Preparation](#). *You are not required to provide written responses to these questions.* Think about how you would respond to these questions, and note any questions you might need to clarify with your Mentor. Choose or develop the lesson plan that you will be implementing during the observed lesson, and bring it to this meeting to share with your Mentor. This meeting will be a Pre-Observation Meeting much like the procedure you will follow when being observed by your administrator. Use [Discussion Log 3: Year 2](#) to make notes as you review the lesson plan together. After your discussion, highlight your current level of performance on each of the criteria of [Component One: Planning and Preparation](#).

9. Observation #3: at least 2-4 weeks after Observation #2, before end of third marking period

Have your Mentor observe your instruction on the scheduled date/time when you will be implementing the lesson you reviewed together. Your Mentor will record notes on [Observation Form 3: Year 2](#), which focuses specifically on Component Three: Instruction.

10. Post-Observation Meeting #3: your next Mentor meeting after Observation #3

Before your Post-Observation Meeting, review the [Guiding Questions for Instruction](#). *You are not required to provide written responses to these questions.* Think about how you would respond to these questions, and note any questions you might need to clarify with your Mentor. During this meeting, you and your Mentor will discuss your performance on the component of instruction. After considering the criteria of [Component Three: Instruction](#), you will select one criterion from Component Three as your area of focus. At the conclusion of this meeting, you and your Mentor should determine any supports or resources you will need related to this criterion and agree as to how and when they will be provided.

11. Veteran Teacher Observations #3 AND #4: complete before spring break

You will observe instruction by your Mentor OR another veteran teacher on 2 separate occasions for at least 30 minutes each. Discuss with your Mentor how/when you will be observing. This may be achieved by using a virtual meeting program for live video observation, receiving videos from your Mentor of their teaching, or visiting your Mentor's classroom in person. During and after these observations, make notes on the [New Teacher Observation Form](#) to guide discussions between you and your Mentor, being sure to focus on the Component Three criterion you selected.

12. Observation #4: at least 2-4 weeks after Observation #3, before end of fourth marking period

Schedule a time for your Mentor to observe your instruction for a final time and record notes on [Observation Form 4: Year 2](#). These notes should focus specifically on the Component Three criterion you selected as an area of focus.

13. Post-Observation Meeting #4: your next Mentor meeting after Observation #4

During this meeting, you and your Mentor will discuss your observation and review the conversation on [Discussion Log 4: Year 2](#). Together, you will review the [Component Rubrics for Teachers](#) and highlight your current level of performance on each of the criteria for Component One: Planning and Preparation and Component Three: Instruction, which will determine your next steps in the mentoring process.

14. Verification/Year Two Sign-Out: end of year

At the end of Year Two, you must complete the [Verification of Services Form for New Teachers: Year Two](#). ***This is a personal statement, and should not be completed during a meeting with your Mentor.*** You only need to check off the statements and sign the form. If you feel that you need to be matched with a different Mentor for your remaining time in the CIP, please contact your Lead Mentor directly. Send the completed Verification of Services form to your Lead Mentor and Site Coordinator as indicated by your school or district. Your Mentor will also complete a [Verification of Services Form for Mentors](#).

Documentation of Year Two Completion

You will be issued a Certificate of Completion for Year Two, which must be kept for a period of three (3) years.

Please keep copies of the following as documentation for Year Two:

- Certificate of Completion for Year Two
- [Verification of Services Form for New Teachers: Year Two](#)
- Documentation (training assurance, certificate of completion or participation, etc.) of professional learning workshops

Program Requirements: Year Three

Year Three of the CIP for arts teachers addresses lesson planning and preparation, instruction, and student improvement. The purpose of this year is to develop “assessment literate” teachers who understand the value of formative and summative assessment data and know how to use that data to drive educational decisions within their classrooms.

The activities will be conducted in professional learning community (PLC) teams organized by content area and/or grade level, which will be constructed by the Visual and Performing Arts Lead Mentor. Once constructed, the members of each team will set their own meeting dates, methods, and times. During the meetings, the team members review the essence of assessment for and of learning, and discuss how the two play out in arts classrooms to gain a better understanding of how to use data to make instructional decisions that best meet the needs of students. New teachers are required to implement several strategies and indicate the effectiveness of those strategies on student growth.

New arts teachers in Year Three will be provided with copies of [book TBD fall 2020] to be used by the teams for the year. This guide outlines how to set up the PLC meetings and offers suggestions for conducting the sessions.

Summary of Year Three Activities

- Professional learning community (PLC) team book study meetings (monthly)
- Review text chapters prior to PLC team meetings (6 or more chapters required)
- Implement instructional strategies discussed during PLC meetings
- Collect evidence to share at follow-up PLC meetings
- Lead a minimum of one (1) PLC meeting
- Final reflection on Year Three

Detailed Procedures, Forms, & Suggested Deadlines

Please note: PLC meetings should occur on a monthly basis, in a synchronous manner. PLC team members will be located in different buildings and/or districts, so it is highly likely that a virtual meeting platform will need to be utilized, although teams may meet in person if desired. Each team may select the manner in which they choose to conduct meetings; however, the chosen method must be synchronous and accessible to all team members and the Lead Mentor.

Before the PLC team meetings begin, the Lead Mentor for the Visual and Performing Arts content areas will identify the members of the teams and conduct the initial meetings to model the process. Each team will select its meeting dates/times and share this information with the Lead Mentor. If a team member must miss a meeting, they may attend another team’s session and should contact the Lead Mentor for a schedule of available times/dates. The Lead Mentor may attend teams’ meetings throughout the year, but are not expected to lead the discussions. The Lead Mentor will be available to answer questions related to the readings and other assessment materials, and to assist with the planning of meetings.

1. Initial PLC Team Setup: August or early September

The Lead Mentor will provide new teachers with contact information for the other members of their PLC team and a proposed time and date for an initial synchronous

meeting. Team members should communicate to the Lead Mentor and one another about a time/date that accommodates all members.

2. PLC Team Meeting #1 (led by Lead Mentor): September

Books for team study will be distributed by the Lead Mentor, who will model the facilitation and structure of this initial meeting. Before the conclusion of the meeting, each team will:

- Create a schedule for future meetings, using the [Meeting Schedule Template](#) if desired.
- Select the book chapter(s) that each team member will facilitate, for a minimum of six (6) total. If there are more than six (6) team members, additional chapters may be selected for these members to facilitate.
- Develop a plan for communication among team members as needed between monthly meetings.
- Designate a team member to act as the point of communication with the Lead Mentor. This individual should share the future meeting schedule with the Lead Mentor.
- Determine required reading and facilitator for next meeting.

3. Preparation for Meeting #2: beginning after first meeting

The designated member of each team should share their team's schedule for remaining meetings with the Lead Mentor. No changes to the schedule or structure of meetings may be made without the Lead Mentor's approval. All team members should complete the required reading prior to the next meeting and prepare for discussion using the [Chapter Response Form](#). The next facilitator should prepare to lead the upcoming meeting, using the [PLC Facilitator Guide](#) if desired.

4. PLC Team Meeting #2: October

The meeting facilitator should lead the meeting discussion and track attendance using the [PLC Attendance Sheet](#). Before the conclusion of the meeting, team members should understand who will facilitate the next meeting and what reading is required. A copy of the attendance sheet should be sent to the Lead Mentor by the facilitator following the meeting.

5. PLC Team Meeting #3: November

Team members should follow the same procedures for meeting preparation and attendance outlined in steps 3-4 for each monthly meeting from November-April.

6. PLC Team Meeting #4: December

7. PLC Team Meeting #5: January

8. PLC Team Meeting #6: February

9. PLC Team Meeting #7: March

10. PLC Team Meeting #8: April

11. PLC Team Reflection Meeting: May

Each member of the PLC team is responsible for completing the four (4) reflection questions on the [Reflection on Learning Form](#). Although these responses may be discussed during the meeting, each member must submit their own reflection form, which should reflect their individual thoughts. Each team member should submit their reflection form to the Lead Mentor following this meeting.

12. Verification/Year Three Sign-Out: end of year

Once the team has completed and documented all required work, they will notify the Lead Mentor and submit all documents as required to the Lead Mentor and/or Site Coordinators, including the [Verification of Services Form for New Teachers: Year Three](#).

Documentation of Year Three Completion

You will be issued a Certificate of Completion for Year Three, which must be kept for a period of three (3) years.

Please keep copies of the following as documentation for Year Three:

- Certificate of Completion for Year Three
- [Verification of Services Form for New Teachers: Year Three](#)

Program Requirements: Year Four

The fourth and final year of the CIP for arts teachers focuses on assessing your own development in content knowledge and pedagogical skills. You will first analyze your current development and then select an area for growth for the remainder of the year. As this is a professional development requirement, this experience is designed to help you develop skills and knowledge specific to your position as an arts teacher through an action research project. Although certain guidelines for this project do exist as described below, you will have the ability to design your project to meet the needs of your individual classroom setting. Your Lead Mentor will help you to develop a project that meets both your needs and the CIP requirements. You will not be required to select experiences, such as graduate course work, that would require you to pay for the learning opportunity.

Summary of Year Four Activities

- Conduct a self-analysis (content knowledge and pedagogical skills)
- Identify areas of strength and areas for growth
- Develop a Professional Growth Plan to address at least one (1) selected area of growth
- Implement the Professional Growth Plan
- Collect evidence of the impact of the Professional Growth Plan
- Final review of clock hour needs for Continuing License

Detailed Procedures, Forms, & Suggested Deadlines

Please note: The Professional Growth Plan that you will develop and implement must be approved by your Lead Mentor and aligned with the results of your self-analysis.

1. **Review: September**

Read [Cycle of Growth and Development](#) and [Words of Wisdom Regarding Your Plan](#) before beginning your analysis.

2. **Conduct Self-Analysis of Content Knowledge and Pedagogy: October**

Follow the instructions in the [Analysis of Content Knowledge](#) to complete the [Content Knowledge Expertise Inventory Chart for Content Knowledge](#). You should consider [Big Picture Questions](#) as you complete the chart.

Resource links:

- [National Core Arts Standards](#)
- [DE Professional Teaching Standards](#)
- [DPAS-II\(R\) Guide and Rubrics for Teachers](#)

Follow the instructions on the [Analysis of Pedagogy Development](#) document to complete the [Content Expertise Inventory Chart for Pedagogy Development](#).

3. **Introduction to Action Research: November**

Read selected materials [TBD fall 2021] for an overview of action research.

4. **Develop Professional Growth Plan: December**

Select an area of growth in either your content or pedagogical knowledge. Using what you have learned about action research, formulate a Professional Growth Plan and complete the [Checklist for My Plan](#) form. Submit a copy of this form and your plan to your Lead Mentor for approval.

5. **Implement Professional Growth Plan: January**

Implement your plan as required, contacting your Lead Mentor for assistance as needed.

6. **Collect Evidence: as needed**

Use the procedures outlined in your plan to collect data to measure its impact. Compile this data into a final report to share with your Lead Mentor and Site Coordinator.

7. **Review Clock Hours: May**

Complete your tentative plan for professional development for the next five (5) years on the [Professional Development for 90 Clock Hours](#) form and submit a copy to your Lead Mentor.

8. **Verification/Year Four Sign-Out: end of year**

Once you have completed the requirements, please complete the [Verification of Services Form for New Teachers: Year Four](#) and submit it to your Lead Mentor and/or Site Coordinator.

Documentation of Year Four Completion

You will be issued a Certificate of Completion for Year Four, which must be kept for a period of three (3) years.

Please keep copies of the following as documentation for Year Four:

- Certificate of Completion for Year Four
- [Verification of Services Form for New Teachers: Year Four](#)

Important Information

If you transfer to another district/charter school during the period of time when you hold an Initial License, you are required to present the specified documents related to each of the four (4) program years. Failure to provide the documentation for each year may result in your not securing a teaching position or being required to repeat some or all of the program requirements.

Please verify with your Lead Mentor that you are moving through the correct path of evaluation. You are to receive a summative evaluation in accordance with current Delaware Code and/or Regulations during your time on an Initial License. A formative lesson analysis is not a summative evaluation. In the event that your administrator does not provide you with the appropriate summative evaluations, you should notify your Site Coordinator immediately.

After the first year of teaching, your personal files should contain copies of your **summative DPAS-II(R) evaluations**. Teachers moving from the Initial License to a Continuing License must have proof of three (3) successful summative evaluations. Failure to have this part of the program completed may result in a required extension of the Initial License or the inability to secure a Continuing

APPENDIX C: INFORMED CONSENT

UNIVERSITY OF SOUTH CAROLINA CONSENT TO BE A RESEARCH SUBJECT

The Impact of Content-Specific Virtual Mentoring on Job Satisfaction and Attrition: A Mixed Methods Study of Delaware Arts Teachers

KEY INFORMATION ABOUT THIS RESEARCH STUDY:

You are invited to volunteer for a research study conducted by Rachel Hoke. I am a doctoral candidate in the College of Education at the University of South Carolina. The Delaware Department of Education is sponsoring this research study. The purpose of this study is to learn about your experiences in the VPA Mentoring Program, and to determine the type of impact it may have on your job satisfaction and intentions to remain in teaching. You are being asked to participate in this study because you are a new arts teacher or mentor participant in the VPA Mentoring Program. This study is being conducted with new arts teachers and their mentors from multiple schools throughout the state of Delaware and will involve approximately 50 volunteers.

The following is a short summary to help you decide whether to be a part of this study. More detailed information is listed later in this form.

SUMMARY

This study will take place during the spring semester of the 2020-2021 school year. As a volunteer, you will simply participate in the VPA Mentoring Program as you normally would. At the beginning of the semester, you will be asked to complete a short online survey and an interview with me. You will be asked to repeat this survey and interview at the end of the year. Through the feedback and data provided from study volunteers, this research has the potential to benefit current and future arts educators across the state, as this information will be used to continually improve the mentoring program. Although your participation in this study is confidential, there is a minimal risk that your survey and/or interview responses may be breached.

PROCEDURES

If you agree to participate in this study, you will do the following:

1. Complete a brief online survey at the beginning of the spring semester.
2. Complete a 30-minute interview with me at the beginning of the spring semester.

3. Participate in the activities required by the VPA Mentoring Program.
4. Complete a brief online survey at the end of the spring semester.
5. Complete a 30-minute interview with me at the end of the spring semester.

DURATION

Participation in the study involves participation in two surveys and two interviews over the period of one semester (approximately 20 weeks). Each interview will last about 30 minutes, and each survey should take about 15 minutes to complete.

RISKS/DISCOMFORTS

Loss of Confidentiality: There is the risk of a breach of confidentiality, despite the steps that will be taken to protect your identity. Specific safeguards to protect confidentiality are described in a separate section of this document.

BENEFITS

Taking part in this study may benefit you personally. The information gained from this study will be used to improve future aspects of the VPA Mentoring Program, which new arts teachers will complete during the first four years of their employment in a Delaware school. This study may also help researchers understand potential links between mentoring, job satisfaction, and teacher attrition, which may improve conditions for Delaware arts teachers in the future.

COSTS

There will be no costs to you for participating in this study.

PAYMENT TO PARTICIPANTS

You will not be paid for participating in this study.

COLLECTION OF IDENTIFIABLE PRIVATE INFORMATION

Your information collected as part of the research study will not be used or distributed for future research studies.

RETURN OF RELEVANT RESEARCH RESULTS

All materials in the study directly involving you (e.g., survey results, interview responses) will be shared with you at your request. The study findings and completed report will also be available to you when they are completed.

CONFIDENTIALITY OF RECORDS

Information obtained about you during this research study will remain confidential, and will be released only with your written permission. Study information will be securely stored on a password-protected personal computer that is not the property of the state

of Delaware or DDOE. No personally-identifiable information will be shared with your administrators or DDOE. However, the appropriate state and/or local authorities will be notified if, during the course of the study, you disclose a serious intent to harm yourself or others. Results of this study may be published or presented at conferences; however, any report(s) or presentation(s) will not include your name or any other identifying information.

VOLUNTARY PARTICIPATION:

Participation in this research study is voluntary. You are free not to participate, or to stop participating at any time, for any reason, without negative consequences. In the event that you do withdraw from this study, the information you have already provided will be kept in a confidential manner. If you wish to withdraw from the study, please call or email the researcher listed on this form.

ACKNOWLEDGEMENT OF INFORMED CONSENT

I have been given a chance to ask questions about this research study. These questions have been answered to my satisfaction. If I have any more questions about my participation in this study, or a study related injury, I am to contact Rachel Hoke at 717-448-5062 or email rachel.hoke@mot.k12.de.us.

Concerns about your rights as a research subject are to be directed to Lisa Johnson, Assistant Director, Office of Research Compliance, University of South Carolina, 1600 Hampton Street, Suite 414D, Columbia, SC 29208, phone: (803) 777-6670 or email: LisaJ@mailbox.sc.edu.

I agree to participate in this study. I have been given a copy of this form for my own records.

If you agree to participate, please sign below:

Signature of Participant

Date

Signature of Qualified Person Obtaining Consent

Date

APPENDIX D: MENTOR/MENTEE ATTRITION AND SATISFACTION QUESTIONNAIRE (MMASQ)

Instrument Type: Inventory/questionnaire

Test Format: MMASQ items are rated on a 5-point scale with anchors of: *1 – not at all true, 2 – a little bit true, 3 – somewhat true, 4 – mostly true, and 5 – completely true*. A *not applicable (N/A)* option is also provided. Section 2 is reverse-scored, such that higher numerical scores indicate an unfavorable outcome associated with attrition.

Items

Section 1: Job Satisfaction

Factor 1: Colleagues

- 22. I like the people with whom I work.
- 9. My colleagues seem reasonable to me.
- 23. I get along well with my colleagues.
- 1. I get cooperation from the people I work with.
- 8. My colleagues stimulate me to do better work.
- 17. My colleagues are highly supportive of one another.
- 25. I have made lasting friendships among my colleagues.
- 14. My interests are similar to those of my colleagues.
- 16. My colleagues provide me with suggestions or feedback about my teaching.

Factor 2: Working Conditions

- 7. Working conditions in my school are good.
- 13. Working conditions in my school are comfortable.
- 2. Physical surroundings in my school are pleasant.
- 10. The administration in my school communicates its policies clearly.

Factor 3: Responsibility

- 18. I get along well with my students.
- 5. I try to be aware of the policies in my school.
- 24. I do have responsibility for my teaching.
- 20. My students respect me as a teacher.
- 4. I am responsible for planning my daily lessons.
- 11. Teaching provides me the opportunity to help my students learn.

Factor 4: Work Itself

- 3. Teaching is very interesting work.

- 12. Teaching encourages me to be creative.
- 15. Teaching provides me the chance to develop new methods.
- 19. Teaching provides an opportunity to use a variety of skills.
- 6. I have the freedom to make my own decisions.
- 21. The work of a teacher is very pleasant.

Section 2: Attrition

Factor 1: Job satisfaction and relation with students

- *18. I experience little satisfaction in my job as a teacher.
- *20. I don't enjoy teaching much.
- *17. Students are poorly motivated.
- *14. Job contents fall short of expectations.
- *25. Students' learning outcomes are insufficient.
- *13. Students' progress in learning is minimal.
- *15. I have made a wrong study choice.
- *16. I have difficulties with class management and discipline.
- *23. My expectations are disappointed.
- *1. I feel little enthusiasm for teaching.
- *7. I feel insecure in the classroom.
- *5. I am bullied by students.

Factor 2: School management and support

- *9. I get little support from my principal.
- *21. I feel little support from the school community.
- *8. I have conflicts with the principal and/or colleagues.
- *11. I have little contact with colleagues.
- *19. I experience less autonomy compared to more experienced colleagues.
- *22. I often have to justify my actions in class to other school personnel.
- *28. I am given annoying tasks and/or difficult classes.
- *2. I experience(d) little guidance and support as a beginning teacher.
- *12. I feel little engagement in the school's policy.
- *27. I experience little recognition and respect as a teacher.

Factor 3: Workload

- *3. I have too much work outside of school hours.
- *10. I have too little time to adequately prepare lessons.
- *26. Time pressures and stress in education are too high.
- *4. Too much administrative work is associated with my job.
- *6. I cannot handle my job.
- *24. I am emotionally tired and burned out.

END OF PRE-TEST

For post-tests, a branching question will direct respondents to the Section 3 version appropriate to their role as a mentor, mentee, or prospective mentor.

Section 3: Perceptions of the Mentoring Intervention – MENTORS

12. My mentee responds positively to the assistance I offer.
7. Being a mentor enables me to set an example of good teaching.
3. Mentoring motivates me to improve my instruction.
1. Mentoring provides me with recognition as a leader.
10. I feel supported in my role as a mentor.
4. I am confident in my ability to fulfill the expectations of a mentor.
6. My mentee is receptive to my suggestions.
2. Being a mentor gives me equitable status within the school community.
14. I feel comfortable interacting with my mentee.
5. My mentee recognizes when I teach a good lesson.
11. Mentoring has been effective to improve my mentee's teaching.
8. I have the resources I need to be an effective mentor.
9. Being a mentor encourages me to collaborate.
13. My work as a mentor is meaningful.

Section 3: Perceptions of the Mentoring Intervention – MENTEES

12. My mentor gives me assistance when I need help.
7. My mentor praises good teaching.
3. My mentor provides assistance for improving instruction.
1. I receive recognition from my mentor.
10. My mentor backs me up.
4. My mentor explains what is expected of me.
6. My mentor is willing to listen to suggestions.
2. My mentor treats everyone equitably.
14. My mentor makes me feel comfortable.
5. My mentor recognizes when I teach a good lesson.
11. My mentor offers suggestions to improve my teaching.
8. My mentor makes available the material I need to do my best.
9. My mentor encourages teachers to collaborate.
13. I receive meaningful information from my mentor.

Section 3: Perceptions of Mentoring – PROSPECTIVE MENTORS

12. Mentees are likely to respond positively to the assistance I offer.
7. Being a mentor would enable me to set an example of good teaching.
3. Mentoring would motivate me to improve my instruction.
1. Mentoring would provide me with recognition as a leader.
10. I have the support I would need to be successful as a mentor.
4. I am confident in my ability to fulfill the expectations of a mentor.
6. Mentees are likely to be receptive to my suggestions.
2. Being a mentor would give me equitable status within the school community.
14. I would feel comfortable interacting with mentees.
5. Mentoring would allow others to notice when I teach a good lesson.

11. Mentoring is an effective way to improve new teachers' skills.
8. I have the resources I would need to be an effective mentor.
9. Being a mentor would encourage me to collaborate.
13. Being a mentor is meaningful work.

* Indicates reversed items.

APPENDIX E: INTERVIEW PROTOCOLS

Instrument Type: Semi-structured interview

Interview Format: Mentors/mentee interviews will occur in two parts, administered pre- and post-intervention. Prospective mentors will be interviewed once.

Pre-Intervention Interview: Mentors/Mentees

1. Describe your teaching position and school setting.
 2. What are your expectations for the mentoring program?
 3. What type of structure for mentoring activities do you feel would be most helpful (e.g. meeting frequency, tasks, evaluations, etc.)?
 4. Do you think it will be helpful if your mentor/mentee has similar professional experiences to yours (e.g. grade, content)? How so?
 5. Other than distance and technology use, how do you expect the virtual mentoring experience to be distinct from in-person mentoring?
 6. From your perspective, what makes mentoring a quality experience? What makes it successful?
 7. How would you describe your current satisfaction with your job?
 8. How do you feel about the overall environment at your school?
 9. What aspects of your job have the most impact on your satisfaction?
 10. How does your job compare to your perception of an ideal career?
 11. What impact, if any, do you expect your experience in the mentoring program to have on your level of satisfaction with your job?
 12. What are your plans with regard to your job/career for next school year?
 13. What are your plans with regard to your job/career for the future beyond next school year? What led to your decision?
 14. What impact, if any, do you expect your experience in the mentoring program to have on your intention to remain in this teaching position in the future?
-

Post-Intervention Interview: Mentors/Mentees

1. Describe your overall level of satisfaction with the mentoring program. How well did it meet your expectations?
2. What type of structure for mentoring activities do you feel would have been most helpful (e.g. meeting frequency, tasks, evaluations, etc.)?
3. Do you think it was helpful that your mentor/mentee had similar professional experiences to yours (e.g. grade, content)? How so?
4. Other than distance and technology use, how was the virtual mentoring experience distinct from in-person mentoring?

5. From your perspective, what makes mentoring a quality experience? What makes it successful?
 6. Describe any suggestions you have for future versions of the mentoring program.
 7. How would you describe your current satisfaction with your job?
 8. How do you feel about the overall environment at your school?
 9. What aspects of your job have the most impact on your satisfaction?
 10. How does your job compare to your perception of an ideal career?
 11. What impact, if any, did your experience in the mentoring program have on your level of satisfaction with your job?
 12. What are your plans with regard to your job/career for next school year?
 13. What are your plans with regard to your job/career for the future beyond next school year? What led to your decision?
 14. What impact, if any, did your experience in the mentoring program have on your intention to remain in this teaching position in the future?
-

Prospective Mentor Interview

1. Describe your teaching position and school setting.
 2. What are your expectations for a mentoring program?
 3. What type of structure for mentoring activities do you feel would be most helpful (e.g. meeting frequency, tasks, evaluations, etc.)?
 4. Do you think it will be helpful for mentors/mentees to have similar professional experiences to one another (e.g. grade, content)? How so?
 5. Other than distance and technology use, how do you expect a virtual mentoring experience to be distinct from in-person mentoring?
 6. From your perspective, what makes mentoring a quality experience? What makes it successful?
 7. How would you describe your current satisfaction with your job?
 8. How do you feel about the overall environment at your school?
 9. What aspects of your job have the most impact on your satisfaction?
 10. How does your job compare to your perception of an ideal career?
 11. What impact, if any, would the opportunity to work as a mentor have on your level of satisfaction with your job?
 12. What are your plans with regard to your job/career for next school year?
 13. What are your plans with regard to your job/career for the future beyond next school year? What led to your decision?
 14. What impact, if any, would the opportunity to work as a mentor have on your intention to remain in this teaching position in the future?
-

APPENDIX F: OBSERVATION FORMS



Comprehensive Induction Program Observation Form One - Year 1 *Classroom Environment*

During the *first* observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates to Component Two (*Classroom Environment*) on this form. In the second observation, the Mentor shall collect and record evidence that is seen and heard related only to the criterion of Component Two identified by the new teacher as a focus for Observation Two. ***The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.***

New Teacher: _____ Date: _____

Time	Teacher (<i>seen and heard</i>)	Students (<i>seen and heard</i>)

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program

Observation Form Two - Year 1

Classroom Environment

New Teacher: _____ Date: _____

Component Two Criterion of Focus: _____

During the *second* observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates *only* to the criterion of Component Two identified by the new teacher as a focus for Observation Two. *The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.*

Time	Teacher <i>(seen and heard)</i>	Students <i>(seen and heard)</i>

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program

Observation Form Three - Year 1

Preparation & Planning/Instruction

During the *third* observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates to Component Three (*Instruction*) on this form. In the fourth observation, the Mentor shall collect and record evidence that is seen and heard related only to the criterion of Component Three identified by the new teacher as a focus for Observation Four. ***The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.***

New Teacher: _____ Date: _____

Time	Teacher (<i>seen and heard</i>)	Students (<i>seen and heard</i>)

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program

Observation Form Four - Year 1

Preparation & Planning/Instruction

During the fourth observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates *only* to the criterion of Component Three identified by the new teacher as a focus for Observation Four. ***The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.***

New Teacher: _____ Date: _____

Component Three Criterion of Focus: _____

Time	Teacher <i>(seen and heard)</i>	Students <i>(seen and heard)</i>

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program

Observation Form One - Year 2

Classroom Environment

During the *first* observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates to Component Two (*Classroom Environment*) on this form. In the second observation, the Mentor shall collect and record evidence that is seen and heard related only to the criterion of Component Two identified by the new teacher as a focus for Observation Two. ***The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.***

New Teacher: _____ Date: _____

Time	Teacher (<i>seen and heard</i>)	Students (<i>seen and heard</i>)

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program

Observation Form Two - Year 2

Classroom Environment

New Teacher: _____ Date: _____

Component Two Criterion of Focus: _____

During the *second* observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates *only* to the criterion of Component Two identified by the new teacher as a focus for Observation Two. *The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.*

Time	Teacher (<i>seen and heard</i>)	Students (<i>seen and heard</i>)

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program

Observation Form Three - Year 2

Preparation & Planning/Instruction

During the *third* observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates to Component Three (*Instruction*) on this form. In the fourth observation, the Mentor shall collect and record evidence that is seen and heard related only to the criterion of Component Three identified by the new teacher as a focus for Observation Four. ***The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.***

New Teacher: _____ Date: _____

Time	Teacher (<i>seen and heard</i>)	Students (<i>seen and heard</i>)

Additional information and/or comments that might be helpful to the new teacher:



Comprehensive Induction Program **Observation Form Four - Year 2** *Preparation & Planning/Instruction*

During the fourth observation, the Mentor shall collect and record evidence that is seen and heard during the class period as it relates *only* to the criterion of Component Three identified by the new teacher as a focus for Observation Four. *The Mentor shall provide a copy of the notes to the new teacher and keep a copy as a reference for the formative conference.*

New Teacher: _____ Date: _____

Component Three Criterion of Focus: _____

Time	Teacher <i>(seen and heard)</i>	Students <i>(seen and heard)</i>

Additional information and/or comments that might be helpful to the new teacher:

APPENDIX G: DPAS-II COMPONENT RUBRIC FOR TEACHERS

II. DPAS II and the Delaware Framework for Teachers

Component 1: Planning and Preparation

CRITERION	LEVEL OF PERFORMANCE			
	INEFFECTIVE	NEEDS IMPROVEMENT	EFFECTIVE	HIGHLY EFFECTIVE
1a: Selecting Instructional Goals	Teacher's goals represent trivial learning, are unsuitable for students, or are stated only as instructional activities, and they do not permit viable methods of assessment.	Teacher's goals are of moderate value or suitability for students in the class consisting of a combination of goals and activities, some of which permit viable methods of assessment.	Teacher's goals represent valuable learning and are suitable for most students in the class; they reflect opportunities for integration and permit viable methods of assessment.	Teacher's goals reflect high-level learning relating to curriculum frameworks and standards; they are adapted, where necessary, to the needs of individual students and permit viable methods of assessment.
1b: Designing Coherent Instruction	The various elements of the instructional design do not support the stated instructional goals or engage students in meaningful learning and the lesson or unit has no defined structure.	Some of the elements of the instructional design support the stated instructional goals and engage students in meaningful learning, while others do not. Teacher's lesson or unit has a recognizable structure.	Most of the elements of the instructional design support the stated instructional goals and engage students in meaningful learning and the lesson or unit has a clearly defined structure.	All of the elements of the instructional design support the stated instructional goals, engage students in meaningful learning, and show evidence of student input. Teacher's lesson or unit is highly coherent and has a clear structure.
1c: Demonstrating Knowledge of Content and Pedagogy	Teacher displays little understanding of the subject, or structure of the discipline, or of content-related pedagogy.	Teacher's content and pedagogical knowledge represents basic understanding but does not extend to connections with other disciplines or to possible student misconceptions.	Teacher demonstrates solid understanding of the content and its prerequisite relationships and connections with other disciplines. Teacher's instructional practices reflect current pedagogical knowledge.	Teacher's knowledge of the content and pedagogy is extensive, showing evidence of a continuing search for improved practice. Teacher actively builds on knowledge of prerequisites and misconceptions when describing instruction or seeking causes for student misunderstanding.
1d: Demonstrating Knowledge of Students	Teacher makes little or no attempt to acquire knowledge of students' backgrounds, skills, or interests and does not use such information in planning.	Teacher demonstrates partial knowledge of students' backgrounds, skills, and interests and attempts to use this knowledge in planning for the class as a whole.	Teacher demonstrates thorough knowledge of students' backgrounds, skills, and interests and uses this knowledge to plan for groups of students.	Teacher demonstrates thorough knowledge of students' backgrounds, skills, and interests and uses this knowledge to plan for individual student learning.
1e: Designing Student Assessments	Teacher's plan for assessing student learning contains no clear criteria or standards, is poorly aligned with the instructional outcomes, or is inappropriate to many students. The results of assessment have minimal impact on the design of future instruction.	Teacher's plan for student assessment is partially aligned with the instructional outcomes, without clear criteria, and inappropriate for at least some students. Teacher intends to use assessment results to plan for future instruction for the class as a whole.	Teacher's plan for student assessment is aligned with the instructional outcomes, uses clear criteria, and is appropriate to the needs of the students. Teacher intends to use assessment results to plan for future instruction for groups of students.	Teacher's plan for student assessment is fully aligned with the instructional outcomes and uses clear criteria and standards that show evidence of student contribution to their development. Assessment methodologies may have been adapted for individuals, and the teacher intends to use assessment results to plan future instruction for individual students.

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Component 2: The Classroom Environment

CRITERION	LEVEL OF PERFORMANCE			
	INEFFECTIVE	NEEDS IMPROVEMENT	EFFECTIVE	HIGHLY EFFECTIVE
2a: Managing Classroom Procedures	Classroom routines and procedures are either nonexistent or inefficient, resulting in the loss of much instruction time.	Classroom routines and procedures have been established but function unevenly or inconsistently with some loss of instruction time.	Classroom routines and procedures have been established and function smoothly for the most part, with little loss of instruction time.	Classroom routines and procedures are seamless in their operation, and students assume considerable responsibility for their smooth functioning.
2b: Managing Student Behavior	Student behavior is poor, with no clear expectations, no monitoring of student behavior, and inappropriate responses to student misbehavior.	Teacher makes an effort to establish standards of conduct for students, monitor student behavior, and respond to student misbehavior, but these efforts are not always successful.	Teacher is aware of student behavior, has established clear standards of conduct, and responds to student misbehavior in ways that are appropriate and respectful of the students.	Student behavior is entirely appropriate, with evidence of student participation in setting expectations and monitoring behavior. Teacher's monitoring of student behavior is subtle and preventive, and teacher's response to student misbehavior is sensitive to individual student needs.
2c: Creating an Environment to Support Learning	The classroom does not represent a culture for learning and is characterized by low teacher commitment to the subject, low expectations for student achievement, and little student pride in work.	The classroom environment reflects only a minimal culture for learning, with only modest or inconsistent expectations for student achievement, little teacher commitment to the subject, and little student pride in work. Both teacher and students are performing at the minimal level to "get by."	The classroom environment represents a genuine culture for learning, with commitment to the subject on the part of the teacher and students, high expectations for student achievement, and student pride in work.	Students assume much of the responsibility for establishing a culture for learning in the classroom by taking pride in their work, initiating improvements to their products, and holding the work to the highest standard. Teacher demonstrates a passionate commitment to the subject.
2d: Organizing Physical Space	Teacher makes poor use of the physical environment, resulting in unsafe or inaccessible conditions for some students or a serious mismatch between the furniture arrangement and the lesson activities.	Teacher's classroom is safe and essential learning is accessible to all students, but the furniture arrangement only partially supports the learning activities.	Teacher's classroom is safe and learning is accessible to all students; teacher uses physical resources well and ensures that the arrangement of furniture supports the learning activities.	Teacher's classroom is safe and students contribute to ensuring that the physical environment supports the learning of all students.

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Component 3: Instruction

CRITERION	LEVEL OF PERFORMANCE			
	INEFFECTIVE	NEEDS IMPROVEMENT	EFFECTIVE	HIGHLY EFFECTIVE
3a: Engaging Students in Learning	Students are not at all intellectually engaged in significant learning as a result of inappropriate activities or materials, poor representations of content, or lack of lesson structure.	Students are intellectually engaged only partially, resulting from activities or materials of uneven quality, inconsistent representations of content, or uneven structure or pacing.	Students are intellectually engaged throughout the lesson with appropriate activities and materials, instructive representations of content and suitable structure, and pacing of the lesson.	Students are highly engaged throughout the lesson and make material contributions to the representation of content, the activities, and the materials. The structure and pacing of the lesson allow for student reflection and closure.
3b: Demonstrating Flexibility and Responsiveness	Teacher adheres to the instruction plan in spite of evidence of poor student understanding or of students' lack of interest and fails to respond to students' questions; teacher assumes no responsibility for students' failure to understand.	Teacher demonstrates moderate flexibility and responsiveness to students' needs and interests during a lesson and seeks to ensure the success of all students.	Teacher seeks ways to ensure successful learning for all students, making adjustments as needed to instruction plans and responding to student interests and questions.	Teacher is highly responsive to students' interests and questions, making major lesson adjustments if necessary, and persists in ensuring the success of all students.
3c: Communicating Clearly and Accurately	Teacher's oral and written communication contains errors or is unclear or inappropriate to students.	Teacher's oral and written communication contains no errors but may not be completely appropriate or may require further explanations to avoid confusion.	Teacher communicates clearly and accurately to students, both orally and in writing.	Teacher's oral and written communication is clear and expressive, anticipating possible student misconceptions.
3d: Using Questioning and Discussion Techniques	Teacher makes poor use of questioning and discussion techniques with low-level questions, limited student participation, and little true discussion.	Teacher's use of questioning and discussion techniques is uneven with some high-level questions, attempts at true discussion, and moderate student participation.	Teacher's use of questioning and discussion techniques reflects high-level questions, true discussion, and full participation by most students.	Students formulate many of the high-level questions and assume responsibility for the participation of all students in the discussion. Teacher employs cognitive coaching in questioning.
3e: Using Assessment in Instruction	Assessment is used for the purpose of grading rather than informing instruction. Students are not aware of the assessment criteria; the teacher does not monitor progress of students, nor provide feedback to them. Students are not engaged in self-assessment.	Assessment is occasionally used to support instruction through some monitoring of progress of learning by teacher and/or students. Feedback to students is uneven, and students are aware of only some of the assessment criteria used to evaluate their work. Assessment is primarily summative, although formative and informal assessments are used occasionally.	Assessment is regularly used during instruction through monitoring of progress of learning by teacher and/or students and through high quality feedback to students. Occasional formative assessment is used and students are aware of most summative assessment criteria.	Assessment is used in a sophisticated manner in instruction through student involvement in establishing the assessment criteria, self-assessment by students and monitoring of progress by both students and teachers, and high quality feedback to students from a variety of sources. Formative assessment is used regularly and students are aware of summative assessment criteria.

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Component 4: Professional Responsibilities

CRITERION	LEVEL OF PERFORMANCE			
	INEFFECTIVE	NEEDS IMPROVEMENT	EFFECTIVE	HIGHLY EFFECTIVE
4a: Communicating with Family	The teacher provides little or no information to families and makes no effort to engage families in the instructional program.	The teacher complies with school procedures/policies for providing information to families and makes an effort to engage families in the instructional program.	The teacher communicates frequently with families and successfully engages families in the instructional program.	The teacher communicates frequently with families; communication is sensitive to families' cultures and values. The teacher successfully engages families in the instructional program. Students participate in communication with families.
4b: Recording Data in a Student Record System	The teacher does not maintain and record accurate data which results in errors and confusion.	The teacher maintains accurate data, but the teacher officially records data in a rudimentary and ineffective manner.	The teacher maintains and records accurate data in an efficient and effective manner.	The teacher maintains and records accurate data in an efficient and effective manner. Data are always recorded in a timely manner and readily accessible for those who have permission to access them.
4c: Growing and Developing Professionally	The teacher does not participate in professional development activities even when such activities are clearly needed for the development of teaching skills.	The teacher has limited participation or involvement in professional development activities.	The teacher actively participates in professional development activities and contributes to the profession.	The teacher makes a substantial contribution to the profession through activities such as action research and mentoring new teachers and actively pursues professional development.
4d: Reflecting on Professional Practice	The teacher does not accurately reflect on the lesson or propose ideas on how the lesson could be improved.	The teacher's reflection on the lesson is generally accurate and the teacher makes global suggestions about how the lesson may be improved.	The teacher's reflection on the lesson is accurate, citing general characteristics of the lesson, and the teacher provides specific suggestions about how the lesson may be improved.	The teacher's reflections on the lesson are accurate and perceptive, citing specific examples within the lesson and specific suggestions for improvement. The teacher draws on an extensive repertoire to support suggestions for alternative strategies.

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APPENDIX H: GUIDING QUESTIONS FOR CONFERENCES

GUIDING QUESTIONS

Component One – Planning and Preparation

The questions below are suggestions for stems related to each of the criterion of the components. It is not expected that all questions would be asked during a conference. However, it is expected that information about each of the components be sought during the formative process. These questions provide guidance in how to seek clarification and move toward true evidence to record.

**** Although asking all questions is not an expectation, this component requires deep discussion in order to both acquire and present the evidence. To that end, several questions under each of the headings will deepen understanding.*

Overarching question: *What learning do you anticipate happening during this lesson?*

1a. Selecting Instructional Goals

- How did the teacher select the goals of both the lesson and the sequence of learning?
- Why are these goals appropriate for these students at this time?
- How do the selected goals meet the needs of the diverse learners in the class?
- How did the teacher determine the viable methods of assessing student progress against these goals?
- What will students be able to do when they have achieved these goals?

1b. Designing Coherent Instruction

- How do the activities selected to be used during the instructional lesson and sequence promote the intellectual engagement of the students?
- How does the lesson being observed fit into the overall sequence of lessons to be covered during the learning sequence?
- How does the teacher construct instructional groups to support student learning? What will be the specific grouping for the observed lesson?
- What instructional materials and resources does the teacher plan to use and how will they support student engagement?

1c. Demonstrating Knowledge of Content and Pedagogy

GUIDING QUESTIONS

Component Two - Classroom Environment

The questions below are suggestions for stems related to each of the elements of the components. It is not expected that all questions would be asked during a conference. However, it is expected that information about each of the components be sought during the formative process. There are times when administrators infer how and why something occurred. These questions provide guidance in how to seek clarification and move toward true evidence to record.

2a. Managing Classroom Procedures

- How did the teacher decide what routines, rules, and timelines are needed and when they are needed?
- How did the teacher develop a daily schedule, timelines, classroom routines, and rules? How do these management tools promote and maintain a climate of fairness and respect?
- How did the teacher involve the students in the development of classroom procedures and rules? How did the teacher introduce them to the class? How does the teacher support students to internalize classroom procedures and rules to become self-directed learners?
- How does the teacher determine whether students are working? What does the teacher do if they are not working?

2b. Managing Student Behavior

- How does the teacher (*with the students*) establish standards for behavior? How are the standards communicated? Maintained? Changed?
- Given any situation when student behaviors do not meet agreed-upon standards, how does the teacher decide when to intervene? What does the teacher do? What do other students do? What does the student who misbehaved do?
- How does the teacher communicate approval when standards are met?
- How does the teacher deal with students who are a challenge behaviorally?
- How does the teacher help all students learn to participate in decision-making, problem-solving and conflict resolution?
- How and when does the teacher involve families or others to maintain standards for student behavior?

GUIDING QUESTIONS

Component Three - Instruction

The questions below are suggestions for stems related to each of the criterion of the components. It is not expected that all questions would be asked during a conference. However, it is expected that information about each of the components be sought during the formative process. These questions provide guidance in how to seek clarification and move toward true evidence to record.

3a. Engaging Students in Learning *(not time on task)*

- What evidence of intellectual engagement is present in the classroom?
- Which specific activities and assignments challenged the students to think broadly and deeply solve problems, and/or be involved in non-routine thinking?
- How did the teacher use instructional grouping during the lesson that promoted engagement.
- How did the instructional materials and/or resources used provide for student choice?
- What are some of the adaptations that made the task accessible to all students?

3b. Demonstrating Flexibility and Responsiveness

- How and when did the teacher make adjustments to the lesson in reaction to student needs?
- How did the teacher respond to the questions posed by the students?
- What did the teacher do when the class or individual had difficulty learning the concepts of the lesson?

3c. Communicating Clearly and Accurately

- How did the teacher convey his/her learning expectations to the students?
- Were the students able to explain what they were to achieve to others?
- How did the students demonstrate that they understood the directions and procedures for the tasks assigned?

APPENDIX I: DISCUSSION LOGS



Comprehensive Induction Program

Discussion Log One - Year 1

Classroom Environment

New Teacher : _____ Mentor: _____ Date: _____

<p>What successes have you had with managing classroom procedures, managing student behavior, creating an environment to support learning and/or organizing physical space?</p>	<p>What challenges have you had with managing classroom procedures, managing student behavior, creating an environment to support learning and/or organizing physical space?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p>	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/17/2017



Comprehensive Induction Program

Discussion Log Two - Year 1

Classroom Environment

New Teacher : _____ Mentor: _____ Date: _____

Component Two Criterion of Focus: _____

<p>What successes have you had related to your Component Two criterion of focus?</p>	<p>What challenges have you had related to your Component Two criterion of focus?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p>	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/19/2017



Comprehensive Induction Program

Discussion Log Three - Year 1

Preparation & Planning/Instruction

New Teacher : _____ Mentor: _____ Date: _____

<p>What successes have you had with the specific criteria for Component One (<i>Planning & Preparation</i>) and Component Three (<i>Instruction</i>) as outlined in the "A Framework for Teachers Components" chart?</p>	<p>What challenges have you had with the specific criteria for Component One (<i>Planning & Preparation</i>) and Component Three (<i>Instruction</i>) as outlined in the "A Framework for Teachers Components" chart?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p>	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/18/2017



Comprehensive Induction Program

Discussion Log Four - Year 1

Preparation & Planning/Instruction

New Teacher : _____ Mentor: _____ Date: _____

Component Three Criterion of Focus: _____

<p>What successes have you had related to your Component Three criterion of focus?</p>	<p>What challenges have you had related to your Component Three criterion of focus?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p>	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/18/2017



Comprehensive Induction Program

Discussion Log One – Year 2

Classroom Environment

New Teacher : _____ Mentor: _____ Date: _____

<p>What successes have you had with managing classroom procedures, managing student behavior, creating an environment to support learning and/or organizing physical space?</p> 	<p>What challenges have you had with managing classroom procedures, managing student behavior, creating an environment to support learning and/or organizing physical space?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p> 	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/17/2017



Comprehensive Induction Program

Discussion Log Two – Year 2

Classroom Environment

New Teacher : _____ Mentor: _____ Date: _____

Component Two Criterion of Focus: _____

<p>What successes have you had related to your Component Two criterion of focus?</p> 	<p>What challenges have you had related to your Component Two criterion of focus?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p> 	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/19/2017



Comprehensive Induction Program

Discussion Log Three - Year 2

Preparation & Planning/Instruction

New Teacher : _____ Mentor: _____ Date: _____

<p>What successes have you had with the specific criteria for Component One (<i>Planning & Preparation</i>) and Component Three (<i>Instruction</i>) as outlined in the "A Framework for Teachers Components" chart?</p>	<p>What challenges have you had with the specific criteria for Component One (<i>Planning & Preparation</i>) and Component Three (<i>Instruction</i>) as outlined in the "A Framework for Teachers Components" chart?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p>	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/10/2017



Comprehensive Induction Program

Discussion Log Four - Year 2

Preparation & Planning/Instruction

New Teacher : _____ Mentor: _____ Date: _____

Component Three Criterion of Focus:

<p>What successes have you had related to your Component Three criterion of focus?</p>	<p>What challenges have you had related to your Component Three criterion of focus?</p>
<p>When you reflect on the challenges that you have faced, can you think of different ways that you could have addressed the situation? Describe the actions that you will take the next time that you face a similar situation.</p>	<p>When you consider the challenges that you have faced recently are there any that you would like guidance with from me as your Mentor or others that you feel could assist you in developing the skills and knowledge that you need?</p>

Revised 4/19/2017

APPENDIX J: NEW TEACHER OBSERVATION FORM



Comprehensive Induction Program New Teacher Observation Form

Directions: This form can be used for in-person and/or online observations of veteran teachers done by novice teachers. If your district/charter school elects to use online videos, you Site Coordinator will distribute usernames & passcodes with instructions to log into the Educational Impact Online Learning Academy (www.educationalimpact.com). Once you are logged in, click on “Program Library” and then on “Charlotte Danielson’s Teaching Framework”. Choose one or more streaming videos to observe which are related to your chosen criterion of focus for Component 2. Please complete this form and review and discuss with your Mentor. *Keep a copy of this form as evidence of completion.*

New Teacher: _____ Date: _____

Mentor: _____ Grade Level/ Subject: _____

Criterion of Focus: _____

What do you want to learn about your chosen criterion of focus as you observe the veteran educator?

What did you learn from observing the veteran educator? *Be specific about strategies to use.*

What are some applications that you have used or that you plan to use in your classroom?

APPENDIX K: TMLPM/MMASQ ITEM ALIGNMENT

The TMLPM was obtained from the PsycTESTS database and used with author permission, as shown in Figure K1. Alignment between original TMLPM items and resultant MMASQ items in Section 2: Attrition are shown in Table K1.



Teachers' Motives for Leaving the Profession Measure

Note: Test name created by PsycTESTS

PsycTESTS Citation:

Struyven, K., & Vanthournout, G. (2014). Teachers' Motives for Leaving the Profession Measure [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t60039-000>

Instrument Type:

Inventory/Questionnaire

Test Format:

Responses for the 36 items are on a 5 point-scale whether the reason had no effect on their decision not to teach (anymore) (N.A., not applicable) or whether it played a small part (+), a considerable part (++), a large role (+++), or a very significant role (++++ in their decision not to teach (anymore).

Source:

Struyven, Katrien, & Vanthournout, Gert. (2014). Teachers' exit decisions: An investigation into the reasons why newly qualified teachers fail to enter the teaching profession or why those who do enter do not continue teaching. *Teaching and Teacher Education*, Vol 43, 37-45. doi:<https://dx.doi.org/10.1016/j.tate.2014.06.002>, © 2014 by Elsevier. Reproduced by Permission of Elsevier.

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Figure K1. TMLPM PsycTESTS item record.

Table K1
TMLPM/MMASQ Item Alignment

TMLPM Item	MMASQ Item
<p>Factor 1: Job satisfaction and relation with pupils/students</p> <p>I experienced little satisfaction in my job as a teacher</p> <p>I didn't enjoy teaching much</p> <p>Students were poorly motivated</p> <p>Job contents fall short of expectations</p> <p>Students' learning outcomes were insufficient</p> <p>Students' progress in learning was minimal</p> <p>I made a wrong study choice</p> <p>I had difficulties with class management and discipline</p> <p>My expectations were disappointed</p> <p>I felt little enthusiasm for teaching</p> <p>I felt insecure in the classroom</p> <p>I was bullied by students</p> <p>Factor 2: School management and support</p> <p>I got little support from the school principal</p> <p>I felt little support from the school and from educational policy</p> <p>I have had conflicts with the principal and/or colleagues</p> <p>I had little contact with, and support from, colleagues</p> <p>I experienced less autonomy compared to experienced colleagues</p> <p>I often have to justify my actions in class to the principal or to colleagues</p> <p>I was given annoying tasks and/or difficult classes</p> <p>I experienced little guidance and support as a beginning teacher</p>	<p>Attrition Factor 1: Job satisfaction and relation with students</p> <p>I experience little satisfaction in my job as a teacher</p> <p>I don't enjoy teaching much</p> <p>Students are poorly motivated</p> <p>Job contents fall short of expectations</p> <p>Students' learning outcomes are insufficient</p> <p>Students' progress in learning is minimal</p> <p>I have made a wrong study choice</p> <p>I have difficulties with class management and discipline</p> <p>My expectations are disappointed</p> <p>I feel little enthusiasm for teaching</p> <p>I feel insecure in the classroom</p> <p>I am bullied by students</p> <p>Attrition Factor 2: School management and support</p> <p>I get little support from my principal</p> <p>I feel little support from the school community</p> <p>I have conflicts with the principal and/or colleagues</p> <p>I have little contact with colleagues</p> <p>I experience less autonomy compared to experienced colleagues</p> <p>I often have to justify my actions in class to other school personnel</p> <p>I am given annoying tasks and/or difficult classes</p> <p>I experience little guidance and support as a beginning teacher</p>

I felt little engaged in the schools' policy
I experienced little recognition and respect as a teacher

Factor 3: Workload

I had too much work outside of school hours
I had too little time to adequately prepare lessons
Time pressures and stress in education are too high
Too much administrative work is associated with the job
I could not handle the job
I was emotionally tired and burned out

Factor 4: Future prospects

Factor 5: Relations with parents

I feel little engagement in the school's policy
I experience little recognition and respect as a teacher

Attrition Factor 3: Workload

I have too much work outside of school hours
I have too little time to adequately prepare lessons
Time pressures and stress in education are too high
Too much administrative work is associated with my job
I cannot handle my job
I am emotionally tired and burned out

Removed due to lack of applicability to current study context

Removed due to low significance during initial validation

APPENDIX L: TJSQ/MMASQ ITEM ALIGNMENT

The TJSQ was obtained from the PsycTESTS database and used with author permission, as shown in Figure L1. Alignment between original TJSQ items and resultant MMASQ items in Section 1: Job Satisfaction and Section 3: Perceptions of Mentoring are shown in Table L1.



Teacher Job Satisfaction Questionnaire

PsycTESTS Citation:

Lester, P. E. (1987). Teacher Job Satisfaction Questionnaire [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t11206-000>

Instrument Type:

Inventory/Questionnaire

Test Format:

Teacher Job Satisfaction Questionnaire items are rated on a 5-point Likert scale with anchors from strongly disagree (1) to strongly agree (5). For unfavorable responses the scoring is reversed. Thus, a low score represents low job satisfaction, whereas a high score represents high job satisfaction.

Source:

Lester, Paula E. (1987). Development and factor analysis of the Teacher Job Satisfaction Questionnaire (TJSQ). *Educational and Psychological Measurement*, Vol 47(1), 223-233. doi: <https://dx.doi.org/10.1177/0013164487471031>, © 1987 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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Figure L1. TJSQ PsycTESTS item record.

Table L1
TJSQ/MMASQ Item Alignment

TJSQ Item	MMASQ Item
<p>Factor 1: Supervision</p> <p>My immediate supervisor gives me assistance when I need help</p> <p>My immediate supervisor praises good teaching</p> <p>My immediate supervisor provides assistance for improving instruction</p> <p>I receive recognition from my immediate supervisor</p> <p>*My immediate supervisor does not back me up</p> <p>My immediate supervisor explains what is expected of me</p> <p>*My immediate supervisor is not willing to listen to suggestions</p> <p>My immediate supervisor treats everyone equitably</p> <p>*My immediate supervisor makes me feel uncomfortable</p> <p>When I teach a good lesson, my immediate supervisor notices</p> <p>My immediate supervisor offers suggestions to improve my teaching</p> <p>My immediate supervisor makes available the material I need to do my best</p> <p>*My turns one teacher against another</p> <p>*I receive too many meaningless instructions from my immediate supervisor</p> <p>Factor 2: Colleagues</p> <p>I like the people with whom I work</p> <p>*I dislike the people with whom I work</p> <p>*My colleagues seem unreasonable to me</p>	<p>Perceptions of Mentoring section</p> <p>My mentor gives me assistance when I need help</p> <p>My mentor praises good teaching</p> <p>My mentor provides assistance for improving instruction</p> <p>I receive recognition from my mentor</p> <p>My mentor backs me up</p> <p>My mentor explains what is expected of me</p> <p>My mentor is willing to listen to suggestions</p> <p>My mentor treats everyone equitably</p> <p>My mentor makes me feel comfortable</p> <p>When I teach a good lesson, my mentor notices</p> <p>My mentor offers suggestions to improve my teaching</p> <p>My mentor makes available the material I need to do my best</p> <p>My mentor encourages teachers to collaborate</p> <p>I receive meaningful information from my mentor</p> <p>Job Satisfaction Factor 1: Colleagues</p> <p>I like the people with whom I work</p> <p><i>Removed: reverse-scored duplicate</i></p> <p>My colleagues seem reasonable to me</p>

I get along well with my colleagues
 *I do not get cooperation from the people I work with
 My colleagues stimulate me to do better work
 *My colleagues are highly critical of one another
 I have made lasting friendships among my colleagues
 My interests are similar to those of my colleagues
 My colleagues provide me with suggestions or feedback about my teaching

Factor 3: Working conditions

Working conditions in my school are good
 Working conditions in my school are comfortable
 *Physical surroundings in my school are unpleasant
 *The administration in my school does not clearly define its policies
 The administration in my school communicates its policies well
 *Working conditions in my school could not be worse
 *Working conditions in my school could be improved

Factor 4: Pay

Factor 5: Responsibility

I get along well with my students
 I try to be aware of the policies of my school
 *I am not interested in the policies of my school
 I do have responsibility for my teaching
 My students respect me as a teacher
 I am responsible for planning my daily lessons
 Teaching provides me the opportunity to help my students learn
 *I am not responsible for my actions

I get along well with my colleagues
 I get cooperation from the people I work with
 My colleagues stimulate me to do better work
 My colleagues are highly supportive of one another
 I have made lasting friendships among my colleagues
 My interests are similar to those of my colleagues
 My colleagues provide me with suggestions or feedback about my teaching

Job Satisfaction Factor 2: Working conditions

Working conditions in my school are good
 Working conditions in my school are comfortable
 Physical surroundings in my school are pleasant
Removed: reverse-scored duplicate
 The administration in my school communicates its policies clearly
Removed: reverse-scored duplicate
Removed: reverse-scored duplicate

Removed due to lack of applicability to current study context

Job Satisfaction Factor 3: Responsibility

I get along well with my students
 I try to be aware of the policies in my school
Removed: reverse-scored duplicate
 I do have responsibility for my teaching
 My students respect me as a teacher
 I am responsible for planning my daily lessons
 Teaching provides me the opportunity to help my students learn
Removed: reverse-scored duplicate

Factor 6: Work itself

- *Teaching discourages originality
- Teaching is very interesting work
- Teaching encourages me to be creative
- *Teaching does not provide me the chance to develop new methods
- *The work of a teacher consists of routine activities
- Teaching provides an opportunity to use a variety of skills
- *I am indifferent toward teaching
- *I do not have the freedom to make my own decisions
- The work of a teacher is very pleasant

Factor 7: Advancement**Factor 8: Security****Factor 9: Recognition****Job Satisfaction Factor 4: Work itself**

- Removed: reverse-scored duplicate*
- Teaching is very interesting work
- Teaching encourages me to be creative
- Teaching provides me the chance to develop new methods
- Removed: reverse-scored duplicate*
- Teaching provides an opportunity to use a variety of skills
- Removed: reverse-scored duplicate*
- I have the freedom to make my own decisions
- The work of a teacher is very pleasant

Removed due to lack of applicability to current study context

Removed due to lack of applicability to current study context

Removed due to lack of sufficient number of direct-scored items

Note. Reverse-scored original items indicated by *.

APPENDIX M: TURNOVER INTENTIONS MEASURE



Turnover Intentions Measure

Note: Test name created by PsycTESTS

PsycTESTS Citation:

Xu, X., & Payne, S. C. (2014). Turnover Intentions Measure [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t37749-000>

Instrument Type:
Rating Scale

Test Format:
The 3 items on the Turnover Intentions Measure are scored on a 5-point agreement scale.

Source:

Xu, Xiaohong, & Payne, Stephanie C. (2014). Quantity, quality, and satisfaction with mentoring: What matters most? *Journal of Career Development*, Vol 41(6), 507-525. doi: <https://dx.doi.org/10.1177/0894845313515946>, © 2014 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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Turnover Intentions Measure

Items

I often think about quitting this job.

I will probably look for a new job during the next year.

from Cammann et al. (1983)

I am actively looking for another job.

from Mayfield and Mayfield's (2007) "intentions to stay" scale

APPENDIX N: TEACHING SATISFACTION SCALE



Teaching Satisfaction Scale

PsycTESTS Citation:

Ho, C.-L., & Au, W.-T. (2006). Teaching Satisfaction Scale [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t05416-000>

Instrument Type:
Rating Scale

Test Format:
For each item, teachers respond on a 5-point scale with the endpoints 1 = strongly disagree to 5 = strongly agree.

Source:
Ho, Chung-Lim, & Au, Wing-Tung. (2006). Teaching Satisfaction Scale: Measuring Job Satisfaction of Teachers. *Educational and Psychological Measurement*, Vol 66(1), 172-185. doi: <https://dx.doi.org/10.1177/0013164405278573>, © 2006 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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Teaching Satisfaction Scale TSS

Items

1. In most ways, being a teacher is close to my ideal.
2. My conditions of being a teacher are excellent.
3. I am satisfied with being a teacher.
4. So far I have gotten the important things I want to be a teacher.
5. If I could choose my career over, I would change almost nothing.

APPENDIX O: SATISFACTION WITH MENTORING MEASURE



Satisfaction with Mentoring Measure

Note: Test name created by PsycTESTS

PsycTESTS Citation:

Xu, X., & Payne, S. C. (2014). Satisfaction with Mentoring Measure [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t37748-000>

Instrument Type:
Rating Scale

Test Format:
The 3 items on the Satisfaction with Mentoring Measure are rated on a 5-point agreement scale.

Source:

Xu, Xiaohong, & Payne, Stephanie C. (2014). Quantity, quality, and satisfaction with mentoring: What matters most? *Journal of Career Development*, Vol 41(6), 507-525. doi: <https://dx.doi.org/10.1177/0894845313515946>. © 2014 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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Satisfaction with Mentoring Measure

Items

I am/have been satisfied with my mentoring.

Mentoring has disappointed me. (reversed-scored)

Mentoring has failed to meet my needs. (reversed-scored)

Note . Items are rated on a 5-point agreement scale.

APPENDIX P: MENTOR'S INTERVIEW



Mentor's Interview

Note: Test name created by PsycTESTS

PsycTESTS Citation:

Doyle, N., Jacobs, K., & Ryan, C. (2016). Mentor's Interview [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t59151-000>

Instrument Type:

Interview Schedule/Guide

Test Format:

The 11-item measure utilizes an open-ended response format.

Source:

Reproduced by permission from: Doyle, Nancy, Jacobs, Karen, & Ryan, Cathryn. (2016). Faculty mentors' perspectives on e-mentoring post-professional occupational therapy doctoral students. *Occupational Therapy International*, Vol 23(4), 305-317. doi: <https://dx.doi.org/10.1002/oti.1431>

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Mentor's Interview

Items

1. When engaging in e-mentoring, what technology (e.g. web cameras, telephone, email) do you prefer to use and why? Is this different from the technology you typically use in e-mentoring?
 2. What is your preferred frequency for e-mentoring (e.g. weekly, bi-weekly, etc.) and why?
 3. From your perspective, what makes mentoring a quality experience? What makes it a successful? What makes it satisfactory?
 4. Do you think that it helps if the mentee has similar attitudes, values, beliefs or personality?
Do you think that it helps if you have similar experiences to share with your mentee?
 5. Do you think it helps if the relationship is structured with regular meetings, mentoring agreements, mentoring evaluations, etc.?
 6. Does type of content or support (e.g. instrumental vs. psychosocial) matter?
 7. Does mentee motivation and social capital affect the mentoring relationship – and if so, how?
 8. Has e-mentoring contributed to your own professional development? If so, how?
 9. Other than distance and technology, is the e-mentoring experience distinct from in-person mentoring?
 10. What could be improved about the e-mentoring experiences you have with students?
 11. Do you have any additional comments about your e-mentoring experiences?
-