

A QUALITATIVE STUDY OF THE PERCEPTIONS OF BEGINNING PK–12  
PUBLIC EDUCATION TEACHERS ON DEFINED BENEFIT RETIREMENT PLANS

by

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A dissertation submitted to the faculty of  
The University of North Carolina at Charlotte  
in partial fulfillment of the requirements  
for the degree of Doctor of Education in  
Educational Leadership

Charlotte

2020

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## ABSTRACT

REX A. MANGIARACINA. A QUALITATIVE STUDY OF THE PERCEPTIONS OF BEGINNING PK–12 PUBLIC EDUCATION TEACHERS ON DEFINED BENEFIT RETIREMENT PLANS. (Under the direction of DR. WALTER HART.)

The significance of this study was its ability to further inform beginning PK–12 public education teachers and policy makers on the issue of teacher compensation. More specifically, the study shed light on beginning teachers' limited understanding of their defined benefit (DB) retirement plans. The purpose of this basic interpretive qualitative study was to gain additional insight and further explore the perceptions and understanding of these teachers about their DB retirement plans. The study sought further understanding as to what these teachers knew about their DB retirement plans, how they developed this understanding, how this understanding impacted their sense of financial security upon retirement, and what if any effect this understanding had in terms of impacting their career decisions. A basic interpretive qualitative study, the researcher's data sources for this study involved semi-structured, one-on-one interviews with twelve (12) beginning PK–12 public education teachers. Results of the study indicate that these teachers lacked clarity about their existing DB retirement plan as well as understanding of retirement plan options more broadly. Results indicate a struggle for these teachers to establish a relationship between their retirement benefits and financial security as well as the ability to make informed career decisions based on adequate understanding of retirement plan options. Implications included the need for related professional development for beginning teachers characterized by strategic planning, delivery, and ongoing evaluation along with the need for additional research.

## DEDICATION

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'I have never let my schooling interfere with my education.'

-Mark Twain

*To Phil, John, Dan, and Joyce...thank you for making the wrestling mat, the paper mill, the door factory, and the 'round table' the best classrooms I ever encountered.*

---

'An investment in knowledge pays the best interest.'

-Benjamin Franklin

*To Mom and Dad...my first and most impactful teachers...thank you for promoting literacy, in all of its forms.*

---

'Someday we'll find it, the rainbow connection, the lovers, the dreamers and me.'

-Kermit the Frog

*To Nicholas... 'You my best, little man.'*

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'My most brilliant achievement was my ability to be able to persuade my wife to marry me.'

-Winston Churchill

*To Carolyn...God smiled on me that January evening in Chapel Hill, and I've been blessed ever since.*

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## ACKNOWLEDGEMENTS

I first acknowledge the encouragement and support of my dissertation committee, in particular, my dissertation chair, Dr. Walter Hart, who assisted me with my writing and stylistic choices, and Dr. Hilary Dack, who assisted me with my methodology.

Furthermore, I acknowledge the role that UNC Charlotte's Educational Leadership department played in the realization of this accomplishment. I also acknowledge the dissertation written by Randolph Hudgins Jr. in 2018 ("A Qualitative Exploration of Public Sector Employee Understanding of Changes to Florida Pension Plan Retirement Planning"), which served as an impetus and model in many ways for my own related research efforts. Furthermore, I readily acknowledge that I am not a financial expert by trade, nor am I a Certified Financial Planner; however, I was blessed with the opportunity to gain strong financial literacy skills from my parents, professional mentors, and personal advocates. The critical knowledge and social capital I have been able to build in this regard have afforded me the privilege and opportunity not necessarily shared or realized by many of the participants with whom I sought to engage in this study. Finally, I acknowledge the continued and ongoing support of Ms. Michelle Demand, a Certified Financial Planner whose perspective and strategic advice have been invaluable throughout this process and so many others.

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## LIST OF ABBREVIATIONS

DB	defined benefit
DC	defined contribution
PD	professional development
PK–12	prekindergarten through 12th grade
RQ1	Research Question 1
RQ2	Research Question 2
RQ3	Research Question 3
RQ4	Research Question 4
TSERS	Teacher & State Employee Retirement System

## CHAPTER 1: INTRODUCTION

### **Introduction**

In 2020, working professionals stand at a proverbial professional crossroads characterized simultaneously by certainty and uncertainty. Certainty exists in their efforts to pursue professional passions and interests aligned with skill sets, yet uncertainty clouds whether their career endeavors will provide the necessary means to support themselves and their families. Whereas working professionals once viewed a single career path as the ideal professional endeavor, this perspective has evolved, and professional road maps now unfold in a manner that often includes various career pathways characterized by a myriad of professional directions. Torpey (2017) noted that from 2015 to 2016, more than 6.2 million workers, or 4% of the total American labor force, switched from one occupational field to another. The teaching profession is not immune to this professional paradigm shift either, with large swaths of educators leaving for fields such as office and administrative support, health care, service fields, and other industries, all despite the need for 378,700 new educators prompted by both population growth and these very same replacement issues (Torpey, 2017). Many beginning teachers who once perceived education as a lifelong career now enter their classrooms with significant uncertainty regarding how long they will serve as educators (Peske et al., 2001).

A significant shortage of PK–12 teachers has existed in the United States for some time. In the late 1990s, projections indicated that the United States would need well over 2 million new educators over the next decade and beyond (Gerald & Hussar, 1998). Educational organizations on all levels have responded to this need through the

implementation of broad-swath recruitment and retention strategies designed to help address these demands (Peske et al., 2001). Retention of these beginning teachers, already likely uncertain about their chosen career path, has been difficult (Peske et al., 2001). Many intrinsic factors, such as the desire to help children draw prospective educators into the profession, and extrinsic factors, such as lagging compensation packages, contribute directly to ongoing job satisfaction (or lack thereof) and to this professional uncertainty for beginning teachers (Sharma & Jyoti, 2006). Therefore, the problem that this research study sought to address involves a crucial yet commonly misunderstood and overlooked aspect of teacher compensation: defined benefit (DB) retirement programs.

While educators in the classroom and policy makers in the capital argue with regularity about new initiatives and policies to improve teacher compensation, and the teaching profession at large, few discussions occur involving the topic of teacher retirement programs (DeArmond & Goldhaber, 2010). Understanding that teacher retirement programs typically involve up to 6% of a teacher's gross annual salary (Allegretto et al., 2008) and can provide 60% or more of income replacement after retirement (Mitchell et al., 2001), additional dialogue and further analysis are warranted. This dialogue can be more fully realized when it is critically understood by teachers.

The professional crossroads that beginning teachers find themselves trying to navigate can become more uncertain when considering the prominent challenge of being sufficiently financially literate to fully understand their compensation and benefits packages. The teaching profession, and beginning teachers in particular, are not exempt from financial literacy concerns found in private industry and the public sector, with the

lack of financial literacy contributing to wealth inequalities (Lusardi & Mitchell, 2013). Therefore, the financial literacy of beginning teachers about their compensation and retirement programs, the ways in which they develop this knowledge, and the impact of this knowledge on their decisions to remain in or leave the profession are salient issues that need to be examined.

Studying beginning teachers' knowledge and understanding of their cumulative retirement benefit packages could lead to significant opportunities to improve upon financial literacy education provided to educators. Realized improvements in this arena through activities such as financial training at the time of initial employment and ongoing professional development (PD) could help beginning teachers make more informed financial decisions. These new supports may generate a significant return on investment for individual schools, school districts, and states by reducing the recurring and perpetual costs incurred via the recruitment and subsequent retention of beginning teachers.

### **Purpose**

The purpose of this basic interpretive qualitative study was to explore the perceptions and understanding of beginning PK–12 public education teachers about DB retirement plans.

### **Research Questions**

The following research questions guided this basic interpretive qualitative study:

1. What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?
2. How do beginning teachers develop knowledge and understanding of their retirement plan options?

3. What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?
4. How does beginning teachers' understanding of their retirement benefits inform their career decisions?

### **Theoretical Framework**

The theoretical framework for this study was constructed around Vygotsky's sociocultural theory. Jaramillo (1996) indicated that Vygotsky's conceptual framework supporting his sociocultural theory directly contributed to the development of constructivist epistemology (and thereby social constructivism), which served as a foundational building block for this study (Jaramillo, 1996). Seeking to better explain how the cognitive functions of an individual learner are connected to cultural, institutional, and historical events, Vygotsky focused on an individual learner's participation in both social interactions and culturally organized activities that would in turn impact a learner's development (Scott & Palincsar, 2013). Wertsch and Wertsch (2009) put forward three crucial themes as applied to Vygotsky's sociocultural theory. First, the individual development of learners originates in social sources and subsequent interactions. Second, the actions of individual learners are mediated and controlled by semiotic means. Third, the two prior themes are best studied through historical and developmental analysis (Wertsch & Wertsch, 2009).

Vygotsky's sociocultural theory constituted the foundation of this research and informed this study through its direct influence in shaping the research questions and the interview questions associated with each. Just as Vygotsky maintained the importance of social interactions, semiotic means, and historical analysis in understanding the



individual development of a learner, this study followed the same template to identify how these characteristics help shape beginning teachers' perceptions and understanding of their own involvement with the North Carolina TSERS. Use of this theoretical framework and its three primary themes contributed to and resulted in a more consistent alignment throughout the study. As illustrated in Table 1, Vygotsky's first theme involving the impact of social interactions on learner development is addressed by (a) Research Question 2 / Interview Question 1, (b) Research Question 3 / Interview Question 1, and (c) Research Question 4 / Interview Question 2. Likewise, the relationship between Vygotsky's second and third themes follows a similar pattern within the table.

Table 1

*Alignment of Vygotsky's Sociocultural Theory With Research and Interview Questions*

	RQ2	RQ3	RQ4
Vygotsky Theory Theme 1	RQ2 / Int Q1	RQ3 / Int Q1	RQ4 / Int Q2
Vygotsky Theory Theme 2	RQ2 / Int Q2	RQ3 / Int Q2	RQ3 / Int Q3
Vygotsky Theory Theme 3	RQ2 / Int Q3	RQ3 / Int Q3	RQ4 / Int Q4

*Note.* Int Q1, Int Q2, Int Q3, and Int Q4 = Participant Interview Questions 1, 2, 3, and 4, respectively. RQ2, RQ3, and RQ4 = Research Questions 2, 3, and 4, respectively. RQ1 and the participant interview questions associated with it are not included in the table as the purpose of RQ1 was to elicit responses demonstrating participants' levels of financial literacy as opposed to addressing any of the primary themes surrounding Vygotsky's theory.

Chapter 2 contains a more detailed and nuanced description of Vygotsky's sociocultural theory and how it served as a theoretical framework for this study. Research questions and participant interview questions are found in Appendix A.

### **Overview of Research Methodology**

This study was a basic interpretative qualitative study. Merriam and Tisdell (2016) maintained that this type of study is the most common type of qualitative research because it allows researchers to better understand how individuals (a) interact with their experiences, (b) construct the world around them, and (c) attribute meaning to those experiences (Merriam & Tisdell, 2016). Therefore, basic interpretive qualitative research constituted the study's methodology and approach as it provided a means to better understand how beginning PK–12 teachers experience these facets.

Data sources for this study involved semi-structured one-on-one interviews with twelve (12) beginning PK–12 teachers with the anticipation that this basic interpretive qualitative research structure would provide the researcher the opportunity to better present beginning PK–12 teachers participating in the study with the opportunities to express how they construct meaning as it relates to their perceptions and understanding of their DB retirement plans.

This research design aligned well with the study's theoretical framework based upon Vygotsky's sociocultural theory of learning because the twelve (12) semi-structured one-on-one interviews grounded in basic interpretive qualitative design focused on participant construction of meaning allowed the participants to share rich and authentic data with the researcher in terms of how social interactions and environment may have shaped their financial literacy pertaining to their DB retirement plans along with any

semiotic means or tools that may have contributed to their development. Furthermore, the structure allowed the participants to expound on their perceived growth and development over time in this regard.

The benefits of this specific research design can be seen in the convergence of these three facets of basic interpretive qualitative research (how an individual interacts with experiences, how an individual constructs the world around them, and how an individual attributes meaning to varied experiences) when compared with the three primary themes gleaned from Vygotsky's sociocultural theory. Identified by Wertsch and Wertsch (2009), three important themes of Vygotsky's sociocultural theory that helped shape and guide this particular study included the following: (a) The individual development of a learner has its origins in social sources and interactions; (b) the actions of individual learners are mediated and controlled by semiotic means; and (c) the first two themes are best studied through historical and developmental analysis.

The convergence of the three themes of basic interpretive qualitative research and the three themes put forward by Wertsch and Wertsch (2009) are evident because each of the separate thematic ideas focuses either on how individuals experience and construct the world around them and then develop in this world over a period of time and/or on how these experiences and constructions lead to the development of that world over time. The alignment of these facets and themes drove not only the sequence of the research questions but the related interview questions associated with them. The research design itself was characterized by the purposeful and convenience sampling of twelve (12) active beginning PK–12 public education teachers and the use of semistructured one-on-one interviews. These interviews were conducted away from participants' work sites and

outside of their working hours per specifications of the Institutional Review Board (IRB) process. The methodology, approach, design, population of beginning PK–12 public education teachers, sample size of twelve (12) participants, and setting provided the researcher with the greatest opportunity to readily access necessary data from an applicable sample in a timely, safe, professional, and ethical manner and, in doing so, to seek greater understanding about the research questions while heightening the ability to make appropriate suggestions moving forward.

### **Significance of the Study**

The significance of the study was best realized in its ability to learn from as well as inform and subsequently educate both beginning PK–12 public education teachers and policy makers on the paramount issue of teacher compensation and how this issue might shape educational policy moving forward. More specifically, the study shed light on the topic of beginning teachers' ability to understand and critically evaluate their cumulative compensation packages, of which their DB retirement plans form a significant component. Also, it enabled these same beginning teachers and the larger educational community surrounding them to further develop their financial literacy, subsequently viewing beginning teacher cumulative compensation from a broader and more critically informed lens.

### **Delimitations / Assumptions**

Driven by the idea that many beginning teachers leave the profession early, the first delimitation of this study was to include as its primary focus only beginning teachers. While research has shown that a plethora of experienced and veteran teachers struggle with these very same issues, boundaries needed to be set to organize and

strategically structure the research. The decision to use beginning teachers was made because these teachers are at the genesis of their careers as educators, with many beginning their first career altogether. The importance of making significant and consequential decisions about their long-term financial situation should not be overlooked or minimized. Seeking to better understand how this specific population of beginning teachers interprets their experiences, how they construct the world around them, and what meanings they attribute to their experiences bolstered and supported the rationale to utilize a basic interpretive qualitative structure for this research.

The second delimitation of this study was to include within teachers' compensation packages the primary focus on their DB retirement plans. This boundary was necessary because annualized teacher pay varies significantly from one school district or system to another within the state, but the constant through it all remains their equitable participation in the state's DB retirement plan. This consistent measure was necessary especially when seeking to compare levels of financial literacy and how these levels shaped interpretation and understanding of an equitably shared financial benefit.

The third delimitation of the study was to strategically include only participants who had a preexisting relationship and rapport with the researcher based on the successful completion of their student teaching internship experience under the direction of the researcher. These established relationships and rapport resulted in an eagerness to share and discuss a financial topic that many are uncomfortable discussing with strangers, particularly if levels of financial literacy are low. Also, the preexisting relationship meant that participants already trusted the researcher to maintain confidentiality.

The first significant assumption made in this study was that all participants were full and active participants in the state's DB retirement program. The researcher did not ask for tangible or visible proof of participation; rather, the researcher accepted on good faith that all participants employed as PK–12 public school educators would be part of this state-mandated retirement program for full-time, PK–12 public educators.

The second assumption made was that a sample size of twelve (12) beginning teachers would yield sufficient and suitably rich data and information. The researcher considered this in seeking out a sample that considered gender, race, completed educational program, and educational background; however, the researcher was unable to interview all applicable beginning teachers, and boundaries needed to be drawn to make the study realistic and feasible.

The third assumption that the researcher made was that the sample of beginning teachers interviewed would answer both openly and honestly the questions asked and, in doing so, would provide the most real and timely data possible.

### **Definition of Terms**

*beginning teachers.* Title IX of the U.S. Department of Education (2004) has defined

beginning teachers as any teachers in a public school setting who have been teaching in a public school classroom for a period totaling fewer than 3 complete school years.

*defined benefit (DB) plans.* Hess and Squire (2010) maintained that DB plans are

characterized by the employee continuously contributing mandated pretax dollars as a percentage of total income to the plan for a period of years while employed by a public agency (i.e., school district) that participates in the respective state's

retirement plan program. Upon retirement, said participant will then be eligible to receive a defined financial benefit based on a preexisting formula for the remainder of their life. Additional options with DB plans exist in terms of early retirement formulas and optional disbursements to spouses or beneficiaries (Hess & Squire, 2010). The North Carolina TSERS program is a DB retirement pension plan program.

*defined contribution (DC) plans.* Hess and Squire (2010) stipulated that these plans are characterized by the employee continuously electing to contribute pretax dollars (as a percentage of income or a prespecified fixed dollar amount) to the plan for a period of years while employed by a participating company or organization. Upon retirement, the employee becomes eligible to receive a cash balance or defined contribution based on the cumulative performance of their retirement fund over time. Additional options with DC plans exist in terms of early retirement formulas, early disbursement options (which entail tax penalties), and optional disbursements to spouses or designated beneficiaries. Unique features include the flexibility to roll DC funds over into other retirement investment funds without tax penalty or to delay disbursement upon retirement (Hess & Squire, 2010).

*financial literacy.* Financial literacy can be defined as an individual's ability to understand and process economic information and use this understanding to make informed decisions about topics ranging from financial planning to wealth accumulation, debt-to-income ratios, and pensions (Lusardi & Mitchell, 2013). Financial literacy provides individuals with the aptitude, knowledge, and skills needed to effectively manage their personal finances and become more informed

consumers capable of questioning various financial services and entities (Mason & Wilson, 2000).

*retirement pension.* According to Milkovich et al. (2011), a pension plan is a form of deferred compensation paid at regular and fixed intervals to an individual after that individual has retired from service in a participating organization. Typically, pensions involve four characteristics. The first characteristic involves payments made to the former employee who is now retired or in some combination to the employee and a surviving spouse. The second characteristic involves payments beginning to occur at a clearly specified or stated age. The third characteristic involves plans administered with clearly formulated and stated calculations used to determine the amount of financial benefit the retired former employee is paid. The fourth characteristic involves provisions within the pension plan to accommodate the inclusion of Social Security as a benefit when the retiree becomes eligible to claim it (Milkovich et al., 2011). The North Carolina TSERS is a state-sponsored DB retirement pension plan administered within the Department of the State Treasurer (North Carolina Department of State Treasurer, 2018).

### **Organization of the Study**

This chapter reviewed the purpose of this study along with applicable research questions. Additionally, the theoretical framework was discussed, along with an overview of the research methodology, design, and rationale. Finally, the study's potential significance was stated, delimitations and assumptions were noted, and important terms were operationally defined. The following chapter outlines the existing literature



employed to investigate further how financial literacy levels and understanding of existing DB retirement plans for beginning PK–12 public education teachers might impact their perceptions and career decision-making processes. Additionally, further details are provided about how the theoretical framework provides alignment for the study.

## CHAPTER 2: REVIEW OF LITERATURE

Educators and policy makers alike debate policies designed to improve teaching as well as the teaching profession. Preservice training, certification policy, PD, and compensation are all topics on how to better the teacher experience within the teaching profession (Corcoran, 2007; Ingersoll, 2007; Odden et al., 2007). However, often ignored in these discussions is the topic of teacher pensions and retirement programs (DeArmond & Goldhaber, 2010). Given that teacher pension programs comprise upward of 6% of a teacher's total compensation package (Allegretto et al., 2008), and can provide upward of 60% of salary replacement for retired teachers (Mitchell et al., 2001), crucial conversations and further study about pensions and teacher retirement need to be part of the dialogue shaping education moving forward.

Lusardi and Mitchell (2013) defined financial literacy as an individual's ability to understand and process economic information, thereby making more informed decisions regarding personal finances, wealth accumulation, debt-to-income ratios, and retirement benefits. However, recent research has indicated that financial literacy alone, or the lack thereof, can explain more than half of globally observed wealth inequalities (Lusardi & Mitchell, 2013). This finding stands out as prominent across both public and private industries but warrants additional attention within the field of education, an industry characterized by continually contentious compensation debates. Herein lies the gap within existing research and the impetus for this study of what DeArmond and Goldhaber (2010) referred to as a "nascent" (p. 2) field of literature in education. This study was designed to critically examine the extent to which beginning teachers understand their own DB retirement pension plans, how they develop this understanding, and how their

understanding of these plans impacts their career decisions about longevity within the teaching profession. The review of literature resulted in the emergence of three prominent themes, organized as follows: (a) retention of beginning PK–12 teachers, (b) pension plans, and (c) financial literacy. The literature related to each of these themes along with this study’s theoretical framework is summarized in Figure 1.

## Figure 1

### *Retention of Beginning PK–12 Teachers, Pension Plans, and Financial Literacy*

<b>Retention of Beginning PK–12 Teachers</b>
<b>Context &amp; Explanations</b> (Peske et al., 2001; U.S. Department of Education, 2004; Woods & Earls, 1995)
<b>Compensation Packages</b> (Cornu, 2002; Glatthorn, 1997; Kimball et al., 2005; Lussier & Forgione, 2010; Morey, 2008; Steele et al., 2010)
<b>Pension Plans</b>
<b>Context &amp; Explanations</b> (Disney et al., 2009; Hess & Squire, 2010; Milkovich et al., 2011; North Carolina Department of State Treasurer, 2018)
<b>History / Evolutions / Prospect for the Future</b> (Bredt, 2008; Costa, 2010; Holland et al., 2008; Jinping, 2013; Mikhitarian & Wukitsch, 2010; Munnell, 2016; Purcell, 2007)
<b>Barriers for Beginning PK–12 Teacher Pension Plan Participation</b> (DeArmond & Goldhaber, 2010; Gustman & Steinmeier, 2002; Hess & Squire, 2010; Kimball et al., 2005; Sapolsky, 2000)
<b>Financial Literacy</b>
<b>Context &amp; Explanations</b> (Davies, 2015; Huston, 2010; Lusardi & Mitchell, 2013; Mason & Wilson, 2000)
<b>History / Evolutions / Prospect for the Future</b> (Arthur, 2011; Davies, 2015; Gibson, 2008; Institute of Medicine, 2001; Lin & Lee, 2004; Mishkin, 2008; Pinto, 2013; Vitt et al., 2005; Way, 2014)
<b>Barriers to Financial Literacy</b> (Alessie et al., 2011; Anthes & Most, 2000; Arrondel et al., 2013; Baldwin & Ford, 1988; Brown & Graf, 2013; English, 2014; Hayes, 2012; Hira & Loibl, 2008; Jarecke et al., 2014; Klapper & Panos, 2011; Lusardi & Mitchell, 2007a, 2007b, 2008, 2011b, 2011c, 2013, 2017; Lusardi et al., 2010; Lusardi & Tufano, 2009, 2015; Mahdavi & Horton, 2012; Merriam et al., 2007; National Center for Education Statistics, 2011–2012; Thaler & Sunstein, 2010; Tisdale et al., 2012; Way & Holden, 2009)
<b>Facilitators to Financial Literacy</b> (Financial Literacy and Education Commission, 2011; Gibbons, 2004; Hensley et al., 2017; Hira & Loibl, 2008; Livingstone, 2001; Sawatzki & Sullivan, 2017; Schuchardt et al., 2009; Thorn & Porter, 2012; Way, 2014)
<b>Theoretical Framework</b>
Scott and Palincsar (2013); Tudge and Scrimsher (2003); Vygotsky (1978); Wertsch and Wertsch (2009)

## **Retention of Beginning PK–12 Teachers**

### **Context and Explanations**

In ever-evolving professional work environments that increasingly view the idea of a single career as obsolete, the teaching profession stands caught between the paradigm of what once was versus what now is. Aspiring teachers who once viewed the role of classroom educator as a career or lifelong commitment now enter the profession tentatively and conditionally (Peske et al., 2001).

Title IX of the U.S. Department of Education (2004) defined beginning teachers as any teachers in a public school setting who have been teaching in a public school classroom for a period totaling fewer than 3 complete school years. These beginning teachers often report that their first years of teaching are quite challenging, describing them as filled with disillusion and frustration and placing the primary emphasis on survival (Woods & Earls, 1995). Given this dynamic, Peske et al. (2001) hypothesized that five factors make the retention of already tentative beginning teachers more difficult: (a) insufficient induction processes, (b) inadequate PD opportunities, (c) unsupportive working conditions, (d) the absence of career progression ladders, and (e) lagging compensation packages. As a result, schools, school districts, and states have responded to high turnover among beginning teachers via wide-ranging and creative recruitment and retention strategies designed to address these concerns (Peske et al., 2001).

Appreciating the depth, breadth, and nuance of these five categories negatively impacting beginning teacher retention, this study highlights beginning teacher retention issues from the lens of compensation packages, more specifically, whether beginning

teachers are able to understand their own DB retirement pension plans as well as how the plans impact their own retirement and future within the teaching profession.

### **Compensation Packages**

Specific and targeted financial incentives are present within any number of professional occupational fields, including law, medicine, nursing, teaching, and military service (Steele et al., 2010). Glatthorn (1997) suggested that starting salary ranges and paid benefit levels are solid indicators of how well those professional environments are able to compete for capable applicants who are willing and able to conduct the work necessary of the field. Advanced and end-of-career salaries serve as a suitable indicator of whether particular types of professional work environments can continually retain and motivate needed employees. The gap between starting and end-of-career salaries gives insight into opportunities for growth, promotion, and financial reward available to employees as they advance in their careers. Understanding this, it stands to reason that the teaching profession would offer compensation and benefits comparable to other professional industries, with salaries that reflect the importance of teachers to society at large (Glatthorn, 1997). Likewise, Cornu (2002) argued that for their salaries to be commensurate with other professions, teachers must internalize and communicate that they are significantly involved in the processes of social change and therefore of infinite value. The profession of education involves a responsibility not just to the students within a classroom but also to society at large and therefore requires continuous and lifelong professional and skill development (Cornu, 2002).

Morey (2008) contended that within the field of education, traditional teacher salaries have evolved to address issues of equity, eliminate competition between fellow

teachers, and afford teachers greater autonomy and security within their classrooms. Long present, and readily accepted because of their familiarity and predictable nature, these scales have had the adverse effect of creating professional boredom and complacency (Morey, 2008).

Steele et al. (2010) discussed a recent initiative in California called the Governor's Teaching Fellowship (GTF), which offered a \$20,000 incentive to attract academically gifted beginning teachers into low-performing schools and retain them in those positions for a period of 4 years or more via the use of strategic compensation bonuses and student loan forgiveness opportunities. While the need for additional longitudinal studies remains to determine the long-term viability of such compensatory programs and their impact on student achievement, the positive results of the GTF demonstrate the power of specific, targeted financial incentive packages designed to help recruit and retain the best beginning teachers while having a positive effect on student achievement (Steele et al., 2010).

According to Lussier and Forgione (2010), the Austin Independent School District in Texas also piloted a system of support and compensation for beginning teachers and administrators called REACH for a period of 4 years. REACH sought to create an intensive induction program geared toward beginning teachers, focused on assessing student growth and allocating resources to those environments demonstrating the greatest need. This growth metric measured itself against schools of similar qualifying characteristics across the state. While positive results were seen in terms of student achievement and beginning teacher retention, issues surrounding the political, financial, and operational sustainability of the program (or like programs) remained.

Despite these uncertainties, belief that the program's benefits and potential to positively affect the teaching profession was strong. The professional skills of educators are not commonly understood or for that matter even appreciated by the public, and given that so much of an educator's work occurs within the walls of their immediate classroom, programs like REACH promoted the profession of teaching and the idea to compensate teachers like the professionals they are (Lussier & Forgione, 2010).

Kimball et al. (2005) maintained that with the exception of salary, little knowledge exists about the effectiveness of alternative incentives to attract and retain teachers. Educators' levels of responsiveness to salary and direct pay beg the question of whether teachers might also respond positively to delayed compensation in the form of pension benefits. Understanding this, teacher pensions are an already existing financial incentive that deserves consideration when addressing teacher recruitment and retention (Kimball et al., 2005).

## **Pension Plans**

### **Context and Explanations**

According to Milkovich et al. (2011), a pension plan is a form of deferred compensation paid at regular and fixed intervals to an individual after that individual has retired from service in a participating organization. Typically, pensions involve four characteristics. The first characteristic involves payments made to the former employee who is now retired or in some combination to the employee and a surviving spouse. The second characteristic involves payments that begin at a clearly specified date or stated age. The third characteristic involves plans administered with clearly formulated and stated calculations used to determine the amount of financial benefit the retired, former

employee is paid. The fourth characteristic involves provisions within the pension plan to accommodate the inclusion of Social Security as a benefit when the retiree becomes eligible to claim it (Milkovich et al., 2011). Please reference Hudgins (2018) for a further overview of relevant research defining characteristics of pension plans.

Hess and Squire (2010) maintained that pension plans typically exist in two separate categories. The first category includes DB plans, which are stalwarts of many public service sector retirement program options (including many states' teacher retirement programs). DB plans are characterized by the employee continuously contributing mandated pretax dollars as a percentage of total income to the plan for a period of years while employed by a public agency (e.g., school district) that participates in the respective state's retirement plan program. Upon retirement, said participant will then be eligible to receive a defined financial benefit based on a preexisting formula for the remainder of their life. Additional options with DB plans exist in terms of early retirement formulas and optional disbursements to spouses or beneficiaries (Hess & Squire, 2010). DB plans calculate the number or years of service to an organization combined with some specific measure of salary that structures around either the final year(s) or period of highest earning years during the employee's participation in the plan (Disney et al., 2009). Within DB plans, an employer agrees to give the participating retired employee a specific level of financial compensation with no concern as to the cumulative cost of that benefit over time (Milkovich et al., 2011). Some DB plans exist where employees are not required to contribute to these plans as the employer fully funds them. Conversely, other DB plans exist where employees are required to contribute to the plans as they and the employer fund the plan in a joint effort (Milkovich et al., 2011).



Again, please reference Hudgins (2018) for a further overview of relevant research regarding DB pension plans.

According to the North Carolina Department of the State Treasurer (2018), all PK–12 public school teachers who work at least 30 hours per week and are in a permanent assignment (lasting more than 6 months) are required to participate in the TSERS. These educators contribute 6% of their pretax income to the TSERS plan. This program stipulates that full and unreduced DB pension plan benefits calculate via summing the salary of the four consecutive highest paid years of service. This number is then divided by 4 to yield the average final compensation, which is then multiplied by 0.0182. The resulting number is multiplied by years of creditable service to yield the total annual benefit. Dividing this total annual benefit by 12 then yields the monthly financial benefit before taxes. Plan participants have the option to pursue the maximum individual allowance, a 100% joint-survivor benefit, a 50% joint-survivor benefit, a modified joint-survivor benefit, or a Social Security leveling benefit (North Carolina Department of State Treasurer, 2018). Figure 2 is a hypothetical illustration of how the DB is calculated by TSERS.

## **Figure 2**

### *Hypothetical Illustration of a Calculated TSERS Retirement Benefit for a NC PK–12*

#### *Educator*

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#### Step 1

Mrs. Smith adds her salary earned during her 4 highest paid sequential years within the system and divides that number by 4. As these highest paid years are most commonly found at the end of a career cycle, years 27–30 will be used to represent these 4 years.

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Year 30 - \$60,000 / Year 29 - \$58,500 / Year 28 – \$56,000 / Year 27 - \$54,500

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Total = \$229,000 ( $\$229,000 / 4 = \$57,250$ )

\$57,250 = Average Final Compensation

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Step 2

Mrs. Smith multiplies her Average Final Compensation found in Step 1 by 0.0182 to apply the correct retirement formula.

$\$57,250 \times 0.0182 = \$1,041.95$

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Step 3

Mrs. Smith determines her creditable years of service within the TSERS.

Years of Service = 30

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Step 4

Mrs. Smith calculates her annual retirement benefit by multiplying Step 2 by Step 3.

$\$1,041.95 \times 30 = \$31,258.50$

Total Annual Benefit = \$31,258.50

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Step 5

Mrs. Smith calculates her monthly retirement benefit by dividing Step 4 by 12.

$\$31,258.50 / 12 = \$2,604.88$

Total Monthly Benefit = \$2,604.88

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*Note.* This is an estimate of payment Mrs. Smith will receive each month before taxes or other deductions.

Hess and Squire (2010) further stipulated that the second category of pension plans refers to a DC plan. These plans are characterized by the employee continuously electing to contribute pretax dollars (as a percentage of income or a prespecified fixed dollar amount) to the plan for a period of years while employed by a participating company or organization. Upon retirement, the employee becomes eligible to receive a cash balance or DC based on the cumulative performance of their retirement fund over

time. Additional options with DC plans exist in terms of early retirement formulas, early disbursement options (which entail tax penalties), and optional disbursements to spouses or designated beneficiaries. Unique features include the flexibility to roll DC funds over into other retirement investment funds without tax penalty or to delay disbursement upon retirement (Hess & Squire, 2010). According to Disney et al. (2009), these DC plans place the assumption of financial risk and/or reward squarely on the shoulders of the employee during the accumulation phase of the plan, which occurs during the employee's tenure of work for the organization. In DC plans, employees bear the burden of choice as to whether they will actively contribute to the retirement plan as offered (Disney et al., 2009). For further background on DC plans, please reference Hudgins (2018).

### **History / Evolutions / Prospect for the Future**

Costa (2010) noted that the first public pension plans were originally introduced in the United States during the American Civil War. Created as a method of support and compensation for disabled soldiers, the U.S. Congress established these early pension plans via the General Law Pension System in 1862. This system supported eligible soldiers and military volunteers who were required to have their disability assessed by a review panel comprising three local area doctors employed by the recently created Pension Bureau. Plan participants' compensation linked to the severity of their disability resulting from the war and not to their own employment status or level of personal wealth. Were their health to decline further courtesy of their wounds, participants could see the panel of doctors again and reapply for benefit increases. By 1890, all veterans aged 65 years or older saw a minimum pension regardless of health status or existing disability (Costa, 2010).

According to Mikhitarian and Wukitsch (2010), the first private pension plans in the United States were introduced by American Express in 1875, followed by the creation of 397 other such private pension plans over the next 55 years. Trailblazing companies in this regard included Standard Oil (1903), AT&T (1906), U.S. Steel (1911), General Electric (1912), Goodyear (1915), Bethlehem Steel (1923), American Can (1924), and Eastman Kodak (1929). These prominent companies wanted to recruit and then retain stable and career-minded employees. Three-fourths of the earliest private pensions were noncontributory and covered almost 96% of employed workers. The primary cause of these steep numbers included efforts by companies to compete in labor markets characterized by fierce competition for workers. Industry was flourishing in America, and employers felt that this benefit made them more desirable and competitive in terms of recruiting and retaining motivated employees. Additionally, federal and state governments created favorable tax breaks for companies, allowing them to deduct their contributions to their employees' plans along with a tax exemption on earnings resulting from those investments (Mikhitarian & Wukitsch, 2010).

In 1920, pension plans evolved further when the Civil Service Retirement System established pension plans for civilian federal employees (Purcell, 2007). Mikhitarian and Wukitsch (2010) maintained that shortly thereafter, the Great Depression introduced new economic challenges that compelled most companies to evolve or risk outright dissolution. Profits dwindled and cash became increasingly harder to come by, thus forcing companies to tighten their budgets and cut any and all expenses they could to survive. President Roosevelt's New Deal program brought forward the creation of the Social Security Act (SSA) of 1935. Created to address the absence of a financial safety

net for American workers, specifically those of older age, the SSA introduced the notion that employees and employers could share responsibility in planning for retirement financial needs via joint contributions to a DB pension plan model managed and administered by the federal government. Many companies eyed this newfound sharing as not only advantageous to business but a necessity in a tight economic era. History again reared its head on the American economy and financial system as World War II raged on in Europe and in the Pacific during the early 1940s. The global war created an immense labor shortage, and companies returned once again to the noncontributory model seen more commonly in the 19th and early 20th centuries. This model remained the norm for about 25 years, with only 20% of participants in DB plans having to contribute their own earnings toward the plans (Mikhitarian & Wukitsch, 2010).

According to Holland et al. (2008), the federal Employee Retirement Income Security Act (ERISA) was passed in 1974 to protect employee pensions after the Studebaker/Packard Automobile Company closed, putting the pensions due to all former employees of the company into danger. The ERISA legislation required that employers follow certain guidelines in terms of accessible reporting of their pension plans should they choose to provide one. These mandated reporting measures allowed workers, external agencies, and interested parties to view the financial health and well-being of the plan in question. These reports were then and remain to this day valuable in terms of current workers and retirees seeking to understand the viability and underlying details of their retirement benefits. The Employee Benefits Security Administration regulates and oversees both public and private entities in terms of compliance with ERISA legislation (Holland et al., 2008).

Mikhitarian and Wukitsch (2010) described further evolution, occurring in 1981 with the creation of the 401(k) savings plan. Again, as the American economy struggled through the 1970s, a shift back toward shared responsibility for funding retirement became the more commonly accepted norm. The primary difference was that the 401(k) savings plan was a DC plan, as opposed to the DB plans that had dominated the prior century. The move toward 401(k) savings plans was driven by employers' desire to control operating costs and was in line with what would become successive decades (1980s and 1990s) of strong stock market performance. In the 19 years between 1980 and 1999, single employer DB plans dropped from 145,800 to only 48,200, a 67% decrease. DC plans more than doubled during that same time. By 2008, contributory DB plans had dropped to 28,000, another 58% decrease from 1999 levels (Mikhitarian & Wukitsch, 2010).

Bredt (2008), Jinping (2013), and Munnell (2016) maintained that the stark decrease of DB plans, coupled with the prominent increase in DC plans, supports an argument that many researchers have made. This argument maintains that age-related pension planning, or the disbursement of benefits based solely on age, is no longer the most viable and sustainable option for employers given the longer life-spans of modern individuals and their tendencies to remain in the workforce for longer periods of time. The current system of Social Security in America provides a prime example of this dynamic as the necessary age to qualify for full benefits continues to rise (Bredt, 2008; Jinping, 2013; Munnell, 2016). Hudgins (2018) has provided additional context on this issue of age-related pension planning.

Mikhitarian and Wukitsch (2010) noted that in seeking to maximize the best of DB and DC models, the Pension Protection Act was passed in 2006. It set forth that as of January 1, 2010, organizations with 500 or fewer employees could pursue for the first time a retirement benefit combining the traditional employer-paid DB plan along with the DC plan characterized by shared employee and employer contributions. Referred to as the DB(k), it allows for the creation of a funding formula as it pertains to the DB function and mandates that employees contribute 2% of their earnings in their 30s, 4% of earnings in their 40s, 6% of earnings in their 50s, and 8% beyond that point. The DB(k) allows employers to mandate a 4% minimum contribution on the DC side of the plan with employers required to match at least 50% of those contributions. Companies and organizations favor this because it reduces administrative costs associated with larger DB plans while promoting equity across the salary spectrum for all workers. Despite initial energy around the idea, challenges remain as to how to convert existing plans equitably and legally as well as how to extend this option to larger companies and organizations with more than 500 employees (Mikhitarian & Wukitsch, 2010).

### **Barriers for Beginning PK–12 Teacher Pension Plan Participation**

Scant research exists examining the depth and breadth of teachers' knowledge about their own DB pension plans and related fiscal benefit issues such as service credit provisions, retirement requirements, and investment options (Kimball et al., 2005). This research gap effectively serves as the first barrier for beginning PK–12 teachers in terms of pension plan participation and understanding.

For teacher DB retirement pensions to play a more active and important role in the recruitment and retention of teachers, three factors must be present. First, teachers

must have knowledge about their plans (Kimball et al., 2005). In a national study, Gustman and Steinmeier (2002) noted the importance of employee knowledge about their retirement plans. They found that 50% of the respondents did not even know if they were in a DB or a DC plan. Furthermore, for those under a DB plan, 50% of the respondents could not identify within a year their own retirement eligibility date. Eighty percent of the same group did not know how much or how little their pension benefit would be reduced by opting into early retirement. Additionally, 40% of those with a DB plan underestimated their own pension benefits by nearly \$20,000 (Gustman & Steinmeier, 2002).

According to Kimball et al. (2005), additional research is needed on teacher knowledge (or lack thereof) about pensions so that it can be better understood if proposed changes and evolutions within these benefit structures are in line with what teachers desire and will thus act as a meaningful driver for recruitment and retention within the profession. This research could aid in the development of financial education by states, school districts, and professional teacher organizations. The private sector is already seeing this with the increased proliferation of pension and retirement websites, meetings, seminars, employee portals, and print media (Kimball et al., 2005).

The second factor that must be present for DB teacher retirement pensions to play a more active and important role in the recruitment and retention of teachers is that the pension benefit must be viewed as desirable to teachers relative to other job characteristics (Kimball et al., 2005). Sapolsky's (2000) findings from a study conducted at Florida State University among education majors show that health benefits and retirement benefits were two of the most significant determinants in choosing a career in



education, followed by salary and career advancement opportunities. In terms of retirement, having a guaranteed benefit was very important (Sapolsky, 2000).

Kimball et al. (2005) reiterated how the scant research on the effects of pensions on teacher recruitment and retention is very clear when compared with research on teacher attrition in other areas more commonly studied and referenced earlier in this chapter (e.g., insufficient induction processes, inadequate PD opportunities, unsupportive working conditions, absence of career progression ladders, and lagging compensation packages). More research is needed to determine where pensions stand in comparison with other teacher job attributes (Kimball et al., 2005).

Additionally, Kimball et al. (2005) maintained that the third factor that must be present for DB teacher retirement pensions to play a more active and important role in the recruitment and retention of teachers is the removal of barriers to understanding the benefit of the pension. The general lack of knowledge and limited access to related information detailing the pension plans in question needs to be addressed. States can work to remove these barriers to understanding pension benefits through the purposeful development of pension information and subsequent use of this information to directly attract and retain teachers. School districts could take an active stance on promoting their pension plans as a primary competitive advantage that they can offer to their employees. Additionally, the lack of mobility between separate DB pension plans and the option to move from one plan to another without fear of financial penalty must also be addressed (Kimball et al., 2005).

DeArmond and Goldhaber (2010) detailed a study in Washington State supporting the ideas that increased knowledge and desirability and the reduction of barriers are

crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. The survey asked participants about which version of the pension plan they participated in (Washington State has three choices), how the plan works, and opinions on where they would channel additional funds (DB vs. DC option) were they able to do so. The survey results support the notion that those teachers more advanced in their careers (beyond the stage of being a beginning teacher in their first 3 years) were more aware and knowledgeable about their respective plans, how the plans worked, and in what manner the teachers would channel additional funds if given the opportunity (DeArmond & Goldhaber, 2010).

DeArmond and Goldhaber (2010) went further in suggesting another barrier for beginning PK–12 teachers in terms of pension plan participation, involving the preference for and desirability of how the plan is structured. Recent research indicated that teachers supported the idea of DC plans if they were given additional funds and the freedom to do with funds as they so desired, thus allowing for greater mobility within the profession. Worth noting, however, is that this study involved a proposed marginal change, meaning there would be additional dollars involved. Finally, and worthy of note, the information garnered from this research was from spring 2007, immediately preceding the U.S. Great Recession, when investing in DC plans could have yielded very different results (DeArmond & Goldhaber, 2010).

## **Financial Literacy**

### **Context and Explanations**

Financial literacy can be defined as an individual's ability to understand and process economic information and use this understanding to make informed decisions

about topics ranging from financial planning to wealth accumulation, debt-to-income ratios, and pensions themselves (Lusardi & Mitchell, 2013). Financial literacy provides individuals with the aptitude, knowledge, and skills needed to effectively manage their personal finances and become more informed consumers capable of questioning various financial services and entities (Mason & Wilson, 2000). Huston (2010) maintained that since 2001, the U.S. Department of Education and the No Child Left Behind Act have defined financial literacy via four separate dimensions. The first category is money basics, characterized by the time value of money, purchasing power, and personal accounting concepts. The second category involves the use of credit cards, consumer loans, and mortgages. The third category addresses investment and the saving of current resources for future use via savings accounts, stocks, bonds, and mutual funds. The fourth category involves the protection of that money in the forms of insurance or related risk management techniques (Huston, 2010).

Despite the scope of these definitions, Davies (2015) argued that the definition of financial literacy needs to evolve from a focus on the individual to a more holistic understanding of the financial system, resulting in a more informed population that is able to hold industry and politicians accountable. Placing the definitional emphasis of financial literacy on the individual stands in stark contrast to the financial challenges and realities experienced by so many, further driving the argument that financial literacy should not be limited to just personal financial behavior and decisions but rather should overlap and include economic literacy on a larger and more holistic scale (Davies, 2015).

### **History / Evolutions / Prospect for the Future**

The majority of financial education focuses on developing the individual's knowledge related to specific financial literacy topics, such as money management, credit, saving, banking, insurance, taxes, and investment, as opposed to addressing financial behaviors (Vitt et al., 2005). However, approaches to financial literacy that include both individual knowledge and self-analysis of financial behaviors are apt to yield more positive results (Way, 2014). For example, within the realm of health and nutrition, knowledge on these topics combined with self-analysis of individual behaviors supports cumulative health improvements over time (Institute of Medicine, 2001). Viewed from a wider spectrum and compared against an entirely separate industry, this duality of need becomes clear.

The argument exists for the importance of improving financial literacy of the public more generally to alter the current information environment in which governments and the financial industry interact with one another and of which the public is typically blissfully and naively unaware (Mishkin, 2008). While financial literacy education is paramount to combating this, some theorists have maintained that financial literacy education offered and delivered by bankers or politicians with their own agendas in mind could be considered yet another purposeful attempt to distract or even misinform larger populations from their own role and culpability when financial ethics are breached (Arthur, 2011; Gibson, 2008; Pinto, 2013). To combat this, Davies (2015) discussed proposals put forth to expand financial literacy education approaches beyond personal financial literacy to include a broader understanding across the entire financial sector, including government financial interventions, the primary motivation being that

democratic processes and holistic financial well-being require citizens (and voters) whose levels of financial literacy create functional rather than dysfunctional incentives for the financial sector and government (Davies, 2015).

Research demonstrated the positive correlation between financial literacy and financial literacy education (Lin & Lee, 2004). However, Davies (2015) maintained that very little, if any, of this financial literacy education research involved references to or discussions about financial misdemeanors or crimes that result in damaging economic situations. This absence is not surprising given that many of the resources used for financial literacy education are created by the same industry players perpetuating many of the offenses. Increased emphasis on neutrality in terms of resources and delivery agendas needs to be placed to promote a more knowledgeable population and an ongoing healthy democracy (Davies, 2015). According to Davies, financial literacy viewed from the lens of the individual as opposed to the system in which the individual participates should be the standard. This standard can best evolve by better understanding short-term individual issues, long-term systemic issues, and the relationships between these (Davies, 2015).

### **Barriers to Financial Literacy**

Hayes (2012) referenced Dr. Dennis Kimbro, business professor at Clark Atlanta University, who stated, “Financial literacy is the final rung on the ladder of civil rights. You have the right to eat wherever you want, but what difference does it make if you don’t have any money?” (p. 9). Not only is there a lack of literature focusing on educational practices as they relate to financial literacy programs but literature also lags in terms of the unique needs of the respective populations assisted or instructed by these programs (Tisdale et al., 2012).

Populations more likely to experience inadequate levels of financial literacy are very broad and span a significant demographic spectrum. Financial illiteracy can impact both the young and the old (Lusardi & Mitchell, 2013) and is evident among both males and females, with females typically experiencing higher levels of financial illiteracy (Lusardi & Mitchell, 2017; Lusardi et al., 2010; Lusardi & Tufano, 2009, 2015). Race and ethnicity are involved as well, with African Americans and Hispanics displaying the lowest levels of financial literacy in American studies characterized by differences in race and ethnicity (Lusardi & Mitchell, 2007a, 2007b, 2011b). Urban and rural populations also display stark disparities, with rural populations scoring more poorly on financial literacy (Klapper & Panos, 2011). Education levels are another indicator, as those without a college education demonstrate far less basic understanding of financial concepts (Lusardi & Mitchell, 2007a, 2011b) and perhaps further support findings that a positive correlation exists between financial literacy and demonstrated cognitive abilities (Lusardi et al., 2010). Financial literacy varies by employment type, as evidenced in the performance of lower paid employees as compared to their higher paid counterparts (Lusardi & Mitchell, 2011c; Lusardi & Tufano, 2009). Financial literacy can also be tied to family background and characteristics within the household when controlling for demographic and economic qualifiers (Lusardi et al., 2010), as well as a connection to parental educational levels and background (Mahdavi & Horton, 2012). Gaps in financial literacy also present themselves when considering the nationality of foreigners coming to the United States, who demonstrate less financial literacy than those who are native born to the country (Brown & Graf, 2013). Effectively, financial illiteracy is an international trend (Lusardi & Mitchell, 2013).

While financial illiteracy can be analyzed and further studied from a multitude of angles, research pertaining to women's financial literacy becomes an imperative for further discussion given that the profession of education has historically been populated by a majority of female employees. Data indicate that 79% of the PK–12 teaching force in North Carolina comprises women versus only 21% men (National Center for Education Statistics, 2011–2012). Way and Holden (2009) provided startling numbers on teachers and how little they know and how ill-prepared they are to teach topics related to financial literacy. Only 11.6% of teachers have taken a workshop or PD involving financial literacy, and 36.2% state that they feel comfortable with their state's financial education standards; however, only 20% of teachers report then actually feeling comfortable when teaching this content (Way & Holden, 2009). Even educated female professionals from a prominent liberal arts college were found to have very low levels of financial literacy (Mahdavi & Horton, 2012). Despite findings indicating that women are less financially literate than their male counterparts, Lusardi and Mitchell (2013) indicated that women were found to be far more likely to admit that they did not know or even understand financial literacy questions. This self-awareness of a perceived weakness may actually make them ideal and even superior targets for financial literacy programs. These findings hold consistent internationally as well (Lusardi & Mitchell, 2013).

The argument exists that financial illiteracy has had a historically greater effect on women than on men (Lusardi & Mitchell, 2008). Anthes and Most (2000) noted that women tend to be more apprehensive about their finances, and less informed about ways to learn more about them. They typically face more financial challenges than men, and these disparities between the sexes often align with income disparities, fewer

opportunities to save, shorter employment tenures, impact on finances courtesy of being a primary caregiver, and a commonly assumed stereotype that women enable poor financial decisions (Anthes & Most, 2000).

In an effort to combat this situation, and according to Jarecke et al. (2014), women's financial literacy programs should include goals where the central purpose is to empower women, provide women with financial information, establish environments that are aligned with the unique learning needs of women, and encourage women to be engaged learners on this topic (Jarecke et al., 2014). Further strategies to help women better realize these goals include the pursuit and adoption of a constructivist approach where learning is an active process that gives learners the opportunity to engage with new materials and ideas and reflect on previous learning, thereby allowing new variations and knowledge to emerge (Merriam et al., 2007). Relationship building is also crucial, as research has shown that women display a preference for learning financial literacy with others (Hira & Loibl, 2008). Finally, embracing a critical stance on the subject may allow women to better critique the content and environment in which the subject presents itself, which often happens to be very male-centric (Jarecke et al., 2014).

According to English (2014), this notion of critique also allows women the opportunity to view financial education through the lens of critical theory perspective. Similar in this regard to any type of education, financial education can be communicated and taught through the lens of critical theory where the myth of social progress will be challenged, social class factors will be considered, issues of race and gender will be highlighted, and sources of power will be identified (English, 2014). Financial literacy viewed from the lens of critical theory supports the importance of giving very close



attention and detail to the environments where people make financial choices that have impact on the broader scope of their lives (Thaler & Sunstein, 2010).

### **Facilitators to Financial Literacy**

According to the Financial Literacy and Education Commission (2011), the National Strategy for Financial Literacy 2011 names four crucial areas in the promotion of financial literacy. These areas include building public awareness of available resources; developing tailored, targeted materials and dissemination strategies for said materials; formulating and then utilizing effective partnerships; and supporting research and evaluation of these financial literacy programs. Four goals then extend from these specific areas. They include increasing awareness of and access to effective financial education, determination and integration of core financial competencies, improvements to financial education infrastructure, and the enhancement and sharing of effective practices (Financial Literacy and Education Commission, 2011).

Recent research has shown that most adults (87%) prefer to learn about financial issues by talking with others informed on the subject one-on-one or by completing their own research efforts (75% ; Hira & Loibl, 2008). In a Canadian study, Livingstone (2001) noted that participation among Canadian adults in informal learning was 5 times higher than in instructor-led courses. Eighty percent of the same adults said they spent an average of 5 hours a week learning informally about topics involving financial literacy and budgeting and appreciated the opportunity to learn at home, at work, or elsewhere (Livingstone, 2001). These preferences should be considered as avenues to improve financial literacy and behaviors and will likely determine the quality of resources and their accessibility to those who would seek them out (Way, 2014).

In a recent study conducted from 2010 to 2012 across five states (Illinois, Colorado, Vermont, Arizona, and South Carolina) with three of the five (Colorado, Vermont, South Carolina) ultimately composing the study's final sample size of 163 9th- to 12th-grade teachers (97 in CO / 29 in VT / 37 in SC), Hensley et al. (2017) discussed how PK–12 teachers spent 3 days in a PD program composed of six separate 3-hour sessions (18 hours total). These sessions covered issues ranging from how economic trends impact personal finances to how to develop personal financial strategies, how to identify ways to build wealth through saving/investing, how to critically compare financial services/products, how to prevent fraud, how to maximize credit, how to manage debt, and how to explore personal financial resources. The sessions, presented by academics, included financial planners and insurance representatives, all of whom refrained from using the opportunity as a platform for self-promotion. Results show significant changes in personal behavior as it pertained to personal financial literacy, with increases in confidence across the board. These gains were measured using quantitative data analysis techniques based off of surveys given to participants both immediately before and after the PD treatment implementation. Additionally, a follow-up prompt was given 6 months later to gain better understanding of evolving behaviors regarding the issue, with emphasis on how the topic then extended to their roles in their classrooms with this very same content. These successes highlight the need for financial counseling within education not only to improve the content knowledge and delivery of those teaching the subject but also to enhance the quality of personal financial decisions made by educators (Hensley et al., 2017).

Sawatzki and Sullivan (2017) recently conducted a similar study in Australia where data were collected from 35 teachers tasked with teaching mathematics as a component of their curriculum in 16 different primary school settings. Primary school in Australia extends from kindergarten through sixth or even seventh grade. The study sought to measure practicing teachers' perceptions of the opportunities for financial literacy in terms of the teachers' instructional methods and math content they were responsible for teaching. Findings suggested three things: first, that teachers need to spend more time and training on the development of the knowledge, skills, and capabilities required to make sound financial decisions; second, that teachers need to spend more time and training to better identify and interpret where within the broad spectrums of their curriculum opportunities exist to teach financial literacy; and third, that teachers need to spend more time researching, sharing, and learning about how to bring this content into practice within their classrooms (Sawatzki & Sullivan, 2017).

Regarding the issue of financial literacy education, educators have been encouraged to embrace and support technology-based tools with the belief that digital media (e.g., computer games, simulations, interactive tutorials, virtual learning environments) enhance understanding of the subject matter; however, results have proven to be inconsistent in terms of both youth and adult populations (Schuchardt et al., 2009; Thorn & Porter, 2012). Therefore, according to Gibbons (2004), educators of financial literacy should undertake measures to connect teacher-directed learning with self-directed learning and to further emphasize self-directed learning for their students given the massive variety of financial products, providers, and services available (Gibbons, 2004).

## Theoretical Framework

The theoretical framework for this study is built on the foundations set in place by Vygotsky's sociocultural theory. Vygotsky, a Russian psychologist, began his work shortly after the Bolshevik Revolution (Russian Revolution) that occurred in 1917 (Scott & Palincsar, 2013). Via his sociocultural theory, Vygotsky sought to explain how the mental functioning of an individual learner is connected to cultural, institutional, and historical events, thereby focusing this perspective on an individual learner's participation in social interactions and culturally organized activities, which in turn impact the learner's development (Scott & Palincsar, 2013). Furthermore, Vygotsky maintained that the mental functions of an individual learner were not an isolated derivative from social interactions but instead were characteristic of varied social structures and processes encountered by the learner that shaped the learning process (Scott & Palincsar, 2013).

Wertsch and Wertsch (2009) identified three important themes of Vygotsky's sociocultural theory that helped to shape this particular study and guide it forward:

1. The individual development of a learner has its origins in social sources and interactions.
2. The actions of individual learners are mediated and controlled by semiotic means.
3. The first two themes are best studied through historical and developmental analysis.

With respect to the first theme, Wertsch and Wertsch (2009) stipulated that as learners involve themselves in a range of collaborative activities and internalize the

benefits of these efforts, they develop new levels of understanding and strategies for engaging with the world around them. Typically, this idea has been best illuminated via the critical comparisons between two learners with disparate levels of knowledge or understanding (Wertsch & Wertsch, 2009). Vygotsky stretched this further than simply the existing levels of knowledge brought by the learner in question through his interest in what that learner had experienced in terms of broader cultural or historical events that ultimately shaped the learning interaction (Tudge & Scrimsher, 2003).

With respect to the second theme, Wertsch and Wertsch (2009) argued that semiotics, or the use of tools and signs, was imperative for the learner to facilitate the construction of new knowledge as well as the means by which this new knowledge was internalized to assist with individualized problem solving moving forward. An example of such tools or signs in terms of the financial literacy involved in understanding DB retirement plans includes online retirement benefit calculators and associated retirement planning resources.

With respect to the third theme, Wertsch and Wertsch (2009) supported Vygotsky's (1978) assertion that to study a learner in a historical fashion equates to studying their process of change over time. In effect, to study someone over time and include all their changes during that time is fundamental to discovering their essential nature and, in doing so, to most accurately displaying what they really are; therefore, the historical study of a learner should not be viewed as ancillary but rather foundational in seeking to better understand where they have been and where they might be going (Vygotsky, 1978). For the purposes of this study, and seeking to better understand the element of beginning PK–12 public education teachers' financial literacy development

over time, the researcher asked study participants to self-report via interview questions and subsequent follow-up prompts how their knowledge acquisition or developmental growth in this area (financial literacy involving their DB retirement plan) evolved over time.

Contrary to the popular perspectives of his day that viewed learning as an external event and development as an internal one, Vygotsky was concerned with what he perceived as connections between learning and development. He proposed that the learning process stirred within the learner a desire to interact with their environment and their peers and that when structured properly, these interactions could yield a magical concoction blending learning and development into the perfect elixir (Vygotsky, 1978). Growing out of this perspective, Vygotsky put forward the idea of the zone of proximal development (ZPD), supporting the notion that learning should be aligned with the learner's level of development. Vygotsky argued that to best understand the relationship between learning and development, the learner's level of actual understanding must be compared to their level of potential understanding. In short, what can a learner do individually versus with assistance? Vygotsky maintained that the ZPD was a superior measure of learning to a static observation of what a learner could do alone. Directing learning toward this end helped advance development quickly and more efficiently, resulting in increased confidence to engage with new tasks and heighten development (Vygotsky, 1978).

Scott and Palincsar (2013) maintained that the educational implications of Vygotsky's sociocultural theory are critical. Understanding the breadth of the theory, particularly as it relates to the ZPD, it is imperative to identify the current abilities of the

learner as well as their potential moving forward. Dynamic assessment measures are a strong way to achieve this result. Designed to include both existing knowledge and the incorporation of assistance for the learner to build upon it, educators can then better maximize dynamic assessment to increase learning and heighten development.

Instructionally, this plays out in a manner that sees the learner interact, negotiate, and collaborate with peers. Engaging with these activities and incorporating the necessary tools (semiotics) toward an inquiry-based challenge or learning goal then culminates in superior results as pertaining to both learning and development (Scott & Palincsar, 2013).

Vygotsky's sociocultural theory directly relates to this study via the three primary themes discussed earlier that were characterized and put forward by Wertsch and Wertsch (2009). Figure 3 depicts how the researcher's use of these themes within Vygotsky's sociocultural theory informed the construction of both the research questions and the specific interview questions to support the research questions.

### Figure 3

#### *Alignment of Vygotsky's Sociocultural Theory With Research and Interview Questions*

		<u>RQ2</u>	<u>RQ3</u>	<u>RQ4</u>
Vygotsky's Sociocultural Theory	<u>Theme #1</u>	RQ2/Int Q1	RQ3/Int Q1	RQ4/Int Q2
Three Primary Themes	<u>Theme #2</u>	RQ2/Int Q2	RQ3/Int Q2	RQ3/Int Q3
(Wertsch & Wertsch, 2009)	<u>Theme #3</u>	RQ2/Int Q3	RQ3/Int Q3	RQ4/Int Q4

Theme #1 = The individual development of a learner has its origins in social sources and interactions.

Theme #2 = The actions of individual learners are mediated and controlled by semiotic means.

Theme #3 = The first two themes are best studied through historical and developmental analysis.

These three themes formed the foundation for the research questions and then subsequently guided how the interview questions are constructed to best address them. The alignment of these themes in shaping the study's structure and methodology was done strategically and with purposeful intent. Just as Vygotsky maintained the importance of social interactions, semiotic means, and historical analysis in understanding the individual development of a learner, this study followed the same template to identify how these characteristics help shape beginning teachers' perceptions and understanding of their own involvement with the North Carolina TSERS.

For example, Theme 1 details how the individual development of a learner has its origins in social sources and interactions. This theme was explored via specific interview questions under the umbrella of three separate research questions. Research Question 2 asked how beginning teachers develop knowledge and understanding of their retirement plan options. This research question was then connected to Interview Question 1, which asked participants to detail in what setting or settings they were first informed about their current retirement plans. Research Question 3 asked what beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement. This research question was then connected to Interview Question 1, which asked participants to expound on the characteristics they believed equate to financial security upon retirement and then specify in what settings or environments these perspectives were developed. Research Question 4 asked how beginning teachers' understanding of their retirement benefits inform their career options. This research question was then connected to Interview Question 2, which asked participants to expound on whether they had discussed their retirement benefits prior to accepting a



position and, if they had, to describe the setting in which that discussion occurred. Each of these research questions and the specific interview questions associated with them sought to expand the understanding of how setting, environment, and the interactions in these places impact the individual learning and development of beginning teachers as pertains to their DB retirement plans. Theme 2 and Theme 3 followed similar patterns in their efforts to further explore the topic from their respective lenses.

The theoretical framework aligned well with the researcher's epistemology of social constructivism for a variety of reasons. Creswell and Poth (2018) noted that social constructivism stipulates that individuals seek to gain understanding of the environment in which they live and work, and through this process, they construct meaning of their experiences and provide prospective researchers the opportunity to explore more complex views and perspectives as opposed to the narrow categorization of these facets in other epistemologies. Crotty (1998) noted that with social constructivism, there is no objective truth or meaning waiting to be discovered; instead, truth and meaning emerge based on an individual's engagement with the world around them. Given the researcher's efforts to understand how beginning PK–12 public education teachers construct meaning around their perceptions and understanding of their DB retirement plans through the lens of Vygotsky's sociocultural theory, along with the researcher's efforts to then see new meaning and truth emerge, the epistemology of social constructivism supported the use of this theoretical framework well.

When considering this study, basic interpretive qualitative research provided the researcher the best opportunity to present beginning PK–12 public education teachers participating in the study with the opportunities to express how they interact with their

experiences, construct the world around them, and attribute meaning to those experiences as relating to their perceptions and understanding of their DB retirement plans.

The theoretical framework of this study informed the decision to use semi-structured one-on-one interviews as the primary data source for this study for a variety of reasons. First, the premise behind Vygotsky's sociocultural theory of learning that all individual learners are impacted by environment and semiotics and that this learning is best studied via development over time synched well with the method of interviewing and letting the participants' constructed meaning emerge via the dialogue in these interviews. Second, the three primary themes allowed for the research questions (and the subsequently related interview questions) to be structured strategically to address each theme. The use of semi-structured one-on-one interviews was purposeful and strategic. The researcher employed this method as opposed to open-ended questions in a survey instrument because of the opportunity to ask follow-up questions as necessary and, in doing so, provide the opportunity to explore participants' statements in greater depth. Furthermore, semi-structured one-on-one interviews were employed in place of other qualitative mainstays like focus groups because of the sensitive nature of the topic and the understanding that a group (even a small one) might negatively impact or alter the safety and security a participant might feel when discussing a topic that they might be uncertain or unconfident about discussing.

The theoretical framework of this study informed the decision to use in vivo coding processes for data analysis as well. With its three identified themes (Wertsch & Wertsch, 2009), Vygotsky's sociocultural theory provided three strong thematic pillars upon which research questions and interview questions could be based, thus allowing for

in vivo coding of participants' responses to inductively emerge and either support and/or build upon these preexisting themes.

### **Conclusion**

This chapter has reviewed the emergence of three prominent themes organized as follows: (a) retention of beginning PK–12 teachers, (b) pension plans, and (c) financial literacy. The theme involving the retention of beginning PK–12 teachers expanded upon how lagging compensation packages synthesize to form a prominent barrier to beginning teacher retention. The theme of pension plans was discussed and explained in terms of historical context as well as the context by which beginning teachers engage with them. Finally, the theme of financial literacy was identified, investigated, and incorporated to offer not only an explanation of current struggles with beginning PK–12 teacher recruitment and retention but also a suggestion for how these struggles might be addressed moving forward. Additionally, this chapter delineated in detail how Vygotsky's sociocultural theory was structured and why it was a suitable choice to serve as the study's theoretical framework.

The following chapter outlines the methodology employed to investigate how financial literacy levels of beginning PK–12 teachers and cumulative understanding of existing DB retirement pension plans impact their perceptions and career decision-making processes.

## CHAPTER 3: METHODS

### **Introduction With Research Questions**

The purpose of this basic interpretive qualitative study was to explore beginning PK–12 public education teachers' understanding of DB retirement plans. The desired outcome of this study was to expand the body of literature regarding PK–12 beginning public education teachers' understanding and perceptions of DB retirement plans.

The following research questions guided this study:

1. What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?
2. How do beginning teachers develop knowledge and understanding of their retirement plan options?
3. What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?
4. How does beginning teachers' understanding of their retirement benefits inform their career decisions?

### **Epistemology and Methodology**

This study was based on the epistemology of social constructivism. Creswell and Poth (2018) maintained that constructionism is an outgrowth of the more readily acknowledged and widely recognized social constructivism. Social constructivism postulates that individuals seek to gain greater clarity and understanding of the environment in which they live and work. Through this process, they develop subjective meaning of their experiences and, in doing so, provide prospective researchers the opportunity to explore more complex views and perspectives as opposed to the narrow

categorization of these facets in other epistemologies. The goal of any social constructivist epistemology is to flesh out participant views of situations that are informed and constructed by historical experience and social interaction (Creswell & Poth, 2018).

Crotty (1998) stated that social constructivism holds that there is no objective truth or meaning waiting to be discovered; rather, truth and meaning rise and recede based on an individual's engagement with the world around them. Therefore, truth and meaning are not discovered but rather are constructed. Because of this perspective, social constructivists hold that different individuals may construct meaning in different ways, even when considering the same phenomenon (Crotty, 1998).

Crotty's (1998) argument further supported the researcher's use of this epistemology because the researcher was not in pursuit of a clearly defined and preidentified truth; rather, the researcher sought to identify the manner in which the participants construct their own truth and understanding of the topic. Additionally, the researcher sought to identify how these facets of understanding shape the participants' engagement with the world around them (i.e., PK–12 public school environments).

This social constructivist epistemology provided a well-suited approach for this study and the relevant research questions because the study sought to understand how beginning PK–12 public educators construct meaning about and then utilize knowledge of their DB retirement plans to make decisions that impact the trajectory of their careers as educators. These decisions are shaped and often arrived at within the context of the environment in which they work (i.e., PK–12 public school environments). RQ2 and RQ4 specifically sought to understand how these beginning teachers construct meaning within

their school environments and how they then act upon these constructed meanings in terms of decisions that impact their careers as educators. Furthermore, the epistemology of social constructivism and its process-oriented nature allowed for participants in the study to develop subjective meaning as it relates to their experiences in this regard, thus allowing the researcher access to these more complex views and perspectives. Finally, the epistemology of social constructivism supported the researcher's intent to let the research itself serve as an inductive pathway for the development of theory as opposed to simply superimposing an existing theory upon the process and seeking to make results fit within the existing constraints of that theory.

The methodology for this study was a basic interpretative qualitative study. Merriam and Tisdell (2016) maintained that qualitative research is designed and utilized by researchers to better understand how participants (a) interact with their experiences, (b) construct the world around them, and (c) attribute meaning to those experiences.

Furthermore, Merriam and Tisdell (2016) stipulated that the most common type of qualitative research is generic or basic interpretive qualitative study. Basic interpretive qualitative studies are used primarily to better understand how participants interact with their experiences and then construct meaning around those experiences. Subsequently, basic interpretive qualitative research ("interpretivism") constituted the study's methodology and approach (Merriam & Tisdell, 2016).

When applied to this study, basic interpretive qualitative research provided the researcher the opportunity to better present beginning PK–12 public school teachers participating in the study with the opportunity to express how they interact with their experiences, construct the world around them, and attribute meaning to those experiences

as it relates to their perceptions and understanding of their DB retirement plans than were the study to have been conducted using another of the qualitative research design subgroups.

### **Positionality Statement**

After college, I worked for 5 years as a Production Manager for a global door and window manufacturer (Jeld-Wen, Inc.). In this role, I lead a team of forty employees and was responsible for all employee training, safety, quality, production and purchasing within my department. This role, coupled with early emphasis and exposure from my parents, positioned me advantageously in terms of financial literacy. Since then, I have worked as a full-time educator within the state of North Carolina for the past 13 years. For the first 7 years, I was a high school social studies teacher with the Charlotte-Mecklenburg School District. It was in this capacity where I was first exposed to, gained an interest in, and came to understand the TSERS program. The past 6 years I have spent working as a site coordinator in the Cato College of Education at UNC Charlotte. My current position within the Office of School and Community Partnerships consists of the supervision, mentoring, coaching, and evaluation of both undergraduate and graduate-level middle grades and secondary student teaching candidates as they complete their final student teaching internships in partner schools within many regional school districts located around the greater Charlotte area. Because of my experiences with these aspiring teachers, I have developed a heightened awareness of the issue of compensation and benefits as they pertain to educators, more specifically, how beginning PK–12 teachers' levels of financial literacy impact their ability to understand and thus better maximize their respective benefit packages.

Through my work with both student teachers and beginning teachers, I have come to believe that they receive neither the training nor the support they need to fully understand the compensation and benefits that exist in their chosen profession. Having delved deeply into the literature on financial literacy and how the issue of compensation plays a significant role in both the initial recruitment and ultimate retention of beginning PK–12 public teachers, I believe that, collectively, these factors have a negative impact on the recruitment and retention of beginning teachers. As a faculty member in UNC Charlotte’s Cato College of Education, I view myself as having developed industry-specific knowledge for this population of students and beginning professional educators, and I strive to help them better understand their respective benefit packages.

In my work with these populations, I have observed that they are typically very unsure, anxious, and hesitant in terms of discussing, understanding, and even negotiating prospective compensation and benefit packages. Common concerns that student teachers and beginning teachers regularly voice to me are that they do not understand how and why teacher pay is structured the way it is, nor do they understand their full benefit packages when viewed holistically. Furthermore, since they do not appear to have learned any of this information, they do not know how to navigate these uncertainties and to whom to turn with these questions.

In my professional role, I communicate regularly with school administrators and veteran teachers who are serving as clinical educators (mentors) for our student teaching candidates. In contrast to the student and beginning teachers they mentor, these experienced educators typically (though not always) have a better understanding of their compensation and benefit packages; however, nearly all of them communicate some sort



of awkward or regretful learning curve as it pertains to this topic. It has been my experience that PK–12 educators are largely isolated in terms of understanding this issue and that any growth or development in this regard is individually motivated and accomplished.

Advantages that my positionality affords me in this regard are largely characterized by time, space, and opportunity. My current role as a site coordinator provides me with the time to consider broad and holistic topics related to teacher compensation issues. Furthermore, I have the space in which to communicate about these issues. Whether it be a PD conference or a doctoral class on educational finance, I am again blessed with the space to better inform myself on the topic and build expertise. Finally, I am afforded the advantage of opportunity—my current role provides me with the opportunity to engage with experts and build knowledge in a way that I would not have were I still employed as a traditional PK–12 public education teacher.

Disadvantages that my positionality challenges me with include sensitivity and access—sensitivity in that I continually need to remind myself that the topic of DB retirement plans is rarely in the forefront of what the typical PK–12 public educator will deal with on a day-to-day basis. I have that luxury, they do not. Sensitivity in appreciating this facet is imperative. Additionally, access has proven to be a disadvantage in some respects as it pertains to my positionality. Because I am no longer a PK–12 public educator serving in a traditional classroom with students, I can be and often am viewed as an outsider, and with this comes feelings of hesitation and doubt exhibited by some who are unsure of my role and its larger implications for their classroom or school.

The power that I wielded in this research as a result of my positionality was mitigated to a significant degree because I no longer have the evaluative responsibility nor the position of power over participants choosing to involve themselves in the study. While I did serve as their site coordinator during their student teaching internships, each participant successfully completed their internship experience, was granted initial licensure, and is now gainfully employed by a local area school district. The power dynamic that my positionality may have once had over them was hence significantly altered, and while not eliminated in its entirety, it has been replaced instead with mentorship, support, encouragement, and appreciation. This foundational level of comfort and rapport between the study's participants and me is vital in terms of providing them the space, and the security within that space, to discuss the highly personal topic of financial literacy in an open and honest fashion.

Having addressed the power dynamic of my positionality, it is necessary to acknowledge that the inclusion of participants for this study who have a preexisting relationship with me could mean that participants' willingness to be interviewed and their responses might have been driven by social desirability and the goal to please me as a former mentor. While this is a legitimate concern, the topic's novelty in terms of prior dialogue with these individuals mitigated that influence. Also, these prior relationships helped to establish a level of trust needed for participants to candidly discuss their financial literacy, a topic that may be intimidating for those with limited background knowledge. The researcher worked diligently to establish an environment of trust and open dialogue by (a) beginning interviews by reminding participants that everything they said would be confidential, that they would not be evaluated, and that what they shared

could not adversely impact them in any way; (b) holding the interviews in a confidential location; (c) using accessible and easily understood language in interview questions whenever possible; (d) defining key terms with which participants may have been unfamiliar to help them feel at ease with the questions; and (e) emphasizing throughout the interview that it was acceptable to say that they did not know something.

Furthermore, the participants' prior interactions with me were dominated by dialogue related to teacher preparation (e.g., classroom management, educational pedagogy, child development), with very limited discussion about the focus of this study.

I sought to manage perspective and any potential biases in this research process in terms of what I expected to see via the incorporation of peer debrief sessions with my dissertation committee. Regular sessions throughout the dissertation process and multiple revisions of the chapters involved have been welcomed in an effort to manage my own perspective and potential bias. Furthermore, I sought the advice and expertise of the qualitative methods specialist serving on my committee to ensure that the methods and the processes therein were completed with fidelity and balance in an effort to minimize any potential biases resulting from my perspective or positionality.

### **Protection of Human Subjects**

The consideration of ethics within qualitative research requires a critical level of awareness and attentiveness to procedural, transactional, relational, and sociopolitical elements (Ravitch et al., 2015). Ravitch and Carl (2016) stipulated that the importance of ethical considerations within any study requires that researchers approach, understand, and consider their roles and positionality very carefully. Furthermore, the idea of beneficence is important. The idea of beneficence involves the notion that researchers

should always have the best interests and general welfare of the participants in mind when conducting studies (Ravitch & Carl, 2016). With this idea of beneficence paramount thorough the study, it remained the ongoing goal of the researcher to internalize and act upon any feedback from the dissertation committee and the IRB process to ensure the safety and protection of all participants within this study.

The protection of human subjects was conducted in the following manner over the course of this research project. All of the participants and the materials generated via their interviews remained confidential to all but the researcher. The only individual with access to the data produced and used for subsequent analysis over the course of this project was the researcher. While the data produced did not contain sensitive information, all of the participants' responses were kept confidential. A random numeric identification code was given to each participant along with the use of a pseudonym to further ensure confidentiality of their responses throughout the duration of the research process.

This study was in full compliance with the ethical and professional guidelines set forth by UNC Charlotte and passed as an exempt and/or expedited IRB review process. The study presented minimal risk to participants as it contained neither exposure to physical or psychological harm nor any type of experimental treatment. Extreme care was taken to ensure that every participant of the study fully understood the nature of the study and that participation in the study was completely voluntary. No penalties were applied if any potential participant initially declined to participate in the study, declined to participate in the study once the interview session had begun, declined to answer certain questions during the course of the interview, or voluntarily withdrew from the study. In an effort to further protect confidentiality and any potential conflicts of interest, no

information about any of the participants was communicated to their schools, school districts, or the North Carolina Department of Public Instruction. These conditions were communicated to every participant from the very beginning of their involvement in the study.

### **Sampling**

This study employed purposeful (strategic) convenience sampling of twelve (12) beginning PK–12 public education teachers. Purposeful (strategic) sampling is the primary approach in terms of sampling utilized in qualitative research (Coyne, 1997; Patton, 2015). Via purposeful sampling, qualitative research seeks to provide detailed and contextually rich accounts specific to certain populations as well as the locations in which they reside (Ravitch & Carl, 2016). The deliberate selection of these participants as the primary unit of analysis was strategic because of their unique positioning in terms of addressing the study’s research questions. In addition, each of the participants met the criteria to be accurately labeled as a beginning PK–12 public school teacher and was a participant in the state’s DB retirement program, the TSERS. Furthermore, the participants were selected because the researcher served as their site coordinator during their student teaching internship experiences. This prior relationship and established trust and rapport helped to secure the interview opportunity itself and fostered honest and open discussion when dealing with the topic of financial literacy, which is uncomfortable for many.

The selection of participants was also convenient. As discussed in the positionality statement, the researcher has the regular opportunity to engage with both student teachers and beginning PK–12 teachers as a component of their work, so

identifying a suitable sample of participants for the study was approached from a convenience perspective.

Various strategies were utilized in this study as it pertained to the purposeful aspect of the sampling involved. Drawing on the work of Patton (2015), the sampling strategies of homogeneous sampling, group characteristic sampling, and comparison-focused sampling were utilized in this study. Homogeneous sampling involves the presence of a clearly identifiable characteristic within a sample population that differentiates that sample population from the broader available sample pool, witnessed in this case via the selection of beginning PK–12 public education teachers from the larger sample pool of total PK–12 teachers. Homogeneous sampling was utilized from the perspective of selecting only beginning PK–12 public education teachers because it provided a more balanced foundational base from which further comparisons might be made. Group characteristic sampling involves the purposeful breakdown of an existing homogeneous sample pool into further strategic subcategories, witnessed in this case via the selection of former UNC Charlotte student teaching candidates with whom the researcher had worked during their student teaching internships. Group characteristic sampling was then employed via the strategic breakdown of the larger sample of beginning PK–12 public education teachers according to four critical subgroups (gender, race, program completed, content/subject area). This was accomplished via the strategic decision to pursue eligible participants based on their ability to represent one or more of the four critical subgroups listed earlier. Comparison-focused sampling involves strategic efforts to identify and learn from factors that might explain similarities and differences between existing subgroups. Comparison-focused sampling was utilized in an effort to

learn about factors explaining similarities and differences between the respective subgroups mentioned previously (Patton, 2015).

Related to participant selection is the issue of sample size. The intended objective of qualitative research is not to generalize (as in quantitative research) but rather to thoroughly and completely answer research questions and thereby achieve a more nuanced and complex understanding of the studied phenomenon (Ravitch & Carl, 2016). The sample size for this study was twelve (12) participants strategically selected to represent participation across the critical subgroups mentioned earlier and allowed for flexibility in adjusting to data saturation as appropriate. Participants in the study were kept confidential, with names, schools, and school districts of employ withheld.

The primary data collection method was individual interviews. The researcher had anticipated conducting these interviews via in-person sessions along with the potential use of virtual sessions depending on the distance and availability of participants, and this flexibility was reflected within the IRB approval. Uniquely, this facet of flexibility became invaluable to the researcher when the COVID-19 pandemic hit within 48 hours of the researcher receiving IRB approval. At that time, the study's methodologist suggested utilizing the online platform WebEx to conduct only virtual interviews, thereby remaining more fully aligned with state and federal health recommendations during the pandemic. With some small adjustments, this approach proved to be immensely successful.

The interviews involving the study's participants took place off-site (virtually) from their schools of employ and during nonwork hours, mostly in the evening hours or on the weekends. Negotiating access to the participants began with the successful

completion and acceptance of the IRB process and was then conducted from the perspective of viewing all participants as private citizens who had knowingly and willingly chosen to participate in the study.

### **Data Collection Techniques**

The primary data for this research was generated via three sources including a strategic 12-item demographic questionnaire, twelve (12) semi-structured one-on-one interviews with participants, and a strategic interview follow-up prompt. Ravitch and Carl (2016) maintained that interviews are the centerpiece of any qualitative study, allowing for the collection of contextualized and individualized data central to the pursuit of the research. The goal of the interviews was to gain greater insight into and understanding of the lived experiences of those individuals involved. Furthermore, interviews display how participants construct and make sense of reality in relation to varied phenomena in play. Finally, interviews help researchers explore how participants' perspectives and experiences may connect to other participants in the study and possibly earlier research on related topics (Ravitch & Carl, 2016).

Weiss (1994) highlighted six key reasons for the selection of interviews as the primary data source in qualitative research: first, to develop rich and contextualized descriptions of the perspectives and experiences involved; second, to better integrate and understand individual perspectives from a variety of angles; third, to describe experiences and processes in greater depth; fourth, to create more holistic and cumulative descriptions of varied realities, perspectives, and experiences; fifth, to better understand how study participants interpret experiences; and sixth, to create connections between study participants and researcher (Weiss, 1994).



Ravitch and Carl (2016) stipulated that a number of characteristics should be considered within any research design and/or data collection process involving interviews. According to the authors, interviews should be relational and promote a sense of trust and reciprocity. They should be contextual and seek out specificity within that given context. They should be nonevaluative and understanding rather than judgmental. Interviews should also focus on the person and their experience within the interview itself, as opposed to the data that the interview may yield. Temporal characteristics also need to be in play, and an interviewer must respect and be aware of the needs of the participant as pertaining to the time and space in which the interview is conducted. Interviews should be viewed as being only part of or partial to an existing whole, almost like a snapshot of a much bigger collage. Interviews, like life, are subjective, and experience and context play a tremendous role for the interviewer and participant alike. Finally, interviews should not be considered neutral, as levels and layers of influence, assumption, and bias can and will infuse the larger whole (Ravitch & Carl, 2016).

The researcher conducted twelve (12) semi-structured one-on-one interviews to collect data from the participants. First, a strategic recruitment message was proffered to potential participants via phone call and/or text message (Appendix B). Second, a recruitment follow-up message (Appendix C) was conveyed via personal e-mail to provide the participant with the appropriate consent form (Appendix D). Third, an interview protocol form including the research questions and the interview questions was developed (Appendix A). Fourth, a strategic 12-item demographic questionnaire was administered prior to the actual interview session so that the participants could provide greater context and clarity to the researcher about themselves as individuals and with

regard to their positions as beginning PK–12 public educators (Appendix E). Fifth, a strategic interview follow-up prompt (Appendix F) was administered to each participant exactly 1 week after the completion of their interview.

The interview questions were grouped into five categories based on and aligned with existing research questions: (a) warm-up / introduction, (b) what do beginning teachers know about how the North Carolina TSERS operates, (c) how do beginning teachers develop knowledge and understanding about their retirement plan options, (d) what do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement, (e) how do beginning teachers' understanding of their retirement benefits inform their career decisions. The purpose of the categories was to gain greater clarity and insight into how beginning PK–12 public education teachers learn about their DB retirement program, how they view that program in terms of retirement planning and whether or not the retirement plan has an impact on their decision to remain a PK–12 public educator. The participants were individually interviewed in a virtual setting courtesy of the COVID-19 pandemic. The interviews were voice recorded and then approved qualitative transcription software was used to produce verbatim transcriptions of all interviews. The researcher then reviewed all transcriptions along with their recordings to ensure their accuracy. To ensure quality of transcription, the interviewer personally conducted each interview, recorded and then listened to the interview in its entirety after completion, and then approved qualitative transcription software was used to produce verbatim transcriptions of all interviews.

This semi-structured process allowed for the development of relational and conversational comfort with participants as well as the ability to ask follow-up questions

or provide clarification opportunities as necessary. This method supported the idea that qualitative research should seek to be emergent. This method stands in contrast to more rigid and inflexible structured interview models. Weiss (1994) maintained that structured interviews are based on identical responses asking pre-categorized questions to each participant where use of follow-up questions was limited in an effort to ensure better and more consistent uniformity across interviews (Weiss, 1994). While these structured interview models have their place within the research realm, the goal of this study was to uncover new themes and ideas, and the semi-structured interview model was well positioned to do so.

### **Instrumentation**

The semi-structured one-on-one interview protocol used in this study was designed specifically for use in this study. The protocol was appropriate for both the topic and population given its subject matter and the strategic iterations that it went through to arrive at its final form. The questions involved in the instrument were strategically open-ended in nature and were therefore suitable for a qualitative study. The theoretical framework informed the development of the interview questions in this study via providing a foundational base upon which to structure the ordering and organization of the questions. For example, the second theme of Vygotsky's sociocultural theory posited by Wertsch and Wertsch (2009), involving the use of tools and semiotic means in individual learner development, provided the foundation to structure and organize Research Question 2 / Interview Question 2, Research Question 3 / Interview Question 2, and Research Question 3 / Interview Question 3, all of which sought to address this theme.

Given the protocol's original nature, the researcher anticipated conducting a minimum of one or two pilot interviews. Sampson (2004) stipulated that piloting is a foundational aspect central to the design and refinement of any research instrument. The process of piloting can take on a variety of forms to include the examination of potential bias, the refinement of research questions, the generation of additional contextual information, and the evaluation of research methods and approaches to the study (Sampson, 2004). Piloting can also assist researchers in the refinement of actual interviewing skills and personal engagement with participants, including how the researcher frames the study with the participants in mind (Marshall & Rossman, 2016). And while the use of piloting cannot deliver the promise of a flawless study, it certainly contributes to the quality and rigor of the resulting data when it is conducted in a careful, intentional, and thoughtful manner (Kim, 2011; Sampson, 2004; van Teijlingen, 2002; van Teijlingen & Hundley, 2001).

The use of piloted interviews also helped the researcher in terms of vetting the protocol. Vetting involves the process of sharing multiple drafts of the data collection instrument with others who are critically informed about the method in play and who can then give appropriate and critical feedback (Ravitch & Carl, 2016). Ultimately two pilot interviews were conducted (Participants 1 and 2) resulting in only minor changes made to the protocol as a result of this process, thereby allowing for the inclusion of data gathered through these pilot interviews in the data corpus without needing to conduct a follow-up interview with these two participants. Conferences with the study's methodologist were held after each interview to confirm progress and data quality and to address any questions or concerns prior to moving forward. This vetting process and the exchange of

multiple drafts occurred with members of the dissertation committee, specifically the dissertation chair and qualitative methods specialist.

### **Data Analysis Procedures**

Ravitch and Carl (2016) suggested that the processes involved with the data analysis procedures begin with precoding. Precoding involves the process by which a researcher engages with their data (be it transcripts, field notes, or artifacts) via reading and/or critically questioning prior to beginning the formal coding process (Ravitch & Carl, 2016). As a component of the precoding process, the researcher engaged in an immersive engagement process characterized by multiple data readings analyzed through the lens of the theoretical framework in an effort to identify themes that connected the theoretical framework to the information being revealed by the participants in the study.

Ravitch and Carl (2016) also suggested that an unstructured and uninterrupted reading should occur to give the researcher a more complete and holistic appreciation for the data. While it was challenging to resist the desire to be efficient and code from the onset of reading, this discipline allowed the researcher to maintain a consistent pace and identify potential insights that may have been overlooked were attention wholly occupied by the coding process. After this initial read, the next part of the precoding process involved writing and developing a precoding analytic memo to help organize and structure thought processes in terms of how findings relate to and support the theoretical framework before actual coding work begins (Ravitch & Carl, 2016).

The processes involved with the data analysis procedures continued with initial coding efforts. Coding is the process by which data are assigned a particular meaning (Ravitch & Carl, 2016). A code can be a word or phrase offering an explanation or

description about what is occurring within the data (Corbin & Strauss, 2015). Both inductive and deductive approaches to coding exist (Ravitch & Carl, 2016), and while each has its place within qualitative research, the inductive approach to coding established the foundation of this study's data analysis procedures. Ravitch and Carl (2016) held that inductive coding may involve in vivo, bottom-up, insider, or emic processes. Typically, these inductive approaches seek to remain as close to the data as possible and to generate new knowledge and ideas, as opposed to deductive approaches, which seek to test existing ones. A primary example of this is in vivo coding, which seeks to use the words or phrases from actual participants to organize data segments as opposed to those created by the researcher (Ravitch & Carl, 2016). In vivo coding constituted the initial descriptive open coding efforts within this study (Appendix H).

Descriptive open coding involves the development of codes that seek to classify or name the particular phenomenon being studied and is best achieved by the grouping of data into meaningful expressions or short phrases. Theoretical axial coding involves the use of both inductive and deductive reasoning to seek out connective relationships between codes and then connect those relationships to larger ideas (Ravitch & Carl, 2016). Further refinement of and engagement with more theoretical axial codes upon which larger thematic arguments can be built occurred as the study progressed (Appendix I).

For the purposes of coding in this study, the researcher employed NVivo12 qualitative data analysis software to run a query on each of the developed codes and analyze the data produced by each query by reviewing each query's data and writing analytic memos about each query's results in which connections were made with themes

emerging from the theoretical framework and literature. For the purposes of the verbatim transcription of interviews, the researcher employed Temi.com audio transcription software.

As a component of this initial open coding and theoretical axial coding process, the researcher developed a simple graphic-style organizer for each respective theme posited by Wertsch and Wertsch (2009). Each graphic organizer contained the names of the codes, the definitions of the codes, and verbatim examples of the codes associated with the theme. Figure 4 is an example of this graphic-style organizer for Theme 1.

#### **Figure 4**

##### *Coding Graphic Organizer, Theme 1*

Names of Codes	Definitions of Codes	Verbatim Examples of Codes
1)	1)	1)
2)	2)	2)
3)	3)	3)
4)	4)	4)
5)	5)	5)

Finally, supporting these properties were verbatim examples of participants' words, again supporting broadly themed properties and the open code umbrellas under which they qualify.

As introduced in Chapter 1 and expounded upon further in Chapter 2, Vygotsky's sociocultural theory constituted the theoretical framework and foundation of this

research, informing this study through its direct influence in shaping the primary research questions and subsequent interview questions associated with each research question. Use of this theoretical framework and its three primary themes resulted in more consistent alignment throughout the study. The theoretical framework informed the development of the coding process in this study by providing a foundation upon which to structure the graphic-style organizer, described earlier, that contained names of codes, definitions of codes, and verbatim examples of participants' words as they related to these (Appendices J-P). For example, the second theme of Vygotsky's sociocultural theory posited by Wertsch and Wertsch (2009), involving the use of tools and semiotic means in individual learner development, provided the foundation to structure and organize the memo around this theme, directly referencing Research Question 2 / Interview Question 2, Research Question 3 / Interview Question 2, and Research Question 3 / Interview Question 3, all of which sought to address this theme (Wertsch & Wertsch, 2009).

### **Trustworthiness**

Lincoln and Guba (1985) defined trustworthiness in qualitative research as meeting four primary criteria: first, seen in credibility and the assumption of truth in the findings; second, seen in transferability and the ability of findings to have broader applications within the field; third, seen in dependability and whether the findings are consistent and could be replicated; and fourth, seen in confirmability and the level of neutrality in terms of whether findings are in fact shaped by participants as opposed to researcher bias.

The researcher utilized Lincoln and Guba's (1985) definition of trustworthiness as a continuing model throughout the study and accounted for the following steps to ensure



the overall trustworthiness of data collection and analysis in this process. First, the researcher met with his dissertation chair and dissertation methods specialist to better understand and improve upon the design of his theoretical framework and methodology. Often referred to as peer debriefing or critical inquiry, this example of dialogic engagement serves to challenge the interpretations and assumptions of the researcher and act as a check to maintain the ethics and integrity of the study (Ravitch & Carl, 2016).

Second, the researcher used a predetermined list of semi-structured interview questions during the formal one-on-one interview session along with a pre-structured follow-up prompt to be completed 1 week after the interview. This list of questions and the subsequent follow-up prompt were strategically shaped to include a warm-up and to flow more organically in terms of natural conversation. Semi-structured interviews allow for the consistency of asking the same questions of the participant, while also allowing the interview to progress and evolve in a more personalized conversational path (Ravitch & Carl, 2016). These efforts were a direct result of the two piloted interview efforts to refine the study, discussed earlier.

Third, the researcher listened to the recording and played back the audio tape multiple times to ensure more complete understanding and accuracy when reading and rereading the transcripts provided by the transcription software. The process of transcribing audio interviews into a written form more conducive to deeper and repeated analysis is crucial (Kvale, 2007).

Finally, the researcher provided participants with the option to view the transcription and research reports at their discretion. Commonly known as member checking, this example of participant validation involves providing participants with the

opportunity to reengage with the interview transcripts and/or the researcher's interpretations or analyses and offer informed feedback and opinion (Ravitch & Carl, 2016). All participants were provided with a Member Checking Protocol (Appendix G) approximately 1 month after the completion of their interviews and given the opportunity to provide additional feedback and insight on developing themes.

A variety of analytic strategies pertaining to trustworthiness and suited to the methodology and design of this study came into play. First was the researcher's creation of a data management plan to assist with the process and flow of the study. This plan was discussed in detail throughout this chapter and was holistic to include processes and materials ranging from initial participant recruitment to the scheduling and completion of the actual interviews. Additionally, the plan contained the sequential steps involved with the open coding and theoretical axial coding processes and how these processes were organized. Ravitch and Carl (2016) contended that such data management plans create more holistic familiarity with the data. They stipulated that organization helps to facilitate data, and interacting with those data in an organized manner allows a researcher to identify potential gaps within the data. This continued engagement with the data also allows for the recognition and awareness of when further consultation with experts may be needed (Ravitch & Carl, 2016).

The trustworthiness of this study was made more robust via the incorporation of multiple data collection processes, also known as triangulation. Within research design, triangulation refers to the strategic use of varied data sources to juxtapose one another and, in doing so, provide the study with a greater degree of both validity and rigor (Ravitch & Carl, 2016). The three methods by which data sources were juxtaposed in this

study were triangulation, participant validation studies, and the solicitation of feedback from experts.

Triangulation comes in a variety of shapes and sizes; for this particular study, perspectival triangulation was utilized. Ravitch and Carl (2016) stated that perspectival triangulation is related to the sampling process and how the selection of participants falls under the larger umbrella of data triangulation. More specifically, it assumes that there is systemic and purposeful inclusion of a wide range of perspectives from various participants in an effort to heighten nuance, tension, and complexity in terms of perspective both individually and as a larger data set (Ravitch & Carl, 2016). This was accomplished in this study via the strategic and purposeful selection of participants based upon characteristics such as their gender, race, completed degree program, and content/subject area.

Richardson (1991) argued that crystallization provides a unique opportunity to view the benefits of triangulation. Rather than focusing on specific points of conversion within the triangulation model, the emphasis should be placed on multiple perspectives and varied dimensions, much like one would see when looking through a crystal. Doing so provides a more flexible perspective and makes the researcher more appreciative of the layered process involved in the research (Richardson, 1991).

Participant validation studies, commonly referred to as member checks, were also incorporated into the study. Precipitated on the idea that participating members of the study have the opportunity to reengage with the research, and in that process ensure better accuracy and validity, these member checks were accomplished via the opportunity for participants to read and reread their interviews after formal transcription had occurred

(Ravitch & Carl, 2016). Two types of member checks were utilized in the study. First, participants were sent their interview transcripts. This was for the purpose of inviting them to clarify or add to any of their statements, as appropriate. Second, participants were sent a summary (Member Checking Protocol; Appendix G) of key findings after the completion of data analysis, and their opinions, feedback, or comments on conclusions drawn from the data were welcomed. While the purpose of these two types of member checking is slightly different, member checking did keep participants more directly and meaningfully involved in the process from start to finish.

### **Limitations**

A number of limitations found within the scope of this study were strategic decisions made to narrow the focus of the study. The first limitation involved the strategic involvement of only beginning PK–12 public education teachers within the state of North Carolina, as opposed to teachers more generally across the spectrum of their careers in either public school, private school, or higher education settings. This choice was made because of the researcher’s accessibility to this population along with this population’s unique experiences and needs when compared with their veteran counterparts. The second limitation involved the purposeful study of only DB retirement plans, as opposed to the plethora of alternative avenues by which financial literacy may be investigated and ultimately measured. This choice was made because all beginning PK–12 public educators in the state of North Carolina are mandated to participate, thereby providing an equitable, uniform, and stable topic upon which to construct an analysis involving levels of financial literacy. The third limitation, which is common to all qualitative studies, involved generalizability. The data gathered in this qualitative

study reflected the perspectives and insights of a limited number of beginning PK–12 public education teachers within the state of North Carolina who were given the opportunity and chose to participate in the study, as opposed to the many teachers who did not receive the opportunity or chose not to participate.

Strategies to address these limitations included the intended use of perspectival triangulation processes in the data analysis process. Strategically seeking out and utilizing participants who spanned the demographic spectrum (i.e., gender, race, completed degree program, content/subject area) allowed the researcher to identify varied perspectives and understanding.

As each person's unique experiences brings its own set of challenges, additional studies on how beginning PK–12 public education teachers perceive and understand their DB retirement programs are needed. Suggestions for future studies include examining the perspectives of a larger and more demographically diverse sample of teachers, including those at alternate points in their careers or teachers working in private schools or higher education settings. Furthermore, future studies could extend the analysis of financial literacy beyond DB retirement plans by including alternate measures by which financial literacy can be measured.

Limitations listed herein and other limitations that arose during the data collection phase of the research are discussed, analyzed, and communicated in greater detail in Chapter 5.

### **Summary**

This chapter has described the research methodology employed to address the primary research questions of this study. These research questions were related to the

perceptions of beginning PK–12 public education teachers of their DB retirement plans. The goal of this study was to assess what beginning teachers know about their retirement plans and how they developed that knowledge, the relationship between their current plan and a financially secure retirement, and how their understanding of their current retirement plans shapes future professional decisions as an educator. By employing a basic, interpretive qualitative research model characterized by the use of twelve (12) semistructured one-on-one interviews, the resulting data revealed the extent to which beginning teachers' financial literacy (or lack thereof) impacts their ability to critically understand one of their primary financial benefits and a foundational aspect of their compensation package.

The following chapter is a statement about the results of the study. The demographics of the sample are outlined and responses to each of the interview sessions and related interview questions are documented as transcribed from audio-recorded interview sessions. The final chapter references each of the research questions and any conclusions drawn from those data within Chapter 4. Recommendations for future research or additional actions are presented and discussed in Chapter 5.

## CHAPTER 4: FINDINGS

The purpose of this basic interpretive qualitative study was to gain additional insight into and to further explore the perceptions and understanding of beginning PK–12 public education teachers DB retirement plans. The study sought further understanding regarding what beginning PK–12 public education teachers knew about their DB retirement plans, how they developed this understanding, how this understanding impacted their sense of financial security upon retirement, and what effect this understanding had on their career decisions. Specifically, the objective of this qualitative research study was to answer the following four research questions:

1. What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?
2. How do beginning teachers develop knowledge and understanding of their retirement plan options?
3. What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?
4. How does beginning teachers' understanding of their retirement benefits inform their career decisions?

In this chapter, a summary of the participants is provided, along with an explanation of the procedure by which the study was conducted. Furthermore, themes and findings by research question are expounded, and the chapter concludes with a summary and transition into Chapter 5.

### **Participant Summary**

The population studied in this research comprised beginning PK–12 public education teachers within the state of North Carolina. All participants were classified as beginning teachers because they were within their first 3 years of classroom teaching. As PK–12 public school teachers, all participants participated in the mandatory TSERS DB retirement program via their automated contributions to the system. The participants were identified because of their relationships with the researcher, which developed when the researcher served as their university supervisor during their student teaching internships.

On the basis of these criteria, data from this sample were gleaned from a demographic survey administered via Google Forms and sent to each participant's personal e-mail address. This population was relevant for the purposes of this research study from an investigative standpoint and was significantly connected to the problem statement.

Table 2 shows cumulative, descriptive statistics for the respondents to the initial demographic survey administered via Google Forms. A relatively balanced blend of first- (25%), second- (42%), and third-year (33%) teachers participated in the study. Participants spanned six different age brackets; however, the majority were located within the 20–24 years (42%) and 25–29 years (26%) age categories. The remaining participants (32%) fell within the age brackets of 30–34 years (8%), 35–39 years (8%), 40–44 years (8%), and 45–49 years (8%). Regarding race, Caucasians represented 58% of the sample, and African Americans represented 42%. The same held true in terms of identified gender, as participants were equally split in terms of male (50%) and female (50%).



**Table 2***Participant Demographic Survey Cumulative Data*

	Frequency	Percentage
Teaching experience (years)		
< 3	4	33
< 2	5	42
< 1	3	25
Age (years)		
20–24	5	42
25–29	3	26
30–34	1	8
35–39	1	8
40–44	1	8
45–49	1	8
Race		
Caucasian	7	58
African American	5	42
Gender		
Male	6	50
Female	6	50
Educational level achieved		
Bachelor's degree	6	50
Graduate certificate	5	42
Master's degree	1	8
Undergraduate major		
Middle grades education	3	25
English	2	17
History	2	17
Science	1	8

Other	4	33
Content area currently teaching		
History	5	42
English	3	25
Math	3	25
Science	1	8
No. children		
0	8	67
1	1	8
2	1	8
3+	2	17
Mother's education level		
High school diploma	2	17
Associate's degree	1	8
Bachelor's degree	5	33
Master's degree	2	17
Doctoral degree	2	17
Father's education level		
High school diploma	4	36
Associate's degree	1	9
Bachelor's degree	4	36
Master's degree	1	9
Doctoral degree	1	9
Tax filing status		
Single	7	58
Married filing jointly	4	34
Married filing separately	1	8
Annual household income (USD)		
30,000–39,999	4	33
40,000–49,999	3	25
50,000–59,999	1	8

70,000–79,999	1	8
\$90,000–99,999	1	8
\$100,000+	2	17
Homeowner		
Yes	3	25
No	9	75

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*Note.* Participant 9 only identified “mother” as parent. Therefore, there were only 11 responses for father’s education level.

Table 2 also illustrates educational level achieved. While all participants held bachelor’s degrees, 50% completed a traditional teacher licensure program as undergraduates, and 42% earned their licensure through a postbaccalaureate program for non–teacher education majors. A single participant (8%) had earned a master’s degree. Participants’ undergraduate majors spanned a wide spectrum and included middle grades education (25%), English (17%), history (17%), science (8%), and other (33%). Content areas currently being taught in the classroom included history (42%), English (25%), math (25%), and science (8%). Two-thirds of participants did not have children (67%), 8% had one child, 8% had two children, and 17% had three or more children.

Table 2 illustrates that parental education level spanned a wide spectrum as well. Participants’ mothers’ education level included high school diploma (17%), associate’s degree (8%), bachelor’s degree (33%), master’s degree (17%), and doctoral degree (17%). Participants’ fathers’ education level included high school diploma (36%), associate’s degree (9%), bachelor’s degree (36%), master’s degree (9%), and doctoral degree (9%). Nearly three-fifths of participants (58%) filed their taxes as “single,” though “married filing jointly” (34%) and “married filing separately” (8%) were also included.

Household income was tied largely to age and marital status and saw participants span six separate categories, with two-thirds (60%) of the participants' households earning less than \$60,000 annually. Finally, one-quarter (25%) of participants identified themselves as homeowners, while the remaining three-quarters (75%) did not.

In addition to cumulative data, individualized descriptions of each participant are included. These descriptions supply greater detail, context, and nuance around data gleaned from participants' responses. Additionally, each participant has been randomly assigned a pseudonym to better identify them throughout the course of the study.

Participant data can be referenced in table form via Tables 3–5.

Participant 1 (Emma) had taught for fewer than 3 years, was aged 25–29 years, and identified as a Caucasian female. She had an undergraduate major of history, had earned a graduate certificate teaching license, and was currently teaching high school history. Single with no children, her household income was \$40,000–49,999, her tax filing status was “single,” and she was not a homeowner. Of particular interest with this participant was that both her parents had earned terminal degrees.

Participant 2 (Don) had taught for fewer than 2 years, was aged 35–39 years, and identified as a Caucasian male. He had earned a graduate certificate teaching license and was currently teaching high school history after having earned his undergraduate major in another subject area. Married with two children, his household income was \$90,000–99,999, his tax filing status was “married filing jointly,” and he was a homeowner. Of unique interest with this participant was that both his parents had earned high school diplomas.

Participant 3 (Kristy) had taught for fewer than 2 years, was aged 45–49 years, and identified as a Caucasian female. She had earned a graduate certificate teaching license and was currently teaching middle school math after having earned her undergraduate major in another subject area. Married with three children, her household income was \$100,000+, her tax filing status was “married filing jointly,” and she was a homeowner. Her mother had earned a high school diploma, while her father had earned a bachelor’s degree.

Participant 4 (Ronald) had taught for less than 1 year, was aged 20–24 years, and identified as an African American male. He had earned a master’s degree in business administration and was currently enrolled in a graduate certificate teaching program with intent to earn licensure in his second year of teaching. He was currently teaching high school history after having earned an undergraduate major in another subject area. Single with no children, his household income was \$30,000–39,999, his tax filing status was “single,” and he was not a homeowner. Both of his parents had earned bachelor’s degrees.

Participant 5 (Karl) had taught for fewer than 2 years, was aged 30–34 years, and identified as a Caucasian male. He had earned a graduate certificate teaching license and was currently teaching middle school history after having earned his undergraduate major in another subject area. Married with one child, his household income was \$70,000–79,999, his tax filing status was “married filing jointly,” and he was not a homeowner courtesy of a lodging perk his wife earned through her employment as a college-level educational administrator. Both his parents had earned high school diplomas.

Participant 6 (James) had taught for fewer than 2 years, was aged 20–24 years, and identified as a Caucasian male. He had earned a bachelor’s degree in science and was currently teaching high school science. Single with no children, his household income was \$30,000–39,999, his tax filing status was “single,” and he was not a homeowner. Both of his parents had earned master’s degrees.

Participant 7 (Sue) had taught for less than 1 year, was aged 20–24 years, and identified as an African American female. She had earned a bachelor’s degree in middle grades education and was currently teaching middle school math. Single with no children, her household income was \$30,000–39,999, her tax filing status was “single,” and she was not a homeowner. In fact, she discussed the fact that she still lived at home with her parents to save money. Her mother had earned an associate’s degree, and her father had earned a high school diploma.

Participant 8 (Kelly) had taught for fewer than 3 years, was aged 25–29 years, and identified as a Caucasian female. She had earned a graduate certificate teaching license and was currently teaching high school English after having earned her undergraduate major in English. Single with no children, her household income was \$40,000–49,999, her tax filing status was “single,” and she was not a homeowner. Both of her parents had earned bachelor’s degrees.

Participant 9 (Mark) had taught for fewer than 2 years, was aged 20–24 years, and identified as an African American male. He had earned a bachelor’s degree in middle grades education and was currently teaching middle school math. Single with no children, his household income was \$40,000–49,999, his tax filing status was “single,” and he was

not a homeowner. The participant identified only one parent in his mother and noted that she had earned a master's degree.

Participant 10 (Tom) had taught for fewer than 3 years, was aged 25–29 years, and identified as an African American male. He had earned a bachelor's degree in history and was currently teaching high school history. Single with no children, his household income was \$40,000–49,999, his tax filing status was “single,” and he was not a homeowner. Both of his parents had earned bachelor's degrees.

Participant 11 (Tara) had taught for less than 1 year, was aged 40–44 years, and identified as an African American female. She had earned a bachelor's degree in English and was currently teaching high school English. Married with three children, her household income was \$100,000+, her tax filing status was “married filing jointly,” and she was a homeowner. Her mother had earned a bachelor's degree, and her father had earned an associate's degree.

Participant 12 (Erica) had taught for fewer than 2 years, was aged 20–24 years, and identified as a Caucasian female. She had earned a bachelor's degree in middle grades education and was currently teaching middle school English. Married with no children, her identified household income was \$30,000–39,999, indicating that she chose to address this demographic question through her own earnings rather than combined earnings with her husband. Her tax filing status was “married filing separately,” again unique in comparison with her fellow participants. She was not a homeowner. Her mother had earned a terminal degree, and her father had earned a high school diploma.

**Table 3**

*Participant Demographic Survey Individual Data: Age, Race, Gender, and Teaching Experience*

Participant	Age (years)	Race	Gender	Teaching experience (years)
1 (Emma)	25–29	Caucasian	female	< 3
2 (Don)	35–39	Caucasian	male	< 2
3 (Kristy)	45–49	Caucasian	female	< 2
4 (Ronald)	20–24	African American	male	< 1
5 (Karl)	30–34	Caucasian	male	< 2
6 (James)	20–24	Caucasian	male	< 2
7 (Sue)	20–24	African American	female	< 1
8 (Kelly)	25–29	Caucasian	female	< 3
9 (Mark)	20–24	African American	male	< 2
10 (Tom)	25–29	African American	male	< 3
11 (Tara)	40–44	African American	female	< 1
12 (Erica)	20–24	Caucasian	female	< 2

**Table 4**

*Participant Demographic Survey Individual Data: Educational Level, Major, and Teaching Content Area*

Participant	Educational level achieved	UG major	Content area currently teaching
1 (Emma)	graduate certificate	history	history
2 (Don)	graduate certificate	other	history
3 (Kristy)	graduate certificate	other	math
4 (Ronald)	master's	other	history
5 (Karl)	graduate certificate	other	history



6 (James)	bachelor's	science	science
7 (Sue)	bachelor's	middle grades education	math
8 (Kelly)	graduate certificate	English	English
9 (Mark)	bachelor's	middle grades education	math
10 (Tom)	bachelor's	history	history
11 (Tara)	bachelor's	English	English
12 (Erica)	bachelor's	middle grades education	English

**Table 5**

*Participant Demographic Survey Individual Data: Number of Children, Parental*

*Education Levels, Tax Filing Status, Household Income, and Homeowner Status*

Participant	No. children	Mother's education level	Father's education level	Tax filing status	Annual household income (USD)	Homeowner
1 (Emma)	0	doctorate	doctorate	single	40,000–49,999	no
2 (Don)	2	HS diploma	HS diploma	MFJ	90,000–99,999	yes
3 (Kristy)	3+	HS diploma	bachelor's	MFJ	100,000+	yes
4 (Ronald)	0	bachelor's	bachelor's	single	30,000–39,999	no
5 (Karl)	1	HS diploma	HS diploma	MFJ	70,000–79,999	yes
6 (James)	0	master's	master's	single	30,000–39,999	no
7 (Sue)	0	associate's	HS diploma	single	30,000–39,999	no
8 (Kelly)	0	bachelor's	bachelor's	single	40,000–49,999	no
9 (Mark)	0	master's	n/a	single	40,000–49,999	no
10 (Tom)	0	bachelor's	bachelor's	single	40,000–49,999	no
11 (Tara)	3+	bachelor's	associate's	MFJ	100,000+	yes

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12 (Erica)	0	doctorate	HS	MFS	30,000–39,999	no
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diploma

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*Note.* HS = high school. MFJ = married filing jointly. MFS = married filing separately.

### **Themes / Findings by Research Question**

Participants' levels of understanding about their DB retirement plans, retirement systems more generally, and the relationship of these plans to financial security upon retirement varied from participant to participant. The same was true for using information about their retirement plans to inform career decisions. Still, data analysis generated a number of themes related to each research question. These themes and their connected subthemes are described in the sections that follow.

#### **RQ1: What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?**

The first research question sought to examine the knowledge base of beginning teachers about how the North Carolina TSERS operates. Data analysis was conducted to assess participants' knowledge of the TSERS system, how they paid into this system, and how this system would compensate them during retirement. The analysis also examined the degree of confidence and accuracy with which they could discuss the topic.

#### ***Uncertainty***

The primary theme was that participants were very uncertain about their knowledge and understanding of retirement benefits. Their language included forthright admissions of uncertainty and hedging characteristics. The levels of understanding exhibited by participants were categorized as general understanding, no understanding,

and varied levels of confidence in understanding. Responses often suggested limited knowledge of the logistics of the retirement system.

**Admissions of Uncertainty.** Using language referencing uncertainty, Don noted, “I gotta be honest, I don’t know.” Tom added, “That’s as good as I can go because I have no idea what the word actually means, but that’s what I believe.” The language used by participants could be characterized as honest admissions of uncertainty. Sixty-seven percent of participants in 21 separate references used language referencing honest uncertainty about the topic.

**Hedging Language.** The use of language characterized by hedging suggested a lack of confidence in their knowledge even when the information participants provided was accurate. For example, Erica said, “I believe that my retirement is pretax and I think it’s 6% of my paycheck.” Sue said, “I think it’s something like they take the average of your monthly paychecks and um, and I think it’s something to do with like the last few years of your working, because I know your paychecks changed every year.” Don also illustrated this guarded and uncertain language even when providing accurate information:

So from what I gather from the information that I looked at is that even though we put in 6% and it’s matched, it almost seems like this is kind of like Social Security where it really doesn’t matter how much we put in as long as we teach long enough to be retired, then our pension kicks in with some percentage of like the last few years that we worked and we get a percentage of that salary.

Erica, Sue, and Don all hedged their responses with uncertain language including “so from what I gather,” “I believe,” and “I think.” These admissions of uncertainty and

hedging language indicated that beginning PK–12 public education teachers lack sufficient knowledge of their DB retirement plans (TSERS), including sufficient knowledge about how they pay into their DB retirement plans and how those plans pay them upon retirement.

**General Understanding.** Don stated, “I know there’s formulas in there and it has to do with length of service and your age.” He was able to speak accurately on the functionality of the program, if only in general terms (“formulas,” “length of service,” “age”). Erica continued, “Yeah, I know that I am not vested yet, um, because I haven’t taught in the state of North Carolina for 5 years. You have to teach in North Carolina for 5 years before you become vested into the retirement program.” Erica demonstrated her ability to articulate a detailed and voluminous functional understanding of the TSERS program. She was able to articulate multiple functional specifics (“5 years”) on a complex financial subject (“vesting”).

**No Understanding.** Ronald stated openly that he was guessing even when providing accurate information about the retirement system: “Yeah. Um, I think they are. Um, I think it’s done by a percentage, uh, posttax. That will be my guess. I’m not sure.” In terms of the participants’ inability to explain the operation of the TSERS system, Ronald articulated incorrectly that the system was operated on a “posttax” basis and even that that was a “guess” and he was “not sure.” Mark communicated, “No, I think, I think it’s about 10%. Um, if I’m not mistaken. I do remember looking at this with my mom, but it, it’s, it was way back then, so I think it’s about 10% honestly.” Mark expressed uncertainty (“I think” and “if I’m not mistaken”), and the information provided was also inaccurate (“I think it’s about 10%”). Emma stated, “I, I know that it’s dependent on how

long you have been in a teacher in the, uh, I don't think it's district, I think it's in the state that you're in. Um, maybe it is district, I'm not sure. But I know that the special number is 30 years." While Emma generally understood some characteristics of the plan ("I know the special number is 30 years") she also could not discern whether it was the "district" or the "state that you're in" that administered the plan. Ronald mentioned, "Um, it's job title, it probably matters as well." Providing inaccurate information when he referenced the TSERS program being dependent on "job title," he too demonstrated a poor functional understanding of the plan. Finally, Emma contributed the summative statement "I honestly have zero clue" when questioned about the TSERS plan. She, along with 50% of the sampled population, responded in honest and earnest fashion ("I honestly have zero clue"), demonstrating her lack of functional understanding as it pertained to the TSERS plan.

**Levels of Confidence in Understanding.** Participants' exhibited limited confidence in their understanding of the retirement system. Only 17% of participants expressed confidence in their understanding, while 58% expressed a lack of confidence. The remaining 25% of participants provided responses that were neutral in terms of differentiating between confidence or lack of confidence in their understanding. Tara, describing a meeting with a supplemental retirement plan vendor, communicated,

He was a, um, one of the, I guess he sets up your account and that was it. I saw him twice and he kind of explained everything to me. I was a little confused, but he went over and made it simple. He simplified the process and so it's, if he made it clearer.

Tom articulated, “Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.”

Tara demonstrated confidence through her admission of uncertainty (“I was a little confused”), followed promptly by her own recognition of growth (“He went over it and made it simple . . . made it clearer”). In contrast to this, Tom demonstrated a lack of confidence in his honest admission that “it was all going over my head.”

The majority of participants exhibited limited knowledge about their DB retirement programs (TSERS). Most were unsure about how they paid into this system and how this system would compensate them during retirement. As a result, participants also had little confidence in their ability to discuss the topic. However, of particular importance was the continued reemergence of Erica because she was able to articulate accurate voluminous and well-perceived information about the TSERS system. When queried further, Erica divulged that her mother progressed from an entry-level teacher to a top-tier administrator within the same school district in which Erica works. She discussed talking about retirement with her mother, who also holds a terminal degree. Furthermore, Erica confided that a unique component of her student teaching experience involved the mentorship by a veteran teacher in her final semester in the classroom prior to retirement. The topic of retirement and the TSERS benefit came up often. Finally, Erica was the only participant to file her taxes “married filing separately,” indicating that despite being married, she appreciated or was able to discern some sort of financial advantage to be gained from this approach. While most participants expressed limited knowledge about their DB programs, the understanding and confidence exhibited by

Erica indicate that beginning teachers can learn about, appreciate, and manipulate the retirement program to their advantage if given the appropriate opportunity and resources.

**RQ2: How do beginning teachers develop knowledge and understanding of their retirement plan options?**

The second research question sought to examine how participants developed knowledge of their retirement plan options. How participants developed understanding of their retirement, the sources of information they used to develop this understanding, and the contexts in which this information was gathered (i.e., formal vs. unofficial setting) were analyzed. Participants' perceptions about the quantity of information they received about their retirement plans (too much vs. too little) and the rate at which information was provided (too quickly vs. not quickly enough) were also examined. Participants' perceptions of placing the onus upon the teacher to research and/or make sense of the information without providing enough support to understand the information were analyzed. Participants' misconceptions about the information provided in terms of the tendency to conflate the state's mandatory DB retirement plan with optional supplemental retirement plans were examined, as were participants' misconceptions about supplemental retirement plan representatives and their functions.

***Development of Understanding***

The primary theme suggested by the participants' responses to inquiries about how they learned about the retirement system was that these beginning teachers primarily developed understanding through the use of social sources and social interactions.

**Independent Development of Understanding.** Independent development of understanding about the retirement system rarely occurred. Ronald was the sole

respondent to communicate that knowledge and understanding were gained through individualized effort. Ronald illustrated this ability to learn and understand based off of independent efforts when he said, “I didn’t converse with anybody. I didn’t even look up the information. I think I just clicked through on the options when I was in doing the enrollment paperwork.” His extensive studies (only participant to have earned a master’s degree) and background studying a different field like business (master’s degree in business administration) may have better set him up with the tools and the will to further understand and seek to evaluate his retirement plan options.

**Using Social Source Interaction to Develop Understanding.** Social learning interactions, occurring in both formal and informal settings, were commonly used to develop understanding. Examples of these interactions included group meetings, one-on-one exchanges, and support from mentors. Ninety-two percent of participants made 18 references that these had been the means by which they gained knowledge and understanding of their retirement plans. Emma communicated, “Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me.” James contributed the following:

Um, I sat down with my aunt and she asked about my retirement, the school never informed me. I never, I never asked, but I also never got an explanation during school. So, I had been teaching for a year when I sat down with a paycheck and my, um, yeah, with one of my paychecks, with my aunt and she told me.

Here Emma described a formal setting (“It was at school”), while James described an informal setting (“I sat down with my aunt”).



Building on the idea that learning can occur in both formal and informal settings, participants discussed learning opportunities that occurred in both one-on-one settings and within larger groups. Tara communicated, “Mmm . . . one of the representatives came to my classroom. I never, I’m sure at the beginning of the school year they probably get you all together with hopefully HR or someone and they meet together. But I think I missed that.” Don articulated the following:

We had this 3-day teacher orientation for first-year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it.

Here again, 92% of participants expressed that learning had occurred in one-on-one or large group social interactions. Tara discussed how “one representative came to my classroom,” while Don outlined how “a 3-day teacher orientation” contributed to his learning process.

The learning process extended further as participants discussed the opportunity to learn from both known and unknown instructors. Tara stated, “Mmm . . . no, I did not discuss it with anyone. The only person that I spoke with about it would have been my husband, he did tell me that teachers, um, received retirement. I didn’t know.” Tom added,

Oh, the financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.

Similarly, 92% of participants communicated that learning occurred through interactions with either a mentor and/or a stranger. Tara discussed the topic with a known entity (“The only person that I spoke about it too would have been my husband”), while Tom discussed a session with a “financial person,” who helped him gain clarity.

### ***Sources of Information***

Participants’ responses about how they developed knowledge and understanding of retirement plans suggested that they used people and documents as sources of information.

**People.** Participants discussed receiving information from a variety of individuals, including supplemental retirement plan representatives, personal financial advisors, and family members. Erica, one of 50% of the participants who discussed gaining information from supplemental retirement plan representatives, noted a discussion with her “AXA representative” (AXA is a private company that works with teachers to set up supplemental retirement plans):

I did just recently talk to the AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that’s the only place that I’ve gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.

Contrary to this, Don noted a discussion he and his wife had with their “financial planner.” This participant was one of only 25% of the participants to have done so. Don communicated, “As I mentioned before, talking to our financial planner, she asked for more information and so both my wife and I took it upon ourselves to try to find more information. But I would say that information is scarce.” Tara mentioned discussing her

retirement with her “husband,” one of 42% of respondents to communicate in such fashion with family members. Tara stated, “Yeah! I just asked my husband and everything and he likes banking. He works for Wells Fargo, so he helps me with all that stuff. Numbers are not my thing.” Of important note, participants did not discuss any interactions with people in the form of school-level administrators and/or district-level administrators as it pertained to their retirement planning.

**Documents.** Participants discussed receiving information from a variety of print and virtual sources. Like 42% of her fellow participants, Kristy 3 discussed receiving a resource in the form of a “booklet.” She realized later that this “booklet” dealt with “medical and dental benefits.” She recalled receiving a “single sheet of paper with links to the intranet” to access information about her retirement benefit. One-third of participants discussed receiving a virtual resource in the form of access to an employee intranet portal where, according to Erica, she could “log in and have access to all her benefits.” She expressed concern, however, that she had never received any “physical information.” Ronald discussed feeling that he had not been fully informed and but noted that the virtual resource of a “website” was available to him and others “if you cared enough about that type of thing.”

**Virtual Resources.** Tara outlined her experience with virtual resources in the following manner:

Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works. There’s like an online app that you can use.

You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that

you can earn money each year through interest. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. He did show me a lot of, a lot of that.

Along with 50% of her peers, Tara stated that by using virtual tools (e.g., computer, electronic tablet, online app), she was able to effectively gain more detailed and thorough insight into how her supplementary retirement plan functioned and how she could engage with it. Additionally, the delivery and accessibility of these tools became important and the contrast between passive delivery and personal involvement was crucial. In this case, passive delivery was characterized by the independently driven use of tools to research retirement plan options while personal involvement saw supplemental retirement plan representatives guide beginning teachers through this discovery process. Three-fourths of the participants spoke about the use of passive tools or resources while nearly others spoke about tools and resources that were more personally engaging.

**Printed Materials.** Kelly articulated,

Um, tools and resources. Probably just the . . . I know we got a packet and the packet just explained about a login to the retirement system account. Then I'm sure that there were some like supplemental readings and like things like that.

**Nonpassive, Personally Involved Learning Opportunities.** Erica discussed her results from meeting with the supplemental retirement plan representative when she stated,

When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good. Um,

but yeah, I feel pretty financially secure for the future and I'm glad I'm thinking about that now in my early twenties instead of later.

By contrast, Kelly demonstrated the more detrimental effects of using passive tools/resources in the form of printed materials via her uncertainty (“probably”) and assumption that she was “sure that there were some supplemental readings and things like that.” Her inability to be more specific and certain with these passive printed material resources stood in contrast to her counterpart Erica who communicated that the nonpassive, personally involved resource found in the form of a visit from a supplemental retirement plan representative “sitting down with you for like 30 minutes” resulted in feeling “pretty financially secure for the future and pleased to be thinking about it now in my early twenties instead of later.”

### ***Contexts for Information Gathering***

Another theme to emerge regarding how participants gained knowledge was that formal and informal settings were used to gather information and understanding about the retirement system.

**Formal / Official.** Don described a formal and official orientation event required of beginning teachers:

We had this 3-day teacher orientation for first-year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it.

Emma addressed a less formal and official session with one of the supplemental retirement plan representatives when she said, “I mean, other than those guys coming

around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really."

Participants discussed receiving information from formal / official employer orientations as well as sessions with supplemental retirement plan representatives. Don mentioned his "3-day teacher orientation" but noted that most of the orientation was "related to content and how to teach and what materials to use." Emma referenced the supplemental retirement plan representatives that set up and maintain these voluntary accounts for teachers. Her reference to them as "those guys coming around" is indicative that she does not grasp the full extent of their role or their provided service.

**Informal / Unofficial.** Emma communicated,

Uh, I mean, I would say probably the most I've gotten is just from like talking to people like my dad and my boyfriend who, you know, don't even know my personal retirement plan. But really I have not done really anything.

Ronald furthered this when he communicated, "Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own."

Participant dialogue included mention of how informal/unofficial conversations with family members as well as independent research yielded information pertaining to retirement plan options. Emma mentioned communicating with her "dad and her boyfriend," though she acknowledged that neither "know her plan." Ronald acknowledged that most of the resources are on the "employee intranet portal" and that "you have to seek them on your own."

***Information Given Not Conducive to Effective Understanding***

The third theme was that information was disseminated in ways that were confusing, unclear, and not conducive to effective understanding. The rate at which information was provided was too fast, and the quantity of information provided was not appropriate for effective learning to occur. Participants consistently shared that either too much or too little information was offered and that it was provided too quickly. Uniquely, there were no instances of information not being provided fast enough.

**Too Much Information.** Karl outlined in vivid detail a meeting with district representatives when he stated,

Oooh, boy. Um, I would probably say it was during the very brief, very quick, uh, orientation I had sitting in the office where they broke down my licensure, what it was being a lateral entry, um, person. Um, it went over my pay and I'm sure it probably talked about all the other benefits all within a 30-minute time slot that was literally a 30-minute time slot where they covered everything. You know, they asked the question, do you have any questions? But how do you answer that when you've changed careers and in under 24 hours just been given all this material to process?

**Too Little Information.** Emma outlined a startling lack of information provided her when she communicated,

Honestly, not nothing. I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really. Cause you know, I'm at my age and this was my first, you know, real job, obviously, like I had zero clue.

Don furthered this notion when he communicated,

I'll have to say that I don't think there's a lot of information at all to beginning teachers about what their package is. It just kind of automatically happens.

There's nothing you can really do to it or change it. And so it just kind of happens without your knowledge.

**Information Too Quickly.** Emma communicated further that the information provided came at a rate too quick for her to fully and meaningfully comprehend when she stated,

Um, I think it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me. And I think they, they did a good job explaining it. I remember they had like a notepad and they kind of drew out, you know, how it works. And I remember understanding it at the time. Of course, I forgot it almost immediately.

Participants discussed receiving information in contexts that were largely ineffective; they were given too much information, given too little information, and given the information too quickly. One-third of the participants felt that they were given too much information, half of the participants felt that they were given too little information, and nearly half of the participants felt that the information was given too quickly. Karl stated that he had a "30-minute time slot" where they "covered everything." This left him overwhelmed and unable even to ask a question given that he had "just changed careers and in under 24 hours been given all this material to process." Don noted, "I don't think there's a lot of information at all" and that information just "automatically happens," "cannot be changed," and "happens without your knowledge." Emma responded that



despite “those guys coming around,” her “age,” and the fact that it was her “first real job,” she had “zero clue.” She went further to describe that while these financial representatives initially did a “good job of explaining it” and that “she understood it at the time,” she ultimately “forgot it all almost immediately,” indicating that the rate at which the information was provided was likely too quick.

***Onus on the Teacher and Inadequate Supports***

The fourth theme to emerge was that the onus was placed squarely on the beginning teachers to learn about their retirement plans, yet inadequate supports were provided for that learning to occur.

**Onus on the Teacher.** Don stated, “Uh, yes, it’s been my own self doing my own research and reading.” Half of the participants also discussed the onus being placed on individual teachers to develop understanding about their retirement benefits.

**Inadequate Supports.** Tom communicated further that the information provided was inadequate for him to fully and meaningfully comprehend when he stated,

Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. I feel like he was talking and it was all going over my head, but I knew that, you know,

I wanted this amount of money taken out. Other than that, no clear understanding. Eighty-three percent of participants discussed inadequate supports and the notion that not enough support was provided to understand the information. Tom noted that during a sit-down meeting with a “financial person,” “it was all going over my head” and resulted in “no clear understanding.”

### ***Misconceptions About Information***

The fifth theme was that participants' language suggested common misconceptions about information in terms of gaining knowledge to better understand retirement programs.

**Conflation of Plans.** Emma discussed, "Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me." Responses were also shared by half of the study's participants indicating a chronic tendency to conflate their DB retirement plans (TSERS) with optional supplemental retirement plans. Here Emma talked about "this company" coming by to meet with teachers "one-on-one during their planning period." While she was describing the exact protocol employed by supplemental retirement plan vendors contracted by respective school districts, she believed she was talking about her state retirement plan (TSERS). For the duration of her interview, she conflated the two plans and could not discern that they were entirely separate from one another and entailed entirely separate processes and results.

**Financial Representatives and Their Functions.** Sue demonstrated with certainty that the representative with whom she met was not clear about who they represented and/or their function when she stated,

And we had a state representative, um, a representative of the, um, insurance or the retirement plan, sorry. Um, came in and kind of threw all of the 401k and all those other options out about us. Um, and she gave us a packet and that was about it.

Discussion was furthered when 50% of participants misunderstood the function of the representatives sent out to the schools to inform, set up, and maintain supplemental retirement accounts for teachers. Sue was unsure if this representative was from the “state” or from an “insurance” company or represented a particular “retirement” plan. She had no idea what service this individual sought to provide. Her choice of language in stating that information about a “401k” being “thrown” at her also indicates that the speed at which the encounter occurred was likely too fast as well.

Themes emerging from the second research question were that social interactions, coupled with print and virtual resources, are commonly used to disseminate information. However, these interactions and resources appeared to be insufficient to enable beginning teachers to develop knowledge and understanding of their retirement plan benefits. Information gathered in formal settings or informal settings lacked impact and consistency. The quantity of information provided as well as the rate at which it was provided often resulted in confusion. Uniquely, a description of information not being communicated quickly enough was not discussed by participants leading the researcher to assume that more time with the material, not less, is needed. Also, participants perceived that the onus was on them to research and make sense of the information since few supports were provided. Misconceptions about the information provided were illustrated by the tendency for participants to conflate the state’s DB retirement plan with optional, supplemental retirement plans and to not understand the roles of retirement representatives from private companies. The use of printed or virtual resources occurred, but the effectiveness of these resources was limited by the fact that participants were left on their own to navigate this information.

**RQ3: What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?**

The third research question analyzed the extent to which participants understand their retirement package and its relationship to financial security upon retirement.

Responses were analyzed to establish the extent to which participants understood this relationship. And, attitudes toward financial security were examined to reveal participants' levels of concern about their financial security upon retirement.

***Knowledge of the Relationship***

The primary theme to emerge from RQ3 was that most participants had limited understanding of the relationship between their retirement plans and future financial security. While one participant shared accurate information, most were uninformed. This lack of understanding meant that only 17% of participants made specific connections between their retirement program and future financial security, while 50% of participants were unable to make meaningful connections.

**Informed With Accuracy.** Erica discussed in thorough detail the specifics of her understanding of her retirement benefits when she stated,

Mmm . . . my state retirement plan will not be my only source of income because my 401k with AXA will also be a source of income. I've thought about . . . I know a lot of people work after they retire because if you can retire in your mid-to-late fifties, you're still pretty young. And so, um, I thought about maybe doing like education consulting or something like that after I'm talking about retiring.

In terms of informed and accurate knowledge of the retirement package and what that package includes, Erica clearly delineated between her participation in the DB state

retirement plan (TSERS) and her optional supplemental retirement plan, and had the wherewithal to realize that one or the other not be “her only source of income” upon retirement. She demonstrated further understanding by appreciating the age she might be upon retirement and realizes that her “mid-to-late 50s is still pretty young” and contemplates doing “education consulting work.”

**Uninformed.** Emma discussed in detail the specifics of her understanding of her retirement benefits when she stated,

The only thing I have done to save for retirement is setting up a 401k and I know that I think I put . . . I don't even know the number . . . I think I put \$500 out of my paycheck that I requested, I don't even want to see it. I just want it to disappear into my retirement fund so I know it's there. I do that every month. Um, that is essentially all that I do.

Tara communicated, “Well, it's stable. It comes every month. Um, he gets, he has, um, health care for the whole family, um, dental for the whole family. And I just think it's a nice thing that, um, that you can get after you retire.”

In stark contrast to Erica, Emma and Tara both demonstrated that their understanding about their retirement plan was uninformed and inaccurate. In stating “that is essentially all I do,” Emma reinforces the fact that she failed to appreciate that she even had a DB state retirement plan working on her behalf by describing her participation in a supplemental retirement plan account. Tara demonstrated a lack of knowledge about her retirement package through a telling omission. In describing her husband's DB pension as a retired police officer, she mentioned that it is “stable,” includes “health and dental for the family” and that something of the sort would be “really nice to get after you

retire.” Tara never appreciated the fact that she had a comparable DB retirement plan working on her behalf and expressed envy for her husband’s plan which is synonymous with her DB retirement plan (TSERS).

**Presence of Connective Capabilities.** Kelly communicated the presence of connective capabilities with the following:

Yeah, I think when I first started teaching, I thought, okay, this is great. Like I’ve got this retirement plan. I don’t have to do anything. It’s set up. But then I think as I asked more questions about it, I realized, okay, maybe it’s not. It’s good to have, but it’s not. It can’t be the only thing. I need to be smarter about this. It can’t be the only thing that I rely on.

Kelly made a specific connection between her current plan and financial security upon retirement when she communicated, “It’s good to have, but it can’t be the only thing that I rely on.” Don furthered this perspective when he stated,

Yeah, I think it’s, it’s comforting to know that I have something going now as, as opposed to before when I started teaching, I didn’t have anything from my work. That kind of gives me a little bit of sense of security that as long as I work so many, you know, years mandated to access my full retirement package I’m going to be a lot better off than I was before I started before I started teaching. It gives me a little bit of comfort.

Don made connections between his current plan and financial security upon retirement when he communicated, “It’s comforting to know that I have something” and that it gives him “a sense of security.”

**Absence of Connective Capabilities.** Tara articulated the absence of

connective capabilities when she stated,

So I'm thinking it will help pay for your rent and food. I don't really think it pays for much, really honestly, unless you're rich. Um, and I got these ideas from people that I've seen who have saved for their retirement. And I mean they were making decent money when they were young and now let's see them 80 years old and they don't have any money. Hardly. They can just pay for food and rent . . . barely.

Tara made statements that indicated a lack of connections between her current retirement plan and financial security upon retirement assuming incorrectly that all it would be able to do is “pay for food and rent . . . barely.”

The presence and absence of connective capabilities between beginning teachers' knowledge of their current retirement plan and financial security upon retirement was illustrated by participant responses. Uniquely, specific connections were made by only 17% of participants, general connections were made by 42% of participants, and a lack of connections entirely were made by 50% of participants. The ability to discern broader and more meaningful connectivity of their retirement plans to financial literacy was a struggle for the larger group. The majority of participants were unable to connect the financial benefits of their current DB retirement plan to their understanding of finances during retirement and how their involvement in the plan would better help them realize their desired retirement outcomes.

### ***Levels of Comfort and Understanding***

Like their knowledge of the relationship between retirement plans and future financial security, participants' levels of comfort and understanding were inconsistent.

The levels of comfort and understanding about the impact of the retirement plan on future financial security could be best categorized as specific, limited, or nonexistent.

**Specific Knowledge Characterized by Comfort and Understanding.** Erica again communicated in a very clear way her specific knowledge of the plan and apparent comfort with it when she stated,

I feel very secure about my financial well-being. Um, I do know, um, like I'm not vested yet. Um, so as a beginning teacher, that's a little worrisome, but I know that I'll be in North Carolina for at least five years. Um, so I'll be vested after that. And so, yeah, I feel like, uh, as a beginning teacher, I realized the importance of saving for retirement.

Kelly also communicated in a very detailed way her specific knowledge of the plan and apparent comfort with it:

Um, I would say that I have been, lots of people have told us, I guess the people who have come from, well just speaking with other teachers, but also the people who have come to talk about these supplemental plans have made it pretty clear that you cannot rely on just the, just the state plan. Um, it's not going to be enough to carry you through retirement. And it seems like they make changes to it a lot. And then of course the state, the insurance health insurance plan seems like it's going through a lot of changes. So it just seems like a lot of people have said, yeah, you need to have something else because this 6% or whatever it is, is not going to be, cannot be your only retirement option.

Levels of understanding are important when communicating knowledge of the retirement package, what that package includes, and its relationship to financial security upon



retirement. Erica communicated that she “feels very secure in her financial well-being” and that she understands what it will take to become “vested” in her plan. She did so with specifics and with a level of comfort and understanding. Along with a mere 25% of her peers, Kelly communicated comfort with knowledge via her realization that “through talking with other teachers,” she realized that not only will the state plan “not be enough to carry you through retirement” but that it also “goes through a lot of change.”

**Specific Knowledge Characterized by Discomfort and Understanding.** Erica communicated further that despite having specific knowledge, she was still challenged with a degree of discomfort and lack of understanding when she said,

I would, I, cause like I said, like I don't even know where to look or if there is even somewhere for me to look, um, at my state benefits or retirement. Like, I don't know if there's a way to like see how much money I've put into it or anything like that. Um, but I do know, like if I log into my AXA account, I can see all of that information right in there.

Erica expressed discomfort with specific knowledge (as did only 17% of participants) when she communicated “not knowing where to look to see how much money she's put into it” (referring to the state's TSERS plan) as she does more regularly with her supplemental retirement account.

**Limited Knowledge Characterized by Less Comfort and Understanding.** James communicated in a manner demonstrating more limited understanding and less comfort with it when he said,

It is . . . it's mandated. Um, so everyone, it's not mandated, but you start off, every teacher is put on a pension plan. That is the pension plan for the, maybe it's

the state. I thought it was. Um, but you can change it. You can, um, change it to something else, you just have to apply for that.

His fluctuations between his plan being “mandated” to “not mandated,” his uncertainty about who maintains the plan (“maybe it’s the state”), and his assumption that the plan “can be changed to something else” signified more limited knowledge with a lesser degree of comfort with his plan and/or a conflation with his supplemental retirement plan.

**No Knowledge Characterized by Discomfort and Poor Understanding.** Emma communicated in a fashion demonstrating no understanding and no real comfort with it when she said,

Um, I think for me, I just want to know that I have something set up and it’s kind of doing what I’m supposed to do for me. Um, so really I don’t want to take any part in it. I have zero interest in like sitting down and talking about my retirement and planning. So I just want to, for someone to tell me what to do and then, you know, every month I know that I’m contributing to it. So that, that is good enough for me. I mean, of course I, I would want to be doing that and not doing nothing, but that’s the extent that I care about.

Emma continued,

As of now, yes. Um, but I think in the future I don’t, honestly, I don’t know if I’m supposed to have some other form of income or some other way that I’m saving for retirement, but as of now, that is my sole, my sole way of saving for retirement.

Emma demonstrated that she had little if any knowledge of her plan and did not have the comfort level or understanding to pursue it further when she communicated that she “just

wanted someone to tell me what to do,” “did not want to take any part in it,” and “has zero interest in sitting down and talking about my retirement and planning.” Participant attitudes of discomfort toward their knowledge of their current retirement plan were also considered and voiced by 50% of participants. Emma expressed discomfort with limited or no knowledge as she stated that she “doesn’t know if she’s supposed to have some other way of saving for retirement.” As discussed earlier, Emma does have another way, and is in fact utilizing that way, she simply does not realize or understand this.

### *Attitudes Toward Financial Security*

While connective capabilities relate to participants’ understanding and awareness of the relationship between retirement plans and future financial security, the researcher also examined participants’ attitudes toward their future financial security. A theme emerged as participants’ language suggested widely varying attitudes toward their retirement plans and future financial security, with most only exhibiting limited concern. These attitudes were characterized as specific concern, general concern, and lacking concern.

**Specific Concern.** Kelly demonstrated levels of specific concern about future financial security when stating the following:

Yeah, I think when I first started teaching, I thought, okay, this is great. Like I’ve got this retirement plan. I don’t have to do anything. It’s set up. But then I think as I asked more questions about it, I realized, okay, maybe it’s not. It’s good to have, but it’s not. It can’t be the only, I need to be smarter about this. It can’t be the only thing that I rely on.

Kelly articulated specific expressions of concern: “It’s good to have, but it can’t be the only thing that I rely on.” Specific expressions of concern were voiced by only 17% of the participants.

**General Concern.** Karl communicated levels of more general concern when he stated,

Again, this is the first time in my life I’ve ever had to even consider the concept of retirement. I mean, everybody knows about it. Everybody wants it. But when you’ve worked the careers that I have, the financial stability and . . . mmm . . . the security of a not earning a set numerical amount every paycheck has almost made that . . . mmm . . . uh, impossible. Now that I’ve had this new career with this set salary, it’s, it’s something you could focus on a little bit more.

Karl communicated more general expressions of concern comparing prior employment lacking “financial stability” with the “set salary” of a teacher, indicating that he could now “focus on it a little bit more.”

**Lacking Concern.** James articulated very transparently his lacking levels of concern when he communicated, “It’s 30 years down the road and I’ve got time to save.” Both general expressions of concern and those lacking concern were voiced by 50% of the participants.

**RQ4: How does beginning teachers’ understanding of their retirement benefits inform their career decisions?**

The fourth research question analyzed how participants’ understanding of their retirement benefits informed their career decisions. Sources of information included participant perceptions of the degree to which retirement benefits informed career

decisions (significantly, partially, or insignificantly). Furthermore, the role of retirement benefits in career decisions was questioned through the analysis of factors that encouraged joining the profession as well as those that discouraged it.

### ***Impact on Career Decisions***

A primary theme was that while participants had varied perceptions, understanding of their retirement benefit was not strongly related to their career decisions. Their perceptions of the relationship were classified as being of a significant, partial, or insignificant degree.

**Significant Degree.** Erica communicated, “Um, I would say yes. I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan.” Erica noted that retirement benefits were “definitely something she considered” prior to employment..

**Partial Degree.** Sue demonstrated partial significance when she said, I think it has, um, because, and I know, I don’t know the technical terms, so I know like if you leave the state, different states may have, um, you know, different plans and sometimes you can’t transfer that built up money. Um, because I don’t know if I’m gonna you know, move states or maybe I’ll meet the love of my life and need to move to South Carolina or something.

Sue differed in that she expressed only a partial acknowledgment that retirement benefits had informed her career decision. In fact, she communicated the understanding that while she may not be able to take the benefit with her “if she moved states or something,” it would still be better to have were she to “meet the love of her life in South Carolina.”

**Insignificant Degree.** Ronald stated in no uncertain terms that his perception qualified as an insignificant degree when he stated,

Okay. Um, I remained pretty much the same and that's probably little to no information on it. Uh, and I think if I were to ever like switch careers, it wouldn't be a factor because I don't ever even consider retirement benefits in terms of, you know, why I'm employed somewhere.

Ronald expressed that retirement benefits had not informed his career decisions in any meaningful way. He stated that he had "remained pretty much the same with little to no information" and that he "didn't even consider retirement benefits when employed somewhere."

Participants' perceptions of the degree to which retirement benefits informed their career decisions were varied. In keeping with trends discussed earlier, only 8% (a single respondent) noted that retirement benefits informed their career decisions. Contrary to this, 75% articulated that retirement benefits partially informed their career decisions. Seventeen percent indicated that retirement benefits insignificantly informed their career decisions.

**To Teach or Not to Teach.** Participants' language suggested factors that both encouraged and discouraged teaching as an occupation based on their understanding of retirement benefits.

**Encouraging Factors.** Emma communicated an optimistic perspective on remaining an educator when she stated,

Just in the sense of like now I am aware that if teachers are committed to teaching and put in the time that it ends up worth it in the end. Um, when it comes to

retirement a lot of teachers can retire fairly early and comfortably. Um, which definitely has influenced my wanting to remain a teacher.

Erica furthers this, stating, “I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan.”

Emma discussed the idea that the retirement plan encouraged her to join the profession, as it would provide income upon retirement. Supporting this idea, Erica again mentioned her understanding that “North Carolina has a really solid retirement plan.” Uniquely, she was the only participant to mention this.

**Discouraging Factors.** Kelly communicated a discouraging perspective, especially when compared with other professions. She stated,

There are other companies that I think have more appealing retirement plans and so I think that they, it has, it has factored in a little bit. If I decided to leave teaching, and the thought has crossed my mind, oh well, you know, I could find another job where we're with a company that matches, you know, 6% of my paycheck or whatever.

Kelly was one of only two participants to discuss how professions outside of education might offer better retirement packages when she discussed “other companies with more appealing retirement plans,” indicating that retirement benefits of any employee may not be a meaningful driver in terms of employment.

### **Summary**

This chapter detailed how participants responded to the study's four research questions. The questions involved beginning teachers' knowledge of their DB retirement plans (TSERS) along with how they developed knowledge about their retirement plan

options. Additionally, the research questions addressed beginning teachers' knowledge of their current retirement benefits and their relationship to financial security upon retirement. Finally, the research questions examined how beginning teachers' understanding of their retirement benefits informed their career decisions. The goal of the study was to assess these research questions and, in doing so, reveal through participant interviews the extent to which each of these research questions impacted beginning teachers.

This chapter included an analysis of the responses given by the 12 participants to the interview questions associated with each of the four research questions. Results were analyzed, evaluated, and interpreted with consideration given to Vygotsky's sociocultural theory (Scott & Palincsar, 2013) under the structural umbrella opened by Wertsch and Wertsch (2009) that formed the foundation of this study's theoretical framework. Implications associated with the findings of this research along with recommendations for future studies are discussed in the next chapter.



## CHAPTER 5: DISCUSSION

### **Summary of Findings**

This chapter contains a summary of the problem, purpose, methods, and ethical components of this research study. Discussions regarding the findings, connections to existing literature, and recommendations for future practice and/or policy as well as subsequent recommendations for future research are presented for each of the four research questions in relationship to the study's research problem, purpose, and significance. The remainder of Chapter 5 contains suggestions for PK–12 leaders resulting from this study's research discoveries, and the chapter concludes with a brief summary of significant elements.

A significant shortage of PK–12 teachers led to projections that the United States would need well over 2 million new educators through the 2000's and 2010's (Gerald & Hussar, 1998). Educational organizations responded to this need through the implementation of wide-ranging recruitment and retention strategies designed to help address these demands (Peske et al., 2001). Retention of beginning PK–12 teachers already likely uncertain about their chosen career path has been challenging (Peske et al., 2001). While intrinsic factors, such as the desire to help children, often draw prospective educators into the profession, extrinsic factors, such as lagging compensation packages, often contribute directly to ongoing job satisfaction (or lack thereof) and to professional uncertainty for beginning PK–12 teachers (Sharma & Jyoti, 2006). Therefore, the problem that this research study sought to address involved a crucial yet commonly misunderstood and overlooked aspect of teacher compensation: DB retirement programs.

The purpose of this basic interpretive qualitative study was to explore the perceptions and understanding of beginning PK–12 public education teachers about DB retirement plans. The intent of Chapter 5 is to provide relevant discussion regarding the contributions of this study toward the understanding and perceptions of beginning PK–12 public education teachers with regard to their DB retirement plans.

This basic interpretive qualitative study was conducted by means of interviews completed via the WebEx digital platform. Initially intending to conduct the interviews face-to-face, the researcher adjusted this process in light of the COVID-19 pandemic, which occurred simultaneously with the data collection processes. Twelve PK–12 beginning public education teachers were approached to participate in the study, and all 12 accepted the invitation. Digitized demographic surveys, face-to-face open-ended interviews conducted virtually, and digitized post-interview follow-up prompts encompassed the multiple data sources utilized in this research study.

Ravitch and Carl (2016) stipulated that ethical considerations within any study require that researchers approach, understand, and consider their roles and positionality very carefully. Beneficence, the notion that researchers should have the best interests and general welfare of participants in mind when conducting their study, is important as well. (Ravitch & Carl, 2016). With this idea of beneficence paramount thorough the study, it remained the ongoing goal of the researcher to internalize and act upon any feedback from the dissertation committee and the IRB process to ensure the safety and protection of all participants within this study.

The protection of human subjects was conducted in the following manner over the course of this research project. All of the participants and the materials generated via

their interviews remained confidential to all but the researcher. The only individual with access to the data produced and used for subsequent analysis over the course of this project was the researcher. While the data produced did not contain sensitive information, all of the participants' responses were kept confidential. An anonymous numeric identification code was given to each participant to further ensure confidentiality of their responses throughout the duration of the research process.

This study was in full compliance with the ethical and professional guidelines set forth by UNC Charlotte and passed as an exempt and/or expedited IRB review process. The study presented minimal risk to participants as it contained neither exposure to physical or psychological harm or any type of experimental treatment. Extreme care was taken to ensure that every participant of the study fully understood the nature of the study and that participation in the study was completely voluntary. No penalties would be or were applied if any potential participant initially declined to participate in the study, declined to participate in the study once the interview session had begun, declined to answer certain questions during the course of the interview, or voluntarily withdrew from the study. In an effort to further protect confidentiality and any potential conflicts of interest, no information about any of the participants was communicated to their schools, school districts, or the North Carolina Department of Public Instruction. These conditions were communicated to every participant from the very beginning of their involvement in the study.

This study expanded the body of literature regarding PK–12 beginning public education teachers' understanding and perceptions of DB retirement plans. Previous literature demonstrated that while new initiatives and policies to improve teacher

compensation and the teaching profession at large occur with regularity, few discussions occur involving the topic of teacher retirement programs (DeArmond & Goldhaber, 2010). As DB teacher retirement programs typically involve up to 6% of a teacher's gross annual salary (Allegretto et al., 2008) and can provide 60% or more of income replacement after retirement (Mitchell et al., 2001) additional dialogue and further analysis were warranted.

Too often, beginning teachers find themselves trying to navigate the prominent challenge of being sufficiently financially literate to fully understand their compensation and benefits package. The teaching profession, and beginning teachers in particular, are not exempt from financial literacy concerns contributing directly to wealth inequalities (Lusardi & Mitchell, 2013). Therefore, the financial literacy levels of beginning teachers about their compensation and retirement programs, the ways in which they develop this knowledge, and the impact of this knowledge on their decisions to remain in or leave the profession were all salient issues examined within the scope of this study.

The theoretical framework for this study was constructed around Vygotsky's sociocultural theory. Seeking to better explain how the cognitive functions of an individual learner are connected to cultural, institutional, and historical events, Vygotsky focused on an individual learner's participation in both social interactions and culturally organized activities that would in turn impact a learner's development (Scott & Palincsar, 2013). Wertsch and Wertsch (2009) put forward three crucial themes as applied to Vygotsky's sociocultural theory. First, the individual development of learners originates in social sources and subsequent interactions. Second, the actions of individual learners

are mediated and controlled by semiotic means. Third, the two prior themes are best studied through historical and developmental analysis (Wertsch & Wertsch, 2009).

Each of the three themes put forward by Wertsch and Wertsch (2009) were instrumental in shaping how the research questions, the interview questions that supported them, and the subsequent participant responses coalesced into a clearer depiction of how PK–12 beginning public education teachers understand and perceive their DB retirement plans.

This study's results indicated that PK–12 beginning public education teachers have limited understanding of how their DB retirement plan operates. The beginning teachers who participated in this study developed knowledge and understanding of their retirement plan options via rushed opportunities characterized by a lack of structure and broader context. Very little specific understanding existed regarding how their current retirement package related to their financial security upon retirement. Finally, beginning teachers' understanding of their retirement benefits rarely, if ever, informed their career decisions, indicating that this financial benefit has almost no impact on recruitment and/or retention of beginning teachers.

### **Discussion of Findings**

#### **RQ1: What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?**

This research demonstrated that beginning PK–12 public education teachers had little to no understanding of how the North Carolina TSERS operates. Two separate categories appeared within this research in terms of PK–12 beginning public education teachers' understanding of the TSERS system. The first category involved those who

know so little about their involvement in the TSERS system that they were unwilling and/or unable to even venture a guess, let alone expound upon the TSERS system. They were direct in their responses and simply said that they did not know. The second category involved those who knew it existed and that they participated in it as beginning teachers, but they were unable to provide any sort of consistent or accurate information regarding characteristics of this participation without also expressing doubt and uncertainty.

Participants with the least understanding about the retirement system offered quicker, more brief answers. Erica, the outlier in the cohort responses, was easily the most holistically informed in terms of financial literacy, but she too expressed doubt and uncertainty on occasion. The outlier had a stronger financial literacy and was willing to explore the questions in more detail and share connective stories. Unique to the outlier was that she could expound upon the process that she had gone through to learn about TSERS and that she had the ability to connect how her retirement planning efforts related to financial security upon retirement. She also effectively differentiated between her mandated DB plan (TSERS) and her supplemental retirement plan account.

These findings are important because they indicate weakness and inconsistency in how beginning PK–12 public education teachers understand their TSERS DB retirement plan. This benefit is one of the primary facets, albeit a delayed one, of their current compensation package and they are not being given sufficient time and/or opportunities to fully appreciate it. Given that the first theme put forward by Wertsch and Wertsch (2009) is that the individual development of learners originates in social sources and interactions which require a range of collaborative activities, the participants' limited

knowledge makes it clear that this facet of the study's theoretical framework is currently not realizing its full potential.

Connections between the findings of this study to existing literature were numerous. Kimball et al. (2005) discussed at length how scant research exists in terms of teachers' understanding of their DB retirement plans, and in order for these plans to play a more active and meaningful role, participants must have a working knowledge of them (Kimball et al., 2005). Supporting the literature, the study's participants did not have solid understanding and a working knowledge of their DB retirement plan (TSERS) thereby negating its ability to impact how they viewed their holistic compensation package. Gustman and Steinmeier's (2002) claims that 50% of teachers did not know if they were in a DB or DC (defined contribution) plan, that 80% of teachers did not know how much early retirement would reduce their benefit, that 40% of teachers with a DB plan shortchanged themselves upward of \$20,000 when estimating the benefit, and that many teachers could not identify their own eligible retirement date align with and support this study's findings.

However, one theme did emerge contrary to existing literature. Sapolsky (2000) discussed a study conducted at Florida State University among education majors showing that health benefits and retirement benefits were two of the most significant determinants in choosing a career in education followed by salary and career advancement opportunities. In stark contrast, this study found that retirement benefits were not related to the choice to become an educator. It would be necessary to compare in greater detail the demographics of the Sapolsky study and this one to see if discrepancies might better explain this difference. Worth consideration, too, is how professional compensation

packages may have evolved over time and may now be valued or perceived differently than they were 20 years ago, when the Sapolsky study was conducted.

**RQ2: How do beginning teachers develop knowledge and understanding of their retirement plan options?**

This study's findings demonstrated that beginning PK–12 public education teachers developed knowledge and understanding of their retirement plan via three primary pathways. First, through rushed, hurried, or busy orientation sessions for beginning teachers. Second, through voluntary and often poorly advertised sessions with supplemental retirement plan vendors which lacked structure and broader explanatory context. Third, through independent and self-driven analysis or learning.

Data from the study support these three separate categories. The first category involved descriptions by the study's participants of hurried, rushed, and busy initial orientation encounters where very little to no priority was put on this particular employee benefit. The second category involved those participants who know so little about the TSERS system that they consistently conflated optional, supplemental retirement plans with the TSERS system. While there have been efforts by supplemental retirement plan vendors to communicate with and assist these beginning teachers, there have been minimal and ineffective efforts by those administering the state's DB retirement plan (TSERS) to communicate its plan in a similar manner. Those efforts that have been put forward (i.e. NCOorbit.com website) to inform about TSERS could be best characterized as passive and lacking in personal involvement. Thus, when these beginning teachers think about retirement, they almost exclusively view it from the lens of supplemental plan options consisting of DC plans. The third category involved independent and self-driven



analysis or learning. Participants discussed receiving little to no information about their retirement plan options and simply came to the conclusion that if they desired to learn about them, it would be through their own initiative. In terms of outliers, the study's cohort responses were so similar in their descriptions of hurried or rushed beginning teacher and new hire orientations that there really was not a discernible difference between the participant responses.

The current methods by which beginning educators learn about their DB retirement plan result in a significant lack of understanding among beginning teachers. In all cases, from initial orientations to the 30-minute meetings with supplemental retirement plan vendors to the participants' independent research, the time and resources were not sufficient to help these beginning teachers understand the topic let alone be able to effectively differentiate between two retirement plan options with significant structural and procedural processes (DB vs. DC plans). Therefore, it was not surprising that the current methods of information sharing generated expressions of frustration and regret with the speed at which orientations are conducted, the frequent conflation of voluntary supplemental plan retirement benefits with the automated DB retirement plan, and the onus put on beginning teachers to independently learn about a benefit of such financial significance.

These findings are important because they indicate a weakness and inconsistency in how beginning PK–12 public education teachers develop knowledge and understanding of their retirement plan options. Retirement benefits are one of the primary facets, albeit a delayed one, of their current compensation packages, and they are not being given sufficient tools and resources to fully understand them. Given the second

theme put forward by Wertsch and Wertsch (2009) that the actions of individual learners are mediated and controlled by semiotic means requiring the use of tools, it becomes more clear that this aspect of the study's theoretical framework is currently not maximizing its full potential, as available tools and resources are not being effectively utilized to achieve an important end result.

Connections between the findings to existing literature exist. Davies (2015) discussed how the evolution of financial literacy needed to become more holistic rather than isolated on a single principle. Results from this study indicating very low levels of understanding regarding retirement plan options support this notion, given the emphasis placed on communicating annualized salary to teachers as opposed to communicating financial rewards about their cumulative compensation benefit packages, which include their retirement plans. Vitt et al. (2005) detailed how financial education has historically occurred, and Way (2014) furthered this historical outline via suggestions about how financial education should occur moving forward to yield superior results. Each of these studies connects with the data resulting from this study because the data indicate that the financial education of beginning PK–12 public education teachers as it pertains to their cumulative benefit package remained stagnant and mired in the status quo.

DeArmond and Goldhaber (2010) detailed a study in Washington State supporting the idea that increased knowledge and desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. While that notion was supported by this study's findings, DeArmond and Goldhaber (2010) went further in suggesting another barrier for beginning PK–12 teachers in terms of pension plan participation involving the preference and desirability

of how the plan is structured. Their research indicated that teachers support the idea of DC plans if they are given additional funds and the freedom to do with funds as they so desired, thus allowing for greater mobility within the profession (DeArmond & Goldhaber, 2010). Contrary to their finding, participants in this study did not express a preference one way or another as it pertained to DB or DC retirement plans. If anything, they tended to conflate the two and lack sufficient understanding to differentiate between the differences therein. Worthy of note was that DeArmond and Goldhaber's study included teachers across the full career spectrum, whereas this study was limited to beginning teachers.

**RQ3: What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?**

This study's findings demonstrated that beginning PK–12 public education teachers have limited understanding of their current retirement benefit package and its relationship to financial security upon retirement. Furthermore, the understanding that was demonstrated was characterized by generalization and lacked specificity and accuracy.

Responses related to appreciating financial security upon retirement involved generalities. Meaning, nearly every participant could discuss the idea of financial security upon retirement as having adequate funds to support themselves, their families, and their requisite lifestyles. Missing from these responses were any specifics as to how they would make that happen or the ability to connect these desired outcomes to their current retirement benefit package. The primary outlier in the cohort responses (Erica) remained the most holistically informed in terms of her understanding how the TSERS benefit and

its relationship to financial security upon retirement. She talked about the need to be saving as one aged, the need to go above and beyond the automated participation in TSERS in order to maintain full income replacement upon retirement, and the incorporation of medical benefits into that equation as well. Participants' responses shared in common either a very basic and general appreciation for retirement and what that may look like financially as well as the lack of understanding of how participation in the TSERS program would help shape that reality.

The primary pattern with these participants lacking understanding was a general sense that while planning for retirement was an option, it was not a priority. They did not understand how to do so, and in some cases, did not even care to.

These findings are valuable because they indicate a current weakness and inconsistency in what beginning PK–12 public education teachers know about their current retirement benefit package and its relationship to financial security upon retirement. Retirement benefits are one of the primary facets of their current compensation package and can be directly linked to financial security upon retirement; however, the lack of financial literacy training and education is prohibiting full understanding of the benefit and its relationship to financial security upon retirement. Given the third theme put forward by Wertsch and Wertsch (2009) that each of the prior themes are best studied through historical and developmental analysis, it becomes more apparent that this aspect of the study's theoretical framework is underserved and would benefit from additional research, particularly of a longitudinal nature.

Connections between the study's findings to existing literature were replaced in this case by stark contrasts revolving largely around the need for greater financial literacy

training and education. In a multiyear longitudinal study across five states, Hensley et al. (2017) discussed how PK–12 teachers spent 3 days in a PD program composed of six separate 3-hour sessions (18 hours total). These sessions covered issues ranging from how economic trends impact personal finances to how to develop personal financial strategies; how to identify ways to build wealth through saving/investing; how to critically compare financial services/products; how to prevent fraud; and how to maximize credit, manage debt, and explore personal financial resources. The sessions, presented by academics, included financial planners and insurance representatives, all of whom refrained from using the opportunity as a platform for self-promotion. Results show significant changes in personal behavior as it pertained to personal financial literacy, with increases in confidence across the board. These successes highlight the need for financial counseling within education to improve (Hensley et al., 2017).

By contrast, in this study, not a single participant was able to discuss financial literacy and their current retirement plan with the same accuracy described in the Hensley et al. (2017) study. Rather, simple generalizations were the norm, and inaccuracies occurred with regularity. Appreciating the fact that pensions can compose 6% or more of a typical teacher's salary (Allegretto et al., 2008) and can provide upward of 60% of salary replacement for retired teachers (Mitchell et al., 2001), beginning PK–12 public education teachers would be well served if given the opportunity to participate in a financial literacy summit like the one outlined by Hensley et al. (2017).

**RQ4: How does beginning teachers' understanding of their retirement benefits inform their career decisions?**

This study's findings demonstrate that beginning PK–12 public education teachers' understanding of their retirement benefits informed their career decisions very little, if at all. Participant data formed a significant category with a singular outlier. This significant category was characterized by insufficient or the near-total absence of understanding as to how the plan functions and thus how it might be connected to, impact, or shape potential career decisions. Participants articulated that the plan had no bearing as to why they got into education, that few tools/resources were provided to better understand the benefit, and that those components of the benefit that they did gravitate toward (an option to leave the state or to take out a loan against the balance of the account) were not fully understood and would entail significant financial penalties with long-term consequences of which they were unaware. The single outlier in the cohort responses (Erica) was again easily the most informed about the benefit, and while the participant's explanations were still fairly general, it is clear that she had an appreciation for and awareness of the benefit that the others did not. Again, this is likely because her mother had navigated the same system and was nearing retirement age, along with the experience she had with her soon-to-be-retired clinical educator (mentor teacher) during her student teaching internship.

These findings are meaningful because they indicate a weakness and inconsistency in how beginning PK–12 public education teachers' understanding of their retirement benefits inform their career decisions. Retirement benefits are one of the primary facets of a teacher's compensation package and can have significant

ramifications on career decisions; however, in this instance, the lack of financial literacy training and education was again prohibiting full understanding of the benefit and its impact upon making informed career decisions. Once again, the third theme put forward by Wertsch and Wertsch (2009) that each of the prior themes is best studied through historical and developmental analysis becomes more immediate and clear in that this aspect of the study's theoretical framework is also underserved and would benefit from additional research, particularly of a longitudinal nature.

Connections between the findings to existing literature were numerous. With the exception of annualized salary, very little is known as to what financially incentivizes teachers (Kimball et al., 2005). Additional research is needed to see if DB retirement plans are indeed what teachers desire and whether states and school districts can proportionately respond to this feedback with training designed to promote greater awareness and understanding (Kimball et al., 2005). Given this study's results demonstrating that beginning teachers' understanding of their retirement benefits informed their career decisions little, if at all, it is safe to assume that additional research in terms of what will actually inform their career decisions remains warranted.

Sawatzki and Sullivan (2017) conducted a study in Australia where data were collected from 35 teachers tasked with teaching mathematics as a component of their curriculum in 16 different primary school settings. The study sought to measure practicing teachers' perceptions of the opportunities for financial literacy in terms of the teachers' instructional methods and math content they were responsible for teaching (Sawatzki & Sullivan, 2017). Findings suggest a number of things, the first of which is connected to the findings in this study. Sawatzki and Sullivan found that teachers need to

spend more time and training on the development of the knowledge, skills, and capabilities required to make sound financial decisions. This finding was supported in the data generated by this study, and providing such opportunities to teachers (beginning or otherwise) would heighten understanding of their own retirement benefits, allowing them the opportunity to make more informed career decisions.

### **Implications**

The results of this study produced ample recommendations for practice, policy, and future research. To address practice, policy, and research suggestions involving RQ1, resources to help beginning PK–12 public education teachers to better understand the TSERS retirement system should be developed, shared, and utilized with improved fidelity by school districts. Emma stated,

Um, I would say that I would probably say the same thing, you know, I don't, and it's probably reflective on me, but you know, I kind of just want somebody who I can trust and who you know has your best interest at heart, but who also knows, you know, the North Carolina like school system and how all those finances work to honestly just tell me what to maybe take a look at my finances and advise me on what I should do.

Erica noted further,

I absolutely think so because I know that there are other beginning teachers who aren't as informed and I'm just like baseline. So I know there's some that don't even have a baseline knowledge, so I feel like a PD on our state retirement plan would be very beneficial.



Providing beginning PK–12 public education teachers with effective training and PD about their TSERS benefit is justified and, per participant responses above, certainly desired. The connective strand with the study’s theoretical framework is noteworthy here. Wertsch and Wertsch’s (2009) first theme, involving the social sources and subsequent interactions of learners, lends itself to the idea of creating and providing spaces, such as PD, for learners to further develop their understanding of the TSERS system.

In order to best address practice, policy, and research suggestions involving RQ2, planning trainings or PDs for beginning PK–12 public education teachers to better develop knowledge and understanding of their retirement plan options beyond just the TSERS benefit should be considered. Mark stated,

I think so. Maybe a half day and maybe where the sessions weren’t too big and were capped at a certain number. So maybe you can have that one-on-one experience or maybe as one-on-one questions come up they can better prepare you for what you’re going to do.

Kelly communicated,

I need . . . I probably need a whole class, a whole training class, a whole week-long class on the differences between this 401k or this IRA or this 403b, or this and that, and then, you know, just someone to break it down but . . . but not sell, you know, not give their own, I guess opinion. Just present the information. Very unbiased.

Ronald added,

Uh, changing the way the information is . . . mmm . . . delivered. Cause, I mean, the information itself is not going to change, but it’s a matter of how it is being

consumed and interpreted or received. So, I'm for maybe having a more modern app-way or having a more streamlined website where you can look up the information and have it apply to you, um, better. Maybe that would help.

Again, the idea of trainings and/or PD is justified given participant responses. Of particular note, however, is the mention of innovative new tools ("a more modern app-way") as well as the idea that the resources in these sessions be "unbiased" and neutral. Davies (2015) maintained that many of the resources used for financial literacy education are created by the same industry players perpetuating many of the industry's offenses; therefore, increased emphasis on neutrality in terms of resources and delivery agendas needs to be placed to promote a more willing audience and knowledgeable population. The connective strand with the study's theoretical framework is noteworthy here as well. Wertsch and Wertsch's (2009) second theme, involving the mediation and control of learners by semiotic means and the use of tools, lends itself to the idea of creating and providing differentiated learning methods based on the needs of the actual learners to further develop their understanding of their retirement plan options.

RQ1 and RQ2 both revealed the need for PD for beginning teachers. Worthy of note is that these PD sessions would need to be strategically planned, delivered, and, perhaps most importantly, evaluated. Guskey (2000) maintained that for any PD session offered to a potential learner (professional or otherwise) to be considered successful, it must seek to address and sufficiently meet the needs of the following evaluative criteria: participant reactions, participant learning, organization support and change, participant use of new knowledge and skills, and learner outcomes (Guskey, 2000). Were this model to be employed in PD sessions involving beginning PK-12 public education teachers

regarding their TSERS benefit and their cumulative retirement plan options, the researcher is confident that these PD sessions would hold meaningful value to both the teachers and to those individuals or groups funding them.

To best address practice, policy, and research suggestions involving RQ3, simply planning PD for beginning PK–12 public education teachers to better understand the relationship of their retirement benefit package with financial security upon retirement is not sufficient. In this case, practice and policy issues must be considered and addressed at a much earlier point in the learner’s developmental spectrum to help develop and shape a foundational base of understanding as it pertains to the broader issue of financial literacy. Sue stated,

Mmm . . . I know a lot of people say this, that sometime in my education, if that was in college or in high school, that I should have been taught more about finances in any and every way. Like . . . I had to teach myself how to write a check because my mom never did. So, just having like basic knowledge in some way or understanding so I could then research on my own.

As Sue indicates, the desire is there, but the foundational learning and understanding are not. In many ways equivalent to teaching a child to read, financial literacy takes time, practice, opportunity, failures, and successes to develop the skill. A single PD will not solve this challenge, much like a single class would not teach a child to read. Instead, the recommendation is to pursue financial literacy education for everyone (not just teachers) at an earlier age.

Herein lies a connective strand with the study’s theoretical framework. Wertsch and Wertsch’s (2009) third theme, involving the historical and developmental analysis of

the learner, lends itself to study over time. Financial literacy, and the means by which it is taught and developed in teachers, is deserving of additional qualitative and quantitative study in a longitudinal fashion to better support the importance of learning over time.

Given how little, if any, impact beginning PK–12 public education teachers' understanding of their retirement benefits informed their career decisions (RQ4), the suggestion of future research takes precedence over suggested new practices / policies.

Kristy, the oldest participant in the study, communicated,

I think if I started this career, um, you know, right out of college in my twenties, that some . . . some planning, support, seminars, and information would be important because like I said earlier . . . I think when you're 22, 25, 28, whatever, you don't necessarily understand how valuable these funds are going to be to you when you're older and also how expensive it is or could possibly be to retire.

While this study showed definitively that beginning teachers' career decisions were almost never informed by understanding of their retirement benefits, ample room for research still exists to better determine what does inform the career decisions of beginning teachers. Herein lies a connective strand with the study's theoretical framework. Wertsch and Wertsch's (2009) third theme, involving the historical and developmental analysis of the learner, lends itself to study over time. This research should include beginning teachers but should also include examining the perspectives of a larger and more demographically diverse sample of teachers, including those at alternate points in their careers or even teachers working in private schools or higher education settings. This research should be conducted in a longitudinal manner to better demonstrate and expound on change over time. Doing so might allow policy makers to

better align teacher compensation and benefit packages in a more fluid and responsive manner with what it is teachers actually wanted at that particular point in their career, effectively differentiating based on their needs. For example, if teachers demonstrated an interest and desire to have their retirement plans accentuate the flexibility of a DC retirement plan when they were younger and more mobile, this might be allowed. Or, as these teachers matured and demonstrated interest and desire to have their retirement plans accentuate the consistency and dependability of a DB retirement plan, this might be allowed as well. Further quantitative and qualitative analysis efforts in this regard would be justified to discern whether teachers value the flexibility of a hybrid plan as opposed to the rigidity of the current plan.

### **Conclusions**

The genesis of this study was a challenge posed to a group of doctoral students in a school finance course led by a school finance expert. The challenge involved how to better recruit and retain teachers in an educational environment where money was tight and additional school funding was difficult to secure. Lacking the realistic opportunity to increase annual salary by any meaningful degree, how could eager and talented young teachers be enticed into the profession and convinced to remain there once involved?

Needless to say, there were not many responses to the challenge, and even fewer ideas. However, this perplexing problem stuck with the researcher, who stewed over the problem and marinated in the challenges it posed. Emerging from this was the idea to shift the paradigm of analyzing teacher compensation solely from an annualized salary perspective to a more cumulative and holistic lens and, in doing so, hypothesize that many beginning teachers did not appreciate the full spectrum of their holistic

compensation package, let alone have the levels of financial literacy necessary to adequately understand it or manipulate it in their own financial favor. Therefore, the purpose of this basic interpretive qualitative study was to explore the perceptions and understanding of beginning PK–12 public education teachers about their DB retirement plans.

Vygotsky's sociocultural theory, and Wertsch and Wertsch's (2009) three primary themes supporting that theory, were used as a framework by which to better structure and view the research findings, perform the necessary analyses, and make appropriate recommendations moving forward. Findings were consistent with earlier research with small variations. Findings reveal that beginning PK–12 public education teachers had little to no understanding of their current DB retirement plans (TSERS). Furthermore, the knowledge and understanding they did have regarding their retirement plan options had been developed in hurried and often haphazard fashion in either a beginning teacher or new hire orientation meeting or through a voluntary session with an outside vendor seeking to sell a supplemental retirement plan account. Perhaps tellingly, many beginning teachers described ultimately learning about their retirement plan options independently, as it seemed the only feasible method to do so. Beginning teachers demonstrated little to no understanding of how their current retirement packages related to financial security upon retirement, and lagging understanding of this financial benefit played little, if any, role in informing their career decisions.

Recommendations from the data included the development of strategic and consistently evaluated PD opportunities consisting of differentiated tools and mechanisms to allow beginning PK–12 public education teachers to better understand

their own DB retirement plans (TSERS) as well as their cumulative retirement plan options. Additionally, recommendations included support for broad-based financial literacy education earlier in the learner's developmental spectrum, be it in high school or college course work. Finally, the recommendation was made to support further research into what it is that specifically motivates teachers in an effort to better align compensation packages with teacher needs.

Challenges exist in terms of these recommendations. Any suggested change in policy related to PD requires the support of leadership, the financial means to bring it to fruition, and an individual (or team of individuals) capable of serving as a change agent in this respect. The same holds true for mandated financial literacy education across the student spectrum. Additional research on the topic is also tentative, though never a certainty, given the tenuous state of educational research funding.

Embracing Vygotsky's sociocultural theory of learning and appreciating the idea that learners develop themselves through varied social sources and interactions and use of differentiated tools and resources, and that this development unfolds over time, provides hope and optimism that beginning PK–12 public education teachers might be able to better view their career choice and prospects through a more holistic and critically informed lens.

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## APPENDIX A: INTERVIEW PROTOCOL

### **Project Title**

A Qualitative Study of the Perceptions of Beginning PK–12 Public Education Teachers on Defined Benefit Retirement Plans

### **Structure**

This is a semi-structured one-on-one interview with seven (7) open-ended warm-up questions, fifteen (15) open-ended interview questions linked directly to applicable research questions, and two (2) open-ended supplemental questions. The interviewer will possibly ask some probing questions depending on the response of the interviewee during the interview process.

### **Procedure**

1. The researcher will find and secure an appropriate area outside of school premises and outside of school working hours to conduct the interview.
2. The researcher will ask the interviewer to complete the 12-question demographic survey (see Appendix E).
3. The researcher will ask if the interview may be audio recorded.
4. If the participant verbally provides his/her consent (paperwork has already been collected), the recording will begin.
5. The researcher will ask the interviewee questions.

### **Interview Guidelines**

Thank you for agreeing to an interview as part of this project. As you know, the purpose of this study is to gain a better understanding of the perceptions that beginning PK–12 public education teachers have about their defined benefit (DB) retirement plan. I am going to ask you a series of questions. Your name will not be reported. There are no wrong answers, so please answer as freely as you can. You do not need to answer any questions that you do not feel comfortable with. No penalties will be applied if you decline to participate in the study, decline to participate in the study once the interview session had begun, decline to answer certain questions during the course of the interview, or voluntarily withdraw from the study. Later I will transcribe the interview [type up what we both said]. If you are embarrassed about anything you may tell me at the end and it will not be part of the transcript. You may stop at any time for any reason. Would you still like to proceed?

- If no, the researcher will stop the interview and ask whether the participant is willing to be interviewed at another time.
- If yes, the researcher will continue the interview.

### **Research Questions**

1. What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?
2. How do beginning teachers develop knowledge and understanding of their retirement plan options?

3. What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?
4. How do beginning teachers' understanding of their retirement benefits inform their career decisions?

### **Interview Questions**

#### **Warm-Up Questions**

1. In your own words, discuss the difference between saving and spending money?
2. By what methods (i.e. cash, debit, credit, online smartphone app) do you spend your money?
3. Who primarily taught you about how money works?
4. When you talked with that person (or those people) about how money works, did you ever have questions about saving for retirement? If yes, please describe those conversations.
5. Tell me how comfortable and/or confident you are when discussing the topic of retirement planning.
6. What financial benefits do you believe are essential when considering a long-term career as an educator?
7. Tell me how you would define financial literacy.

*RQ1. What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?*

1. What can you tell me about how your participation in the North Carolina Teacher & State Employees Retirement System (TSERS) is funded? How much of each paycheck you receive is withheld? Is it calculated using a percentage or a fixed amount? Are these deductions made pre-tax or post-tax?
2. What can you tell me about how you become vested in the North Carolina Teacher & State Employees Retirement System (TSERS)?
3. What can you tell me about how the North Carolina Teacher & State Employees Retirement System (TSERS) calculates retirement income for teachers who have participated in and then retired as members of the system?

*RQ2. How do beginning teachers develop knowledge and understanding of their retirement plan options?*

1. In what setting or settings were you first informed about your current retirement plan?
2. What tools and/or resources were given to or shared with you to aid in the understanding of your current retirement plan?
3. Has the individual or individuals that made you aware of your current retirement plan followed up with you in any regard or provided you with additional tools or resources as time has passed? If so, can you describe these additional interactions and resources?
4. The majority of employees tend to gain most of their information regarding their retirement plan(s) by reading materials and engaging with resources independently. Is this the main way that you have gained information about your retirement plan, or have you taken other steps? If yes, please describe these other steps.

*RQ3. What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?*

1. Many people feel that having a financially secure retirement plan in place is an important goal for their future. When most reference a 'financially secure retirement' they mean having the necessary funds to support themselves, their families and their desired lifestyle. What do you believe are characteristics of a financially secure retirement? In what settings or environments did you develop these perspectives?
2. In what ways have you saved for retirement? Are there any particular tools and/or resources that you have used to help you in this process?
3. In what way does your participation in your current retirement plan affect your sense of financial well-being? Would you say that your perspective on this topic has changed and evolved over your time spent as a beginning teacher? If so, how? If not, why?
4. Will your current retirement plan be your sole source of income at retirement? To what extent will this be the case?

*RQ4. How does beginning teachers' understanding of their retirement benefits inform their career decisions?*

1. Was North Carolina's retirement plan benefit a deciding factor when accepting a position as a North Carolina PK–12 public teacher? If so, then to what extent?
2. In your deliberation to accept a PK–12 public teaching position, did you discuss the retirement plan with anyone prior to accepting the position? If so, please describe the setting and interaction in which that discussion occurred.
3. What were your perceptions or understanding of retirement plan benefits before starting your career as a North Carolina PK–12 teacher? What were you expecting? Were there any tools and/or resources used in shaping these opinions? If so, please describe them.
4. Has your thought process on North Carolina's retirement plan benefit changed and/or evolved over time as it relates to continuing in or leaving your role as a North Carolina PK–12 public teacher? If yes, please describe these changes and/or evolutions.

### **Supplemental Questions**

1. What do you need specifically to become more knowledgeable about the TSERS plan?
2. What do you need in general to become more financially literate?

## APPENDIX B: CONTACT PROTOCOL

“A Qualitative Study of the Perceptions of Beginning PK–12 Public Education Teachers  
on Defined Benefit Retirement Plans”

Rex A. Mangiaracina / UNC Charlotte / Educational Leadership Department

Hello . . . this is Rex Mangiaracina and I am completing a research project entitled “*A Qualitative Study of the Perceptions of Beginning PK–12 Public Education Teachers on Defined Benefit Retirement Plans.*” The purpose of this project is to explore the perceptions and understanding of beginning PK–12 public education teachers on their defined benefit retirement plan.

In your role as a beginning PK–12 public education teacher, I would like to ask you to participate in an audio-taped interview on this subject. You have been selected because of your status as a beginning PK–12 public education teacher and your mandated participation in the state’s defined benefit retirement plan.

Your participation in the project will take approximately 1 hour; approximately 45 minutes to complete a very brief demographic survey along with the interview itself and approximately 15 minutes to complete a brief follow-up prompt in the shape of a Google Form that will be sent approximately one week after the interview via shared Google link. You will also have the opportunity to verify your comments as they appear in the final work product or to follow up on any details. If you decide to participate, you will be one of approximately 8–12 subjects in this study. I am happy to arrange the interview at a time and place that is convenient for you.

Any information about your participation, including your identity, will remain confidential. The data collected by the investigator will not contain any identifying information or any link back to you or your participation in this study. Also, you are asked to not use identifying information of fellow school district employees, immediate co-workers, students, parents or others during the interview.

Do you have any questions?

At this point in the process, you have several options. If you are ready to agree to participate in the study, you can tell me that now. If you would prefer not to participate in the study, you can tell me that now as well. Or, if you would like additional time to consider participating in the study, that is a third option. If you would like additional time to consider participating, I would be glad to e-mail you the consent form that describes participation in the study so that you may review it as you decide whether or not to participate. You would then be free to follow up with me via phone and/or e-mail to let me know whether or not you would like to participate.

APPENDIX C: POSTRECRUITMENT PREINTERVIEW FOLLOW-UP E-MAIL  
SCRIPT



“A Qualitative Study of the Perceptions of Beginning PK–12 Public Education Teachers on Defined Benefit Retirement Plans”

Rex A. Mangiaracina / UNC Charlotte / Educational Leadership Department

Thank you for agreeing to participate in the study, “*A Qualitative Study of the Perceptions of Beginning PK–12 Public Education Teachers on Defined Benefit Retirement Plans.*”

This study is designed to analyze how beginning PK–12 public education teachers perceive and understand their defined benefit retirement plan. I am interested in understanding the extent to which beginning PK–12 public education teachers know about their plan and how they came to know it. Furthermore, I’m interested in knowing how these perceptions and understandings impact their understanding of financial security upon retirement and how their understanding of the plan may impact their career decisions and longevity as a public educator.

Please note that I have attached the Informed Consent Form to the body of this e-mail for you to review at your leisure prior to our interview. I welcome any questions you may have so please feel free to ask me via e-mail or phone. I will also bring a hard copy of this Informed Consent Form to our actual interview session for you to personally sign.

**Researcher:**

Mr. Rex A. Mangiaracina

[CONTACT INFORMATION REMOVED]

If you have any concerns regarding this study, please contact the faculty advisor of the researcher.

**Faculty Advisor:**

Dr. Walter Hart

[CONTACT INFORMATION REMOVED]



## APPENDIX D: CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of the Project: *A Qualitative Study of the Perceptions of Beginning PK–12 Public Education Teachers on Defined Benefit Retirement Plans*

Principal Investigator: Mr. Rex A. Mangiaracina, UNC Charlotte

Co-investigator: N/A

Study Sponsor: N/A

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate. If you have any questions, please ask.

### **Important Information You Need to Know**

- The purpose of this study is to explore the perceptions of beginning PK–12 public education teachers in regards to how they understand their defined benefit (DB) retirement plan.
- I am asking beginning PK–12 public education teachers who are age 20 and older and employed full-time as a PK–12 public educator (and thus a participant in the state’s defined benefit retirement plan) to complete a simple demographic questionnaire, a 1 - on - 1 interview about the respective topic and a brief follow-up prompt in the shape of a Google Form sent via shared Google link.
- Some of the questions I’ll ask you may be construed as personal and sensitive given your connections to personal financial literacy. For example, I’ll ask you about retirement planning and methods by which you do or envision doing so. These questions are personal and you might experience some mild emotional discomfort. You may choose to skip a question you do not want to answer. You will not personally benefit from taking part in this research but our study results may help in better understanding how beginning PK–12 public education teachers learn about their defined benefit (DB) retirement plan and make impactful decisions accordingly.
- Please read this form and ask any questions you may have before you decide whether to participate in this research study.

### **Why are we doing this study?**

The purpose of this study is to explore the perceptions of beginning teachers in regards to how they understand their defined benefit (DB) retirement plan.

### **Why are you being asked to be in this research study?**

You are being asked to be in this study because you are age 20 and older and employed full-time as a PK–12 public educator (and thus a participant in the state’s defined benefit retirement plan).

### **What will happen if I take part in this study?**

If you choose to participate you will complete a simple demographic questionnaire followed by a 1 on 1 interview about the respective topic. The demographic

questionnaire will ask you demographic questions (teaching experience, education level, age, race, gender, undergraduate major, content you are currently teaching, parental education level, tax filing status, parental status, annual household income, and homeowner status) and the 1 on 1 interview will ask you questions about retirement planning and methods by which you do or envision doing so. I would like to audio record our interviews so that I can capture your words accurately. If at any time during our interviews you felt uncomfortable answering a question, you would let me know, and you wouldn't need to answer the question. Or, if you wanted to answer a question but did not want your answer recorded, you would let me know, and I would turn off the recorder. If at any time you wanted to withdraw from the study, you would let me know, and I would erase the recordings of our conversations. Your total time commitment if you participate in this study will be approximately one (1) hour.

### **What benefits might I experience?**

You will not benefit directly from being in this study beyond contributing to the opportunity of others to better understand the levels of financial literacy that beginning teachers have as it pertains to one of the most significant financial components of their benefit package, their defined benefit (DB) retirement plan.

### **What risks might I experience?**

The questions I'll ask you might be construed as personal or sensitive, as they pertain to your understanding of your own finances. For example, I'll ask you about retirement planning and methods by which you do or envision doing so. These questions are personal and you might experience some mild emotional discomfort. You may choose to skip a question you do not want to answer. I do not expect this risk to be common and you may choose to skip questions you do not want to answer.

### **How will my information be protected?**

You are asked to provide your personal e-mail address as part of this study. I will use your personal e-mail address to deliver to you the Informed Consent Form as well as to then provide you with the Google link to the Google Form containing the follow-up prompt to be sent one week after the interview. Additionally, I will use your personal e-mail to send you your completed interview transcript. To protect your privacy (identity), I'll assign a study ID code to your questionnaire responses. Once I do this, I'll delete the e-mail address from the questionnaire responses so the responses will only have the study ID code. I will use a digital audio recorder to record our interviews. Immediately following each interview, I will transfer the audio file from the digital recorder to university password-protected cloud data storage, and I will delete the audio file from the recorder. After the research project is completed, I will delete the audio files from the password-protected data storage. I will transcribe each interview using word processing software. The transcriptions will be stored in password-protected data storage and will be deleted after the research project is completed. While the study is active, all data will be stored in a password-protected data base that can be accessed by the primary researcher. Only the researcher will have routine access to the study data. Other people, with approval from the Investigator, may need to see the information I collect about you including people who work for UNC Charlotte and other agencies as required by law or allowed by federal regulations; however, that information will be coded for a nonymity.

**How will my information be used after the study is over?**

After this study is complete, study data may be shared with other researchers for use in other studies without asking for your consent again or as may be needed as part of publishing our results. The data we share will NOT include information that could identify you.

**Will I receive an incentive for taking part in this study?**

You will not receive a financial incentive for taking part in this study.

**What are my rights if I take part in this study?**

It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer.

**Who can answer my questions about this study and my rights as a participant?**

For questions about this research, you may contact:

Mr. Rex A. Mangiaracina

[CONTACT INFORMATION REMOVED]

Dr. Walter Hart

[CONTACT INFORMATION REMOVED]

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Office of Research Compliance at 704-687-1871 or [uncc-irb@uncc.edu](mailto:uncc-irb@uncc.edu).

**Consent to Participate**

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will receive a copy of this document for your records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I understand what the study is about and my questions so far have been answered. I agree to take part in this study.

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Name (PRINT)

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Signature

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Date

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Name & Signature of person obtaining consent

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Date

## APPENDIX E: DEMOGRAPHIC SURVEY

This survey was designed to collect demographic information pertaining to current PK–12 beginning teachers who are eligible and participate in the North Carolina TSERS program. Data collected from this survey will be used for dissertation research purposes only.

- 1) How many years have you served as a PK–12 public education teacher in North Carolina?
  - A. Less than one full year
  - B. Less than two full years
  - C. Less than three full years
  
- 2) Indicate your highest level of education achieved:
  - A. Bachelor's Degree
  - B. Graduate Teaching Certificate
  - C. Master's Degree
  - D. Doctorate Degree
  
- 3) Indicate your age range:
  - A. 20–24
  - B. 25–29
  - C. 30–34
  - D. 35–39
  - E. 40–44
  - F. 45–49
  - G. 50–54
  - H. 55–59
  - I. 60–64
  - J. 65+
  
- 4) What is your race?
  - A. Caucasian
  - B. African American
  - C. Hispanic
  - D. Asian American
  - E. American Indian
  - F. Other:
  - G. Choose not to disclose
  
- 5) What gender do you identify with?
  - A. Male
  - B. Female
  - C. Other:
  - D. Choose not to disclose

- 6) What is your undergraduate major?
- A. Middle Grades Education
  - B. Mathematics
  - C. Science
  - D. History
  - E. English
  - F. Other:
- 7) In what content area are you currently teaching?
- A. Mathematics
  - B. Science
  - C. History
  - D. English
  - E. Other:
- 8) Please indicate the highest level of education achieved by your parent(s) **or** legal guardian(s):
- | <u>Mother</u>         | <u>Father</u>         | <u>Legal Guardian</u> |
|-----------------------|-----------------------|-----------------------|
| A. HS Diploma         | A. HS Diploma         | A. HS Diploma         |
| B. Associates' Degree | B. Associate's Degree | B. Associate's Degree |
| C. Bachelor's Degree  | C. Bachelor's Degree  | C. Bachelor's Degree  |
| D. Master's Degree    | D. Master's Degree    | D. Master's Degree    |
| E. Doctorate Degree   | E. Doctorate Degree   | E. Doctorate Degree   |
- 9) How do you file your taxes?
- A. Single
  - B. Married Filing Jointly
  - C. Married Filing Separately
  - D. Head of Household
  - E. Qualifying Widow(er) w/ Dependent Child
- 10) How many children reside in your household or do you claim as dependents?
- A. 0
  - B. 1
  - C. 2
  - D. 3+
- 11) What is your annual *household* income?
- A. Less than \$29,999
  - B. \$30,000 to \$39,999
  - C. \$40,000 to \$49,999
  - D. \$50,000 to \$59,999
  - E. \$60,000 to \$69,999
  - F. \$70,000 to \$79,999
  - G. \$80,000 to \$89,999

- H. \$90,000 to \$99,999
- I. \$100,000+

12) Are you a homeowner?

- A. Yes
- B. No

## APPENDIX F: INTERVIEW FOLLOW-UP PROMPTS

These follow-up prompts were designed to collect additional information from study participants after they have successfully completed the interview with the researcher. These follow-up prompts are being utilized as an additional means for the participants to reflect upon the topics discussed in the interview and for the researcher to gather additional data in this regard. Completion of the prompts should take approximately 15 minutes or less. Data collected from these follow-up prompts will be used for dissertation research purposes only.

1. In the week since we conducted our interview session, have you given further thought to the topic of your defined benefit retirement plan (TSERS)? If yes, please explain how so?
2. In the week since we conducted our interview session, have you thought of or developed any questions or related concerns relevant to retirement planning? If yes, please describe.
3. In the week since we conducted our interview session, has your definition or understanding of financial literacy evolved or changed? If yes, please explain how.

## APPENDIX G: MEMBER CHECKING PROTOCOL

Each of the following research questions is supported by a related participant quote and accompanied by initial findings from the research process. At your leisure, please read through this document and your included personal interview transcript. If you have any questions, concerns, or ideas that may lend further clarity to the research questions and the study at large, please do not hesitate to reach back out to me with those ideas. While this member checking protocol step is 100% optional, your feedback as a participant in this study is (and has been...) crucial and is very much appreciated. Thank you!

### **RQ1 - What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?**

*'I gotta be honest, I don't know. I can, I can share, um, a short story, uh, because we've actually been dealing with this, which is why I thought it was interesting that you, uh, asked me to partake in this once I found out what you were studying and what you were researching is that we actually just talked to a financial planner and they asked us about our retirement. And neither my wife nor I, and my wife's been teaching for 14 years, neither one of us could tell her if we had a 401k or a pension and we went researching for it and we still couldn't find the information and we had our financial planner research it and we still couldn't find the information. And what we could gather from all three of us putting our heads together is that we have a pension. That's about all we know.'*

Initial research indicates that beginning teachers know very little about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates, and what they do know and are able to articulate is characterized by inaccuracy, uncertainty, and routinely conflated with optional supplemental retirement plan options. Outliers in this data exist though, and these participants were differentiated by some form of shared personal experience (family member or professional mentor) who communicated aspects of the plan to them.

### **RQ2 - How do beginning teachers develop knowledge and understanding of their retirement plan options?**

*'Uh, I think when I made that visit, I, I think I'm remembering receiving a booklet. Um, but the booklet I could be thinking of might've just been medical and dental benefits and those kinds of things that may not have been your paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet to learn about it.'*

Initial research indicates that beginning teachers develop knowledge and understanding of their retirement plan options via a variety of means. Orientations, district intranet portals, online resources, booklets/brochures, and dialogue with supplemental retirement plan representatives all contribute to the development and understanding process. Of note however, almost all participants described methods that were largely passive in nature and put the onus on the individual to pursue and act upon necessary information. Participants expressed an interest in more interactive, responsive and meaningfully directed training on this topic.

### **RQ3 - What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?**

*'To be honest, I would say it probably hasn't until we started asking these questions. It's kind of a put it in perspective that I have absolutely no idea how much of a financial amount I'm including in retirement or what is, honestly, what even is my retirement package.'*

Initial research indicates that beginning teachers have very little understanding or immediate appreciation for their current retirement benefit package and its relationship to financial security upon retirement. While participant definitions and understanding of financial literacy rightly varied, few if any were able to connect their understanding of that concept to specifics related to their retirement plan. Uniquely, statements similar to that above were not uncommon over the course of the interviews and the process likely served as a litmus test for where individuals stood in relation to their thoughts on the topic.

### **RQ4 - How do beginning teachers' understanding of their retirement benefits inform their career decisions?**

*'I wouldn't say it was because I didn't even consider or look at, look up any of that information when I was getting a job. It was just a matter of I want to get a job. And, um, it wasn't even a factor of me choosing to work in my district either. It was just a matter of, Hmm, I want to teach. So, it wasn't at all a factor.'*

Initial research indicates that beginning teachers' understanding of their retirement benefits does little to nothing in terms of informing their career decisions. Overwhelmingly, participants expressed that their retirement benefits played almost no role in their initial processes and/or why they ultimately accepted a position. Furthermore, the majority of participants did not discuss their retirement and/or implications with that retirement in terms of any potential career decisions. Again, a few outliers did exist, but these were individuals who had more developed understanding of what the retirement plan entailed and how it operated.



## APPENDIX H: ANALYTIC MEMO PARAGRAPHS

### IA1a - Knowledge of varied retirement plan options

Use of language/terminology that directly references criterion contained within or regarding the TSERS or alternative supplemental plans

*'So from what I gather from the information that I looked at is that even though we put in 6% and it's matched, it almost seems like this is kind of like social security where it really doesn't matter how much we put in as long as we get through re as long we teach long enough to be retired, then our pension kicks in with some percentage of like the last few years that we worked and we get a percentage of that salary.'* (Participant #2)

*'Um, I know that they take out \$200 every paycheck and, and then I think some of it is, they, in some of it, I remember they, he's told me that they put it into different stocks or something like that. Like there's like, all these different, um, commercial companies or I forget, they're like really big, but they're all broken up. Like they take a little bit of your money and they put it here, here, here, all these places. And they spread it out.'* (Participant #11)

Select participants (5/12 w/ 5 references) are able to describe with minimum detail characteristics of their state mandated and/or supplemental retirement plans in which they are participating. Some specifics exist (6%, % of like last few years that we worked, \$200 every paycheck, put into different stocks), but they are surrounded by uncertain language ('so from what I gather', 'it almost seems like', 'kicks in with some percentage', 'or something like that').

### IA1b - Knowledge of paying in to TSERS

Use of language/terminology that directly references criterion related to the processes and/or amounts paid into TSERS

*'I believe that my retirement is taken out pretax and I think it's 6% of my paycheck'* (Participant #12)

*'I think it's a percentage'* (Participant #3)

*'I want to say that it's 6% taken out'* (Participant #8)

Select participants (4/12 w/ 5 references) are able to describe general characteristics related to the processes and/or amounts of their mandated participation paid into TSERS plan, but they repeatedly do so with uncertain language ('I believe', 'I think', 'I want to say') and only one (Participant #12) is able to communicate more than a single component of it accurately.

### IA1c - Knowledge of TSERS payouts upon retirement

Use of language/terminology that directly references processes, timelines, or amounts paid into TSERS

*'I think it's something like they take the average of your monthly paychecks and um, and I think it's something to do with like the last few years of your working, cause I know your paychecks changed every year.'* (Participant #7)

*'I know that the special number is 30 years. Um, so I know that you have to commit that much in order to get like the best amount of retirement benefits, but that's pretty much all I know.'* (Participant #1)

Select participants (5/12 w/ 5 references) are able to describe only vague generalities related to the processes, timelines, and amounts in relation to TSERS ('I think it's something like', 'I think it's something'). Additionally, what concrete information they do know is not surrounded by further context ('I know the special number is 30 years...but that's pretty much all I know')

### IA2a - Large volume of specific info/examples

Use of language/terminology that directly references or indicates larger, more significant amounts of knowledge pertaining to the TSERS system

*'I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you become vested into the retirement program.'* (Participant #12)

*'I don't know how it calculates the retirement income. I do know like if you try to retire at 20 years, it only gives you 50%, but then every year after that it goes up 10%. So they want you to be in the system for 30 years. Mmm... And if you retire early, it, uh, impacts your retirement and negatively. Um, but I do know like if you put in your full 30 years, you get 100% of the benefits.'* (Participant #12)

Select participants (3/12 w/ 4 references) use of language/terminology that directly references or indicates a larger, more significant amount of knowledge pertaining to TSERS system was evident ('You have to teach in North Carolina for five years before you become vested into the retirement program', 'If you retire early it impacts your retirement and negatively' and 'if you put in your full

30 years, you get 100% of the benefits'); however, it was a singular participant able to communicate this level of detail. Participant #12 was an outlier due to her mother's role as an educator within the district and positive experiences with a CE during ST who was getting set to retire.

#### IA2b - Small volume of specific info/examples

Use of language/terminology that directly references or indicates smaller, less significant amounts of knowledge pertaining to the TSERS system

*'I believe that is when you get your, um, are able to get your pension. That's as good as I can go cause I have no idea what the word actually means, but that's what I believe' (Participant #1)*

*'Yeah. Um, I, I think they are. Um, I think it's done by a percentage, uh, post-tax. That will be my guess. I'm not sure.' (Participant #4)*

Select participants (4/12 w/ 5 references) demonstrate a smaller and less significant volume of specific information as it pertains to the TSERS program. The presence of uncertain speech ('I believe', 'I think', 'that would be my guess') are all present. Furthermore, outright uncertainty is openly admitted ('I have no idea what the word actually means').

#### IA2c - No specific info/examples (generalizations only)

Use of language/terminology that references or indicates no significant amounts of knowledge pertaining to the TSERS system

*'I'll have to say that I don't think there's a lot of information at all to beginning teachers about what their packages. It just kind of automatically happens. There's nothing you can really do to it or change it. And so it just kind of happens without your knowledge.' (Participant #2)*

*'Yes. Yes. Yeah. Almost like people think it's kind of like investment and I don't know if it's similar to that, so I don't know.' (Participant #11)*

Select participants (5/12 w/ 5 references) demonstrate the fact that there is little to no significant amounts of knowledge pertaining to the TSERS system and that generalizations abound both in terms of what it is (Participant #11), but also in terms of how/why it is delivered as benefit to teachers (Participant #2).

#### IA3a - Accurate Statements

Use of language/terminology that directly references or indicates accurate knowledge pertaining to the TSERS system

*'I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.' (Participant #12)*

*'I know there's formulas in there and it has to do with length of service and they're in your age.' (Participant #2)*

Select participants (3/12 w/ 5 references) do use language/terminology that directly references or indicates accurate knowledge pertaining to the TSERS system. Participant #12 (discussed as an outlier earlier) gives specific both in terms of process ('vesting') as well as time ('5 years') and geographic requirements therein ('in North Carolina'). Participant #2 recognizes the connection between existing formulas and length of service and intended retirement age. Both also use language expressing certainty ('I know...') that was very different from their peers.

#### IA3b - Inaccurate Statements

Use of language/terminology that directly references or indicates inaccurate knowledge pertaining to the TSERS system

*'From my understanding, I think that the teacher can decide how much of their paycheck percentage, right?' (Participant #1)*

*'No, I think, I think it's about 10%. Um, if I'm not mistaken. I do remember looking at this with my mom, but it, it's, it was way back then, so I think it's about 10% honestly.' (Participant #9)*

Select participants (4/12 w/ 5 references) use language/terminology that directly references or indicates inaccurate knowledge pertaining to the TSERS system. Participant #1 assumes that teachers can adjust the mandated 6% contribution rate. Of note, this participant conflated the mandated state retirement plan for most of their interview. Participant #9 states in uncertain terms ('I think', 'if I'm not mistaken') that the mandated percentage held from each paycheck is 10% when in fact it is 6%. Participant #9 then tries to couch this uncertainty by explaining that it was 'way back when' that he even looked at it.

#### IB1a - Perception w/ Large Volume

Use of language/terminology that directly references or indicates participant perceptions of having larger, more significant amounts of knowledge pertaining to the TSERS system

*'Yeah, I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.'* (Participant #12)

(4/12 w/ 5 references) Participant #12 does use language / terminology that directly references or indicates their perception of larger and more significant amounts of knowledge as it pertains to the TSERS system. Participant #12 (discussed as an outlier earlier) gives specific both in terms of process ('vesting') as well as time ('5 years') and geographic requirements therein ('in North Carolina').

#### IB1b - Perception w/ Small Volume

Use of language/terminology that directly references or indicates participant perceptions of having smaller, less significant amounts of knowledge pertaining to the TSERS system

*'I know that it's dependent on how long you have been in a teacher in the, uh, I don't think it's district, I think it's in the state that you're in. Um, maybe it is district, I'm not sure. But I know that the special number is 30 years.'* (Participant #1)

(4/12 w/ 5 references) Participant #1 does use language / terminology that directly references or indicates participant perceptions of having smaller, less significant amounts of knowledge pertaining to the TSERS system. Participant #1 demonstrates confusion as to whether it is the school district or the state ('I don't think it's the district, I think it's the state you're in. Um maybe it's the district, I'm not sure') and while this participant is certain of the time period ('but I know the special number is 30 years') there is little to no context surrounding this number to build understanding upon.

#### IB1c - None Perceived

Use of language/terminology that directly references or indicates participant perceptions of having no significant amount of knowledge pertaining to the TSERS system

*'I honestly have zero clue.'* (Participant #1)

*'Honestly, I don't know'* (Participant #10)

*'I could not tell you that at all.'* (Participant #5)

*'I've heard it before, but I don't really know what it means.'* (Participant #9)

Select participants (6/12 w/ 10 references) use language / terminology that directly references or indicates participant perceptions of having no significant amount of knowledge pertaining to the TSERS program. Two participants (#1 & #10) are completely candid about this lack of understanding ('honestly') while one participant (#9) tries again to couch this uncertainty in previous exposure ('I've heard it before...') without the ability to recall ('But I don't really know what it means').

#### IC2a - Perception w/ Accuracy

Use of language/terminology that directly references or indicates participant perceptions of accurate knowledge pertaining to the TSERS system

*'Yeah, I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.'* (Participant #12)

(4/12 w/ 5 references) Participant #12 does use language / terminology that directly references or indicates their perception of accurate knowledge pertaining to the TSERS system. Participant #12 (discussed as an outlier earlier) gives specific both in terms of process ('vesting') as well as time ('5 years') and geographic requirements therein ('in North Carolina').

#### IC2b - Perception w/ Inaccuracy

Use of language/terminology that directly references or indicates participant perceptions of inaccurate knowledge pertaining to the TSERS system

*'Um, it's and job title, it probably matters as well.'* (Participant #4)

*'I think you have to sign up.'* (Participant #7)

Select participants (4/12 w/ 6 references) do use language / terminology that directly references or indicates participant perceptions of inaccurate knowledge pertaining to the TSERS system. In the case of Participant #4, they inaccurately assign condition based upon rank ('and it's job title') and Participant #7 makes the error of conflating mandated participation in TSERS with voluntary participation in a supplemental plan which would require voluntary commitment ('you have to sign up').

### IIA1a - Representatives

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of representatives

*'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests.'* (Participant #11)

*'I did just recently talked to the AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that's the only place that I've gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.'* (Participant #12)

Select participants (6/12 w/ 13 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of representatives. Both participants allude to those representatives that are contracted by their districts to provide supplemental retirement plan options. Participant #12 however is able to differentiate between the two plans and recognize that while there to discuss the supplemental plan, the representative also does touch briefly upon the state provided plan (TSERS). Both participants express representatives as being a source of topical information.

### IIA1b - Private Financial Advisor

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of private financial advisor(s)

*'And as I mentioned before, uh, talking to our financial planner, uh, she asked for more information and so both my wife and I took it upon ourselves to try to find more information. But I would say that information is a scarce.'* (Participant #2)

*'I haven't really taken any steps, but I think eventually I'll meet with like an advisor or something that helps me make better decisions on, you know, options or change my plan to make sure I'm maximizing the benefits available to me.'* (Participant #4)

Select participants (3/12 w/ 3 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of private financial advisors. Participant #2 references a pre-existing relationship ('our financial advisor') with a financial advisor working with him and his wife. Participant #4 communicates an admitted need to establish such a relationship to better understand and 'maximize' available benefits.

### IIA1c - Family

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of family

*'Uh, I mean, I would say probably the most I've gotten is just from like talking to people like my dad and my boyfriend who, you know, don't even know my personal retirement plan. But really I've, I have not done really anything.'* (Participant #1)

*'Yeah! I just, I just asked my husband and everything and he, he liked either banks. You're also, he works for Wells Fargo, so he helps me with all that stuff. I'm not, yeah, numbers are not my thing.'* (Participant #11)

*'Um, no, just like, again, like I said before, um, me and my mom will talk about it every now and then. She wants me to go ahead and get on top of it, uh, making sure that, um, I take or I change my percentage, a higher percentage to take more out of my paycheck. Um, but other than that, we've haven't really had any other conversation.'* (Participant #9)

Select participants (5/12 w/ 11 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of family members. Participants #1 & #11 both female reference dependency on male family members ('dad' or 'husband') or close connections ('boyfriend') but both are also very self-deprecating about the whole issue too ('but really I've not done anything' or 'Yeah, numbers are not my thing'). Participant number #9 who is male references dependency on his mom recognizing that they 'talk every now and then' and that she communicates the need to 'take or change percentage' withheld from each check.

### IIA1d - Check-ins

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of those carrying out check-ins

*'Yeah, I get check ins, you know, texts or calls. Um, just to go over things every now and then. Um, as far as like supplemental*

*resources and things that I could kind of look over on my own, Nope. But I do get phone call checking.’ (Participant #10)*

Select participants (7/12 w/ 8 references) use language / terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as people in the form of those conducting or carrying out check-ins. Participant #10 outlines the fact that these check-ins occur in the form of ‘texts or calls’ to ‘go over things every now and then’. Participant #10 also acknowledges that ‘supplemental resources’ are not a part of that discussion, rather ‘phone calls checking in’ are. Maintenance and development of Customer/ vendor relationship is clearly present here and potentially not fully understood by participant.

#### IIA2a(1) - Booklets

Use of language/terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as printed material in the form of a booklet(s)

*‘Uh, I think when I made that visit, I, I think I’m remembering receiving a booklet. Um, but the booklet I could be thinking of might’ve just been medical and dental benefits and those kinds of things that may not have been your paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet.’ (Participant #3)*

Select participants (5/12 w/ 6 references) use language / terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as people in the form of a booklet(s). Participant #3 discusses ‘remembering receiving a booklet’ but realizing it was likely ‘medical and dental benefits’ with only ‘a single sheet of paper with links for the internet’ given for retirement. Both appear to have been passive with retirement taking a backseat to medical/dental benefits according to the description of the resources provided.

#### IIA2a(2) - Information Pages

Use of language/terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as printed material in the form of informational page(s)

*‘Um, I did read, he gave me, um, some information he wrote down for me to read and then I did like a little research as much as I could because I really don’t like numbers cause they’re more boring.’ (Participant #11)*

*‘Um, you know, I get something in the mail from the company, you know, once a month to just tell me like, this is what is in your retirement fund as of now. Um, you know, and really I, I just, they have offered to talk with me.’ (Participant #1)*

Select participants (2/12 w/ 4 references) use language / terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as people in the form of informational page(s). Participants describe having things written down for them directly (‘some information he wrote down for me’) or receiving related information via mail (I get something in the mail from the company, you know, once a month). In both cases, offers to discuss or explain further have been proffered. In each case, supplemental retirement plans are involved.

#### IIA2b(1) - Employee Portal

Use of language/terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as a virtual resource in the form of an employee portal

*‘Um, I do know that like in the intranet that we can log into, um, I have access to view all of my benefits. Um, so I guess technically that was shared with me when I became an employee. Um, but other than that, um, I don’t think I’ve received, I haven’t received any like physical information.’ (Participant #12)*

*‘Um, I would say the most of those resources are on like the employee intranet portal that you have to seek on your own. Um, and then of course they have the individuals that’ll come out that you can make an appointment with.’ (Participant #4)*

Select participants (4/12 w/ 5 references) use language / terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as a virtual resource in the form of an employee intranet portal. In each case, participants discuss awareness of their respective school district’s intranet portal and resources therein (‘I know like the intranet we can log into’ & ‘those resources are on like the employee intranet portal’). However, both also express statements indicating that they might want more in terms of support or resources (‘other than that, I haven’t received any physical information’ & ‘they have individuals that will come out and make an appointment with you’).

#### IIA2b(2) - Public Websites

Use of language/terminology that directly references or indicates beginning teachers’ sources of information pertaining to their retirement plan as a virtual resource in the form of a public website

*'The only thing that was given to me was that website where I can check my retirement and check benefits healthcare. And all that kind of stuff is kind of located in the same area.'* (Participant #2)

*'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.'* (Participant #4)

Select participants (3/12 w/ 3 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of a public website. Both participants express awareness of public websites ('the only thing given to me was a website' & 'I think it was a matter of looking at a website if you care about that type of thing'). Each participant also expresses limitations in this regard ('the only thing given to me was a website' & 'I don't think I was really informed') indicating that they may have valued more resources and/or explanation.

#### **IIA2b(3) - App/Digital Platform**

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an app/digital platform

*'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.'* (Participant #11)

(2/12 w/ 3 references) Participant uses language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as virtual resource in the form of an app/digital platform. Participant describes being shown 'an online app' to better understand her various aspects of her retirement program. Of note however, this is again referencing a supplemental retirement account and this same participant had little to no knowledge about her state mandated pension worked.

#### **IIB 1a - Employer Orientations**

Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being formal / official and carried out through employer orientations

*'We had this three day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it. And from that kind of answers the beginning question, which is I know that we need to go to the CMS web page and then you can click on benefits and then you can kind of see where your money's going per paycheck.'* (Participant #2)

(5/12 w/ 6 references) Participant uses language / terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being formal / official and carried out through employer orientations. Participant #12 indicates this orientation lasted 'three days' although most of it was 'related to content and you know like how to teach and materials you can use'. There was 'a little bit of information about benefits, how to access it how to reach it'. A reference towards the priorities that are placed on these beginning teachers during their orientation towards preparing them how to teach vs. familiarizing them with their employer and their respective benefits.

#### **IIB 1b - Sessions w/ Representatives**

Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being formal / official and carried out through sessions with representatives

*'I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really.'* (Participant #1)

*'I did just recently talked to the AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that's the only place that I've gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.'* (Participant #12)

(6/12 w/ 13 references) Participant uses language / terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being formal / official and carried out through sessions with representatives. In this case, both participants are referencing the representatives who visit the schools to discuss supplemental retirement plans ('those guys coming around' & 'recently talked to the AXA representative about my 401k plan) but only Participant #12 recognizes the difference between this supplemental plan and the state mandated plan ('he touched briefly on my state plan'). Both reference that these representatives as being the most readily available source of information ('I don't remember anybody from my school or district, like telling us how this works, telling us what we should do really' & 'that's the only place that I've gotten information other than reading through my benefits packet at the beginning of the year').

**IIB2a - Conversations w/ Family**

Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being informal / unofficial and carried out through conversations with family

*'Uh, I mean, I would say probably the most I've gotten is just from like talking to people like my dad and my boyfriend who, you know, don't even know my personal retirement plan. But really I've, I have not done really anything.'* (Participant #1)

*'Yeah! I just, I just asked my husband and everything and he, he liked either banks. You're also, he works for Wells Fargo, so he helps me with all that stuff. I'm not, yeah, numbers are not my thing.'* (Participant #11)

*'Um, no, just like, again, like I said before, um, me and my mom will talk about it every now and then. She wants me to go ahead and get on top of it, uh, making sure that, um, I take or I change my percentage, a higher percentage to take more out of my paycheck. Um, but other than that, we've haven't really had any other conversation.'* (Participant #9)

Select participants (5/12 w/ 11 references) use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being informal / unofficial and carried out through conversations with family. Participants #1 & #11 both female reference dependency on male family members ('dad' or 'husband') or close connections ('boyfriend') but both are also very self-deprecating about the whole issue too ('but really I've not done anything' or 'Yeah, numbers are not my thing'). Participant number #9 who is male references dependency on his mom recognizing that they 'talk every now and then' and that she communicates the need to 'take or change percentage' withheld from each check.

**IIB2b - Independent Research**

Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being informal / unofficial and carried out through independent research

*'Uh, yes, it's been my own self doing my own research and reading.'* (Participant #2)

*'Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own.'* (Participant #4)

*'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.'*

Select participants (6/12 w/ 7 references) use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being informal / unofficial and carried out through independent research. Both participants express self-reliance in terms of learning about their retirement program ('it's been my own self doing my own research and reading' & 'that you have to seek on your own'). Of additional note, Participant #4 does reference potential effects including apathy ('I think it was a matter of looking at a website if you care enough about that type of thing').

**IIC1a - Too much Information**

Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including too much information

*'Ooh, boy. Um, I would probably say it was during the very brief, very quick, uh, orientation I had sitting in the office where they broken down my licensure, what it, what it was being a lateral entry, um, person. Um, it went over my pay and I'm sure it probably talked about all the other benefits all within a 30 minute time slot that was literally a 30 minute time slot where they covered everything. You know, they asked the question, do you have any questions? But how do you answer that when you've changed careers and under 24 hours and just been given all this material to process. So that was probably the last time I received any information on that. And that was the, in December of 2018.'* (Participant #5)

(4/12 w/ 5 references) Participant #5 demonstrates use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including too much information. From the get go the 'oh boy' indicated a feeling of being overwhelmed. This is furthered by descriptors like 'very brief' and 'very quick' and 'all within a 30 minute time slot'. When asked if there were any questions, participant states 'But how do you answer that when you've changed careers and under 24 hours and just been given all this material to process.' Clear that too much information was given too quickly. Additionally, participant also references a total lack of follow through in when he says 'So that was probably the last time I received any information on that. And that was the, in December of 2018.'

**IIC1b - Too little Information**

Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including too little information

*'Honestly, not nothing. I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really. Cause you know, I'm at my age and this was my first, you know, real job, obviously, like I had zero clue. So I would say really nothing. You know, you weren't given options of companies to work with or really you weren't really told what your retirement would look like and the benefits of that. So I would say very little.'* (Participant #1)

(6/12 w/9 references) Participant #1 uses language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including too little information. Her mention of 'honestly, not nothing', 'so I would say very little' and 'I don't remember having anybody from my school or district, like telling us how this works, telling us what we should do really'. Aligns this with age and level of development in saying 'cause you know, I'm at my age and this was my first, you know, real job, obviously I had like zero clue'

#### IIC2a - Too Quickly

Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including information provided too quickly

*'Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me. And I think they, they did a good job explaining it. They, I remember they had like a notepad and they kind of drew out, you know, how it works. And I remember understanding it at the time. Of course I forgot it almost immediately.'* (Participant #1)

(5/12 w/5 references) Participant #1 uses language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including information provided too quickly. She references that these meetings would occur 'during planning period' (typically 90 minutes in HS and unlikely that representative had only one session in 90 minutes) and while participant states that 'they did a good job explaining it', clearly there wasn't enough time, repetition or opportunity for follow up given summation 'of course I forgot it almost immediately'.

#### IIC2b - Not Quickly Enough

Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including information not provided fast enough

*'So during our BT training, which was a week or so before school started, we, um, sat down for about eight hours and we had classes. Um, and one of the sections of that class was all about retirement.'* (Participant #7)

(2/12 w/5 references) Participant #7 uses language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including information not provided fast enough. They reference BT training occurring 'a week or so before school started' and 'sitting down for about 8 hours of classes'. In all that time, they had 'one section about retirement'. Participant did not specify further about what was learned in that section.

#### IIC3 - Onus on the Teacher to make sense of Information

Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as placing too much burden on the teacher to gather information

*'Uh, yes, it's been my own self doing my own research and reading.'* (Participant #2)

*'Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own.'* (Participant #4)

*'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.'* (Participant #4)

Select participants (6/12 w/9 references) use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as placing too much burden on the teacher to gather information. Both participants express needing self-reliance in terms of learning about their retirement program ('it's been my own self doing my own research and reading' & 'that you have to seek on your own'). Of additional note, Participant #4 does reference potential effects including apathy ('I think it was a matter of looking at a website if you care enough about that type of thing').

#### IIC4 - Not enough Support in Understanding Information

Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as not providing enough teacher support

*'Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down*



*meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out. Other than that, no clear understanding.'* (Participant #10)

(10/12 w/ 18 references) Participant #10 use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as not providing enough teacher support can be seen in his honest phrase 'Like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out. Other than that, no clear understanding.' Supplemental retirement representative was talking beyond the scope of understanding of this participant and it was not an effective learning episode.

#### **IID1a - Conflation of TSERS & Supplemental Plans**

Use of language/terminology that directly references or indicates beginning teachers' misconceptions about information and its sources when TESRS is conflated with supplemental retirement plans

*'Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me.'* (Participant #1)

*'Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.'* (Participant #10)

(6/12 w/ 12 references) Participants' use of language/terminology that directly references or indicates beginning teachers' misconceptions about information and its sources when TESRS is conflated with supplemental retirement plans is evident throughout the study. However, Participant #1 & #10 provide unique examples. Both referenced the representatives who visit schools to sell and set up supplemental retirement plans ('this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me' & 'we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly') Neither ever gave any indication that they were in fact aware of or actively participating in a state mandated program.

#### **IID2a - Uncertainty about 'Representative' Employer & Functions**

Use of language/terminology that directly references or indicates beginning teachers' misconceptions about information and its sources when teachers are uncertain about representatives' employers and functions

*'And we had a state representative, um, a representative of the, um, insurance or the retirement plan, sorry. Um, cap came in and kind of threw all of the 401k and all those other options out about us. Um, and she gave us a packet and that was about it.'* (Participant #7)

(6/12 w/ 12 references) Participant #7 use of language/terminology that directly references or indicates beginning teachers' misconceptions about information and its sources when teachers are uncertain about representatives' employers and functions. Mentioning 'we had a state representative, um, a representative of the, um insurance or the retirement plan, sorry' shows that the participant was unaware that this was in fact not a state representative but a contracted vendor selling supplemental retirement plans. Furthermore, they discuss larger takeaways in that they were 'given a packet and that was about it'.

#### **IIIA1a - Knowledge of which package and what package includes**

Use of language/terminology that directly references or indicates beginning teachers' knowledge of their current retirement package in relation to what that package includes

*'Mmm... my state retirement plan will not be my only source of income because my, for my 401k with AXA will also be a source of income. Um, but, uh, I don't know. I've thought about, I know a lot of people work after they retire because of if you can retire in your mid to late fifties, you're still pretty young. And so, um, I thought about maybe doing a like education consulting or something like that after I'm talking about retiring.'* (Participant #12)

Select participants (7/12 w/ 11 references) use language/terminology that directly references or indicates beginning teachers' knowledge of their current retirement package in relation to what that package includes. Most poignant of those was participant #12 (again, an outlier) who is able to differentiate between her state plan and supplemental plan and recognize need for both working in unison. She says 'my state plan will not be my sole source of income because my, for my 401k with AXA will also be a source of income'. Participant also references the ability that the plan gives teachers to retire early and keep working when she says 'I've thought about, I know a lot of people work after they retire because of if you can retire in your mid to late fifties, you're still pretty young. And so, um, I thought about maybe doing a like education consulting or something like that after I'm talking about retiring.'

#### **IIIA1b - Knowledge of which package but not what package includes**

Use of language/terminology that directly references or indicates beginning teachers' knowledge of their current retirement package being referenced in the interview but now what the package includes

*'The only thing I have done to save for retirement is setting up a 401k and I know that I think I put, so, yeah, I don't even know the number of like, I think I put \$500 out of my paycheck that I, I requested, I don't even want to see it. I just want it to disappear into my retirement fund. So I know it's there. I do that every month. Um, that is essentially all that I do.'* (Participant #1)

Select participants (4/12 w/ 6 references) use language/terminology that directly references or indicates beginning teachers' knowledge of their current retirement package being referenced in the interview but now what the package includes. Participant #1 does that when she acknowledges 'setting up a 401k' but fails altogether to even mention or incorporate her mandated participation in the TSERS program. She says that 'the only thing she's done' is set up the supplemental account not even realizing another account is currently acting on her behalf. Further, her statements about 'not even wanting to see it, wanting it to disappear into my retirement fund' shows a hands-off perspective when it comes to the topic.

### IIIA1c - Lack of knowledge of which package

Use of language/terminology that directly references or indicates beginning teachers' lack of knowledge of their current retirement package being referenced in the interview

*'Well, it, it's stable. It comes every month. Um, he gets, he has, um, health, health care for the whole family, um, dental for the whole family. And I just think it's a nice thing that, um, that you can get after you retire.'* (Participant #11)

*'Right, exactly. So we have retirement built from my former career and Dan's current career and then his life in the Navy. So, so this one does, does not figure in, um, just by the nature of me coming to it. Totally.'* (Participant #3)

Select participants (2/12 w/ 6 references) use language/terminology that directly references or indicates beginning teachers' lack of knowledge of their current retirement package being referenced in the interview. Both participant #11 & #3 referenced their husbands' existing pensions (one a retired police officer the other retired military) as being ideal and something they count on ('it's stable. It comes every month. Um, he gets, he has, um, health, health care for the whole family, um, dental for the whole family. And I just think it's a nice thing that, um, that you can get after you retire.' & 'So we have retirement built from my former career and Dan's current career and then his life in the Navy. So, so this one does, does not figure in, um, just by the nature of me coming to it.') yet they do not even realize that they are in fact eligible to receive and are currently earning this very same benefit of their own.

### IIIA2a - Accurate statements

Use of language/terminology that directly references or indicates beginning teachers' accurate knowledge of their current retirement package

*'Um, I feel like, uh, I feel like my participation, I feel like I feel very secure about my financial wellbeing. Um, I do know, um, like I'm not vested yet. Um, so as a beginning teacher, that's a little worrisome, but I know that I'll be in North Carolina for at least five years. Um, so I'll be vested after that. And so, yeah, I feel like, uh, as a beginning teacher, I realized the importance of saving for retirement. When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good. Um, but yeah, I feel, I feel pretty financially secure for the future and I'm glad I'm thinking about that now in my early twenties instead of later.'* (Participant #12)

Select participants (4/12 w/ 5 references) use language/terminology that directly references or indicates beginning teachers' accurate knowledge of their current retirement package. Participant #12 notes feeling 'secure about financial well being', understands the vesting process and timelines therein 'I know that I'll be in North Carolina for at least five years. Um, so I'll be vested after that' and also appreciates and uses the resources at her disposal ('When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good.). Finally, she appreciates the importance of time aiding her process of saving when she mentions 'I'm glad I'm thinking about that now in my early twenties instead of later.'

### IIIA2b - Inaccurate statements

Use of language/terminology that directly references or indicates beginning teachers' inaccurate knowledge of their current retirement package

*'It is... it's mandated. Um, so everyone, it's not mandated, but you start off, every teacher is put on a pension plan. That is the pension plan for the, maybe it's the state. I thought it was. Um, but you can change it. You can, um, change it to a fourth would be, you just have to apply for that.'* (Participant #6)

*'Retirement age is around eighty.'* (Participant #10)

Select participants (3/12 w/ 3 references) use language/terminology that directly references or indicates beginning teachers' inaccurate knowledge of their current retirement package. Participant #10 simply does not understand the concept of retirement in relation to age ('Retirement age is around eighty.') and participant #6 waffles back and forth uncertain at all about the plan or separation between the mandated state plan and voluntary supplemental plan when saying ('It is... it's mandated. Um, so everyone, it's not mandated, but you start off, every teacher is put on a pension plan. That is the pension plan for the, maybe it's the state. I thought it was. Um, but you can change it. You can, um, change it to a fourth would be, you just have to apply for that.')

**IIIB1a - Comfort with limited/no knowledge**

Use of language/terminology that expresses participant comfort level with limited or no knowledge of their current retirement package

*'Um, I think for me, I just want to know that I have something set up and it's kind of doing what I'm supposed to do for me. Um, so really I don't want to take any part in it. I have zero interest in like sitting down and talking about my retirement and planning. So I just want to, for someone to tell me what to do and then, you know, every month I know that I'm contributing to it. So that, that is good enough for me. I mean, of course I, I would want to be doing that and not doing nothing, but that's the extent that I care about.'* (Participant #1)

Select participants (7/12 w/ 9 references) use language/terminology that expresses participant comfort level with limited or no knowledge of their current retirement package. Participant #1 is particularly articulate on this point referencing 'just wanting to know that I have something set up' and that 'it's kind of doing I'm supposed to for me'. Further, stating that she 'doesn't want to take part in it', 'has zero interest in sitting down and talking about my retirement and planning' and 'wanting someone to just tell me what to do'. This is an interesting angle because without this plan perspectives of this sort would in no way shape or form be prepared for retirement without its mandated function.

**IIIB1b - Comfort with specific knowledge**

Use of language/terminology that expresses participant comfort level with specific knowledge of their current retirement package

*'Um, I would say that I have been, lots of people have told us, I guess the people who have come from, well just speaking with other teachers, but also the people who have come to talk about these supplemental plans have made it pretty clear that you cannot rely on just the, just the state plan. Um, it's not going to be enough to carry you through retirement. And it seems like they make changes to it a lot. And then of course the state, the insurance health insurance plan seems like it's going through a lot of changes. So it just seems like a lot of people have said, yeah, you need to have something else because this 6% or whatever it is, is not going to be, cannot be your only retirement option.'* (Participant #8)

Select participants (3/12 w/ 6 references) use language/terminology that expresses participant comfort level with specific knowledge of their current retirement package. In this case participant #8 references the development of knowledge from both 'speaking with other teachers' as well as 'the people who come to talk about the supplemental plans' that promotes the idea of needing to go beyond just the state mandated TSERS program to ensure full financial security upon retirement. She also references ongoing 'changes' in the plan and related benefits.

**IIIB2a - Discomfort with limited/no knowledge**

Use of language/terminology that expresses participant discomfort level with limited or no knowledge of their current retirement package

*'As of now, yes. Um, but I think in the future I don't, honestly, I don't know if I'm supposed to have some other form of income or some other way that I'm saving for retirement, but as of now, that is my sole, my sole way of saving for retirement.'* (Participant #1)

Select participants (6/12 w/ 8 references) use language/terminology that expresses participant discomfort level with limited or no knowledge of their current retirement package. Participant #1 again encapsulates this well stating 'I think in the future I don't, honestly, I don't know if I'm supposed to have some other form of income or some other way that I'm saving for retirement, but as of now, that is my sole, my sole way of saving for retirement.' Her discomfort is found in the fact that she acknowledges she may need more savings but doesn't know enough one way or another to act on it.

**IIIB2b - Discomfort with specific knowledge**

Use of language/terminology that expresses participant discomfort level with specific knowledge of their current retirement package

*'I would, I, cause like I said, like I don't even know where to look or if there is even somewhere for me to look, um, at my state benefits or retirement. Like, I don't know if there's a way to like see how much money I've put into it or anything like that. Um, but I do know, like if I log into my AXA account, I can see all of that information right in there.'* (Participant #12)

Select participants (2/12 w/ 4 references) use language/terminology that expresses participant discomfort level with specific knowledge of their current retirement package. In this case, participant #12 uncertainty and discomfort with her state TSERS plan when compared to her supplemental plan. Comparison is evident in her quote, 'I don't even know where to look or if there is even somewhere for me to look, um, at my state benefits or retirement. Like, I don't know if there's a way to like see how much money I've put into it or anything like that. Um, but I do know, like if I log into my AXA account, I can see all of that information right in there.'

**IIIC1 - Specific connections**

Use of language/terminology that draws specific connections between participants' knowledge of their current retirement package and its relationship to financial security

*'Yeah, I think when I first started teaching, I thought, okay, this is great. Like I've got this retirement plan. I don't have to do anything. It's set up. But then I think as I asked more questions about it, I realized, okay, maybe it's not. It's good to have, but it's not. It can't be the only, I need to be smarter about this. It can't be the only thing that I rely on.'* (Participant #8)

Select participants (2/12 w/ 4 references) use language/terminology that draws specific connections between participants' knowledge of their current retirement package and its relationship to financial security. This is seen in this quote as participant #8 acknowledges her state plan but has the financial wherewithal to understand that she will need to supplement this plan to maintain her financial needs. ('I think when I first started teaching, I thought, okay, this is great. Like I've got this retirement plan. I don't have to do anything. It's set up. But then I think as I asked more questions about it, I realized, okay, maybe it's not. It's good to have, but it's not. It can't be the only, I need to be smarter about this. It can't be the only thing that I rely on.')

### IIIC2 - General connections

Use of language/terminology that draws general connections between participants' knowledge of their current retirement

*'Yeah, I think it's, it's comforting to know that I have something going now as, as opposed to before when I started teaching, I didn't have anything work. That kind of gives me a little bit of sense of security that as long as I work 25 years, you know, mandated to access my full retirement package and I'm going to be a lot better off than I was before I started before I started teaching. So it gives me a little bit of comfort.'* (Participant #2)

Select participants (5/12 w/ 5 references) use language/terminology that draws general connections between participants' knowledge of their current retirement. In this case, participant #2 draws the general connection between having a retirement plan vs. not having one ('it's comforting to know that I have something going now as, as opposed to before when I started teaching, I didn't have anything work.') and understanding within the general range ('as long as I work for 25 years') of what it will take to earn said benefit.

### IIIC3 - Lack of connections

Use of language/terminology that draws a lack of connections between participants' knowledge of their current retirement package and its relationship to financial security

*'So I'm thinking it will help pay for your rent and food. I don't really think it pays for much, really honestly, unless you're rich. Um, and I got these ideas from people that I've seen who have saved for their retirement. And I mean they were making decent money when they were young and now let's see them 80 years old and they don't have any money. Hardly. They can just pay for food and rent, barely.'* (Participant #11)

Select participants (6/12 w/ 9 references) use language/terminology that draws a lack of connections between participants' knowledge of their current retirement package and its relationship to financial security. In this case, participant #11 incorrectly assumes that teachers make so little money that her TSERS pension would be so little ('I don't really think it pays for much, really honestly, unless you're rich') and that they will not be able to afford anything ('They can just pay for food and rent, barely.').

### IIID1 - Specific expressions of concern

Use of specific expressions of concern regarding participants' current retirement package and its relationship to financial security

*'Yeah, I think when I first started teaching, I thought, okay, this is great. Like I've got this retirement plan. I don't have to do anything. It's set up. But then I think as I asked more questions about it, I realized, okay, maybe it's not. It's good to have, but it's not. It can't be the only, I need to be smarter about this. It can't be the only thing that I rely on.'* (Participant #8)

Select participants (2/12 w/ 3 references) use specific expressions of concern regarding participants' current retirement package and its relationship to financial security. This is seen in this quote as participant #8 acknowledges her state plan but has the financial wherewithal to understand that she will need to supplement this plan to maintain her financial needs. ('I think when I first started teaching, I thought, okay, this is great. Like I've got this retirement plan. I don't have to do anything. It's set up. But then I think as I asked more questions about it, I realized, okay, maybe it's not. It's good to have, but it's not. It can't be the only, I need to be smarter about this. It can't be the only thing that I rely on.')

### IIID2 - General expressions of concern

Use of general expressions of concern regarding participants' current retirement package and its relationship to financial security

*'Again, this is the first time in my life I've ever had to even consider the concept of retirement. I mean, everybody knows about it. Everybody wants it. But when you've worked the careers that I have, the financial stability and... Mmm... Security of a set numerical amount, every paycheck has almost made that... Mmm... Uh, inability to do, now that I've had this new career in this set salary, it's, it's something you could focus on a little bit more.'* (Participant #5)

Select participants (5/12 w/ 5 references) use general expressions of concern regarding participants' current retirement package and its

relationship to financial security. In this case, participant #5 repeated use of the word or phrase 'everybody' demonstrates a generalized expression of concern. Furthermore, his ability to generally recognize the benefit of being a salaried employee vs. an hourly one in terms of retirement is evident ('But when you've worked the careers that I have, the financial stability and... Mmm... Security of a set numerical amount, every paycheck has almost made that... Mmm... Uh, inability to do, now that I've had this new career in this set salary, it's, it's something you could focus on a little bit more.')

### IIID3 - Lack of concern

Lack of expressions of concern regarding participants' current retirement package and its relationship to financial security

*'It's 30 years down the road and I've got time to save.'* (Participant #6)

Select participants (4/12 w/ 4 references) demonstrates a lack of expressions of concern regarding participants' current retirement package and its relationship to financial security. In this case, participant #6 is quite honest, direct and to the point when they state, 'It's 30 years down the road and I've got time to save.' Retirement is not a priority or concern in any way, shape or form.

### IVA1 - Significant Degree

Use of language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to a significant degree

*'Um, I would say yes. Um, but I wouldn't say that that was, I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan. Um, whether or not I know all the details about that retirement plan, I know that it's, um, a really solid plan.'* (Participant #12)

A single participant (1/12 w/ 1 reference) used language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to a significant degree. Participant #12 again demonstrates her outlier status referencing that retirement benefits have informed her career decision ('I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan.').

### IVA2 - Partial Degree

Use of language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to a partial degree

*'I think it has, um, because, and I know, I don't know the technical terms, so I know like if you leave the state, different States may have, um, you know, different plans and sometimes you can't transfer that built up money. Um, because I don't know if I'm gonna you know, move States or maybe I'll meet the love of my life. I need to move to South Carolina or something.'* (Participant #7)

*'Yes. Um, it has changed a bit, but um, only when I'm looking at other teachers, especially those that are getting ready to retire and I see that they are really, um, wanting to depend on their benefits when they're finished teaching and, um, I think of it as something that is beneficial to them because, um, they don't really plan on doing anything else afterwards.'* (Participant #11)

Selected participants (9/12 w/ 9 references) use language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to a partial degree. Both participants #7 and #11 reference long term consequences related to the plan. #7 refers to consequences of leaving the state 'I know like if you leave the state, different States may have, um, you know, different plans and sometimes you can't transfer that built up money. Um, because I don't know if I'm gonna you know, move States or maybe I'll meet the love of my life. I need to move to South Carolina or something.' #11 refers to the value that experienced teachers have placed on the benefit 'I'm looking at other teachers, especially those that are getting ready to retire and I see that they are really, um, wanting to depend on their benefits when they're finished teaching and, um, I think of it as something that is beneficial to them'.

### IVA3 - Insignificant Degree

Use of language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to an insignificant degree

*'Okay. Um, I, I, I is remained pretty much the same and that's probably a little to no information on it. Uh, and I think if I were to ever like switch careers, it wouldn't be a factor because I don't ever consider retirement benefits in terms of, you know, why I'm employed somewhere.'* (Participant #4)

Select participants (2/12 w/ 2 references) use language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to an insignificant degree. In this case, participant #4 states that his perception has remained 'pretty much the same and that's probably little to no information on it'. Furthermore, he admits that 'I don't even consider retirement benefits in terms of, you know, why I'm employed somewhere.'

**IVB1a - Provides retirement income**

Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge of retirement benefits providing retirement income informed their career decisions in terms of encouraging joining the profession

*'Just in the sense of like now I am aware that if teachers are committed to teaching and put in the time that it ends up worth it in the end. Um, when it comes to retirement and that a lot of teachers can retire fairly early and comfortably. Um, which definitely has influenced my wanting to remain a teacher.'* (Participant #1)

Select participants (5/12 w/ 6 references) use language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge of retirement benefits providing retirement income informed their career decisions in terms of encouraging joining the profession. In this case, participant #1 maintains in very straightforward fashion, 'I am aware that if teachers are committed to teaching and put in the time that it ends up worth it in the end. Um, when it comes to retirement and that a lot of teachers can retire fairly early and comfortably. Um, which definitely has influenced my wanting to remain a teacher.'

**IVB1b - NC plan is "solid"**

Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge of NC retirement benefits being "solid" informed their career decisions in terms of encouraging joining the profession

*'Um, I would say yes. Um, but I wouldn't say that that was, I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan. Um, whether or not I know all the details about that retirement plan, I know that it's, um, a really solid plan.'* (Participant #12)

A single participant (1/12 w/ 1 reference) uses language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge of NC retirement benefits being "solid" informed their career decisions in terms of encouraging joining the profession. Participant #12 again demonstrates her outlier status referencing that NC retirement benefits are solid and have informed her career decision to join the profession ('I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan.').

**IVB2a - May not transfer to other states**

Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge that retirement benefits may not transfer to other states informed their career decisions in terms of discouraging joining the profession

*'Um, she's the one that, um, ultimately told me about the five years of teaching in North Carolina to be vested in the retirement plan. Um, she also had some kind of retirement plan from another state that also had that requirement of the five years. Um, and then, uh, we were talking about all the documents that you have to fill out when you are retiring and exiting, um, district and just making sure that, um, you know, what benefits that you have and what's provided because she was also retiring and the moving States made sure that she had everything, you know.'* (Participant #12)

A single participant (1/12 w/ 1 reference) uses language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge that retirement benefits may not transfer to other states informed their career decisions in terms of discouraging joining the profession. Participant #12 again demonstrates her outlier status referencing her discussions with her Clinical Educator about to retire and stating 'Um, she also had some kind of retirement plan from another state that also had that requirement of the five years.' & 'she was also retiring and the moving States made sure that she had everything, you know.'

**IVB2b - Other professions may offer better retirement benefits**

Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge that retirement benefits in other professions may offer better retirement benefits informed their career decisions in terms of discouraging joining the profession

*'So it's, there are other companies that I think have more appealing retirement plans and so I think that they, it has, it has factored in a little bit. If I decided to leave teaching, the thought has crossed my mind, Oh well, you know, I could find another job where we're with a company that matches, you know, 6% of my paycheck or whatever.'* (Participant #8)

Select participants (2/12 w/ 3 references) use language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge that retirement benefits in other professions may offer better retirement benefits informed their career decisions in terms of discouraging joining the profession. In this case, participant #8 discusses 'other companies having more appealing retirement plans' and that this 'has factored in a bit'. Were she to decide to leave teaching, she may find a company that matches 6% of my paycheck or whatever'

**VA - Language referencing honesty**

Use of language/terminology that describes knowledge of retirement benefits and that directly references honesty or suggests conscious attention to giving an honest/open response

*'I honestly have zero clue.'* (Participant #1)

*'Honestly, I don't know.'* (Participant #10)

*'I gotta be honest. I don't know.'* (Participant #2)

*'Well, again, to be brutally honest, I don't know without pulling up my, my pay stub.'* (Participant #5)

Select participants (8/12 w/ 21 references) use language/terminology that describes knowledge of retirement benefits and that directly references honesty or suggests conscious attention to giving an honest/open response. In these cases, participants #1,2,5,10 all reference honesty in describing their lack of understanding about some aspect of their retirement plan.

#### VB - Hedging language

Use of language/terminology that describes knowledge of retirement benefits and that is hedging/giving a guarded response

*'Although I think I chose a monetary amount, so I'll go with that.'* (Participant #1)

*'That's as good as I can go cause I have no idea what the word actually means, but that's what I believe.'* (Participant #10)

*'No, I think, I think it's about 10%. Um, if I'm not mistaken. I do remember looking at this with my mom, but it, it's, it was way back then, so I think it's about 10% honestly.'* (Participant #9)

Select participants (11/12 w/ 19 references) use language/terminology that describes knowledge of retirement benefits and that is hedging/giving a guarded response. In this case, participant #1 hedges her uncertainty by saying 'so I'll go with that'. Participant #10 hedges uncertainty about the meaning of a word by stating 'but that's what I believe'. Participant #9 states hedges uncertainty about a program detail by stating that 'he remembered looking at it with his mom, but that was way back then'.

#### VC - Uncertain Language

Use of language/terminology that describes knowledge of retirement benefits and that directly references uncertainty or suggests an uncertain response

*'From my understanding, I think that the teacher can decide how much of their paycheck percentage, right?'* (Participant #1)

*'Once again, sadly so, so sad. I am not sure.'* (Participant #10)

*'Um, vested um, I'm guessing that has to do with, um, the money you put in.'* (Participant #11)

*'Um, I, I think they are. Um, I think it's done by a percentage, uh, post-tax. That will be my guess. I'm not sure.'* (Participant #4)

Select participants (10/12 w/ 35 references) use language/terminology that describes knowledge of retirement benefits and that directly references uncertainty or suggests an uncertain response. In this case, participants 1, 4, 10, 11 all use language in this manner ranging from 'from my understanding', 'I am not sure', 'I'm guessing that has to do with...' and 'that will be my guess, I'm not sure'. Further demonstrating uncertainty is the mechanism of answering a question with another question as participant #1 does when she concludes her statement with 'right?'.

#### VIA1 - Formed Individually

Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed individually

*'I guess I don't know what setting I develop that in. I guess that's just like a personal, personal thing or a personal goal that I have for myself.'* (Participant #4)

*'I didn't at all. I didn't converse with anybody. I didn't even look up the information. I think I just clicked through on the options I was in doing the enrollment paperwork.'* (Participant #4)

A single participant (1/12 w/ 2 references) used language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed individually. In this case acknowledging that it was a 'personal thing or goal for myself' and also when stating 'I didn't converse with anybody. I didn't even look up the information. I think I just clicked through on the options I was in doing the enrollment paperwork.' Number 1/12 here important because it demonstrates little if any independent motivation or ability to pursue the topic in question among the cohort.

#### VIA2a - Formal or Informal Social Interaction

Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either a formal or informal social source / interaction

*'Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me.'* (Participant #1) FORMAL

*'Um, when I sat down with my aunt and she asked about my retirement, the school never informed me. I never, I never asked, but I also never got an explanation during school. So whenever it was a year into teaching, I had been teaching for a year and I sat down with a paycheck and my, um, yeah, with one of my paychecks, with my aunt and she told me.'* (Participant #6) INFORMAL

Select participants (11/12 w/ 18 references) use language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either a formal or informal social source / interaction. In this case, participant #1 refers to it happening 'at school' in a formal setting where a representative would schedule a meeting with them 'one on one usually during planning period'. Participant #6 refers to sitting down 'with my aunt' and that 'the school never informed me'.

#### VIA2b - One-on-One or Large Group Social Interaction

Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either a one-on-one or large group social source / interaction

*'Mmm... One of the representatives came to my classroom. I never, I'm sure at the beginning of the school year they probably get you all together with hopefully HR or someone and they meet together. But I think I missed that.'* (Participant #11) ONE-ON-ONE

*'We had this three day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it.'* (Participant #2) LARGE GROUP

Select participants (11/12 w/ 16 references) use language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either a one-on-one or large group social source / interaction. Participant #11 describes a one-on-one interaction where 'One of the representatives came to my classroom' while participant #2 describes a large group interaction referring to "We had this three day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it."

#### VIA2c - Stranger or Known Mentor Social Interaction

Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either dialogue with a stranger or a known mentor in a social source / interaction

*'Mmm... no, I did not discuss, while the only person that I spoke with about it to what would have been my husband, he did tell me that I didn't know that teachers, um, received retirement.'* (Participant #11) KNOWN

*'Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.'* (Participant #10) UNKNOWN

Select participants (11/12 w/ 18 references) use language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either dialogue with a stranger or a known mentor in a social source / interaction. In this case, participant #11 knows the individual with whom she had the dialogue ('the only person that I spoke with about it to what would have been my husband') while participant #10 does not know the individual with who he had a dialogue ('Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching').

#### VIA3a - Confident in Understanding

Use of language/terminology that directly references or indicates beginning teachers' confidence in their new levels of understanding pertaining to their retirement benefits due to a social source / interaction

*'He was a, um, one of the, I guess he sets up your account and that was it. I saw him twice and he kind of explained everything to me. I was a little confused, but he went over and made it simple. He simplified the process and so it's, if he made it clearer.'* (Participant #11)

Select participants (2/12 w/ 2 references) use language/terminology that directly references or indicates beginning teachers'



confidence in their new levels of understanding pertaining to their retirement benefits due to a social source / interaction. In this case, participant #11 discusses that she saw the supplemental retirement representative 'twice' and that he 'kind of explained everything to me. I was confused, but he went over it and made it simple. He simplified the process and so its, if he made it clearer.' Of note, this is same participant who did not understand her own TSERS pension despite talking about it with her husband, perhaps demonstrating the value of an experienced representative sitting down repetitively to explain it until understood.

#### VIA3b - Not Confident in Understanding

Use of language/terminology that directly references or indicates beginning teachers' lack of confidence in their new levels of understanding pertaining to their retirement benefits due to a social source / interaction

*'Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.'* (Participant #10)

Select participants (7/12 w/ 7 references) use language/terminology that directly references or indicates beginning teachers' lack of confidence in their new levels of understanding pertaining to their retirement benefits due to a social source / interaction. In this case, participant #10 admits that despite a 'sit down meeting' occurring, the representative 'was talking and it was all going over my head'.

#### VIIA1a(1) - Booklets

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as printed material in the form of a booklet(s)

*'Uh, I think when I made that visit, I, I think I'm remembering receiving a booklet. Um, but the booklet I could be thinking of might've just been medical and dental benefits and those kinds of things that may not have been your paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet.'* (Participant #3)

Select participants (5/12 w/ 6 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of a booklet(s). Participant #3 discusses 'remembering receiving a booklet' but realizing it was likely 'medical and dental benefits' with only 'a single sheet of paper with links for the internet' given for retirement. Both appear to have been passive with retirement taking a backseat to medical/dental benefits according to the description of the resources provided.

#### VIIA1a(2) - Information Pages

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as printed material in the form of informational page(s)

*'Um, I did read, he gave me, um, some information he wrote down for me to read and then I did like a little research as much as I could because I really don't like numbers cause they're more boring.'* (Participant #11)

*'Um, you know, I get something in the mail from the company, you know, once a month to just tell me like, this is what is in your retirement fund as of now. Um, you know, and really I, I just, they have offered to talk with me.'* (Participant #1)

Select participants (2/12 w/ 4 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of informational page(s). Participants describe having things written down for them directly ('some information he wrote down for me') or receiving related information via mail (I get something in the mail from the company, you know, once a month). In both cases, offers to discuss or explain further have been proffered. In each case, supplemental retirement plans are involved.

#### VIIA2b(1) - Employee Portal

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an employee portal

*'Um, I do know that like in the intranet that we can log into, um, I have access to view all of my benefits. Um, so I guess technically that was shared with me when I became an employee. Um, but other than that, um, I don't think I've received, I haven't received any like physical information.'* (Participant #12)

*'Um, I would say the most of those resources are on like the employee intranet portal that you have to seek on your own. Um, and then of course they have the individuals that'll come out that you can make an appointment with.'* (Participant #4)

Select participants (4/12 w/ 5 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an employee intranet portal. In each case,

participants discuss awareness of their respective school district's intranet portal and resources therein ('I know like the intranet we can log into' & 'those resources are on like the employee intranet portal'). However, both also express statements indicating that they might want more in terms of support or resources ('other than that, I haven't received any physical information' & 'they have individuals that will come out and make an appointment with you').

#### VIIA2b(2) - Public Websites

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of a public website

*'The only thing that was given to me was that website where I can check my retirement and check benefits healthcare. And all that kind of stuff is kind of located in the same area.'* (Participant #2)

*'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.'* (Participant #4)

Select participants (3/12 w/ 3 references) use language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of a public website. Both participants express awareness of public websites ('the only thing given to me was a website' & 'I think it was a matter of looking at a website if you care about that type of thing'). Each participant also expresses limitations in this regard ('the only thing given to me was a website' & 'I don't think I was really informed') indicating that they may have valued more resources and/or explanation.

#### VIIA2b(3) - App/Digital Platform

Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an app/digital platform

*'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.'* (Participant #11)

(2/12 w/ 3 references) Participant uses language / terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as virtual resource in the form of an app/digital platform. Participant describes being shown 'an online app' to better understand her various aspects of her retirement program. Of note however, this is again referencing a supplemental retirement account and this same participant had little to no knowledge about her state mandated pension worked.

#### VIIIB1 - Demonstrated use of knowledge/tools regarding retirement benefits

Use of language/terminology that directly references or indicates beginning teachers' use of knowledge/tools as a mechanism to save retirement income

*'Um, I know I did get a, it was a big older type thing. Um, going over like the portfolio, it was extremely extensive. Um, cause I'm online portal. I, I check it like once every, probably once every month, um, to look into the portfolio. But that's about it.'* (Participant #10)

*'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.'* (Participant #11)

Select participants (6/12 w/ 11 references) use language/terminology that directly references or indicates beginning teachers' use of knowledge/tools as a mechanism to save retirement income. In this case, participant #10 references 'a big folder' or 'portfolio' received in early stages of employment along with access to 'online portal' that he checks 'once every month or so'. Participant #11 references a session with a supplemental retirement representative who utilized technology tools in the form of using 'a computer or a tablet with an online app' that details how fund is performing and money is allotted.

#### VIIIB2 - No demonstrated use of knowledge/tools regarding retirement benefits

Use of language/terminology that directly references or indicates beginning teachers' inability to use knowledge/tools as a mechanism to save retirement income

*'I would say a few months back we had a health care, um, presenter come in and speak during a staff meeting and we were all able to sign up for one on one times and was able to look at my current health care package and break that down. So that was very beneficial. However, never had that with any type of retirement talk. So yes, I would find that very useful.'* (Participant #5)

Select participants (6/12 w/ 9 references) use language/terminology that directly references or indicates beginning teachers' inability to use knowledge/tools as a mechanism to save retirement income. In this case, participant #5 discusses favorably the opportunity to speak with a health care benefits representative one on one. However, no such opportunity was given in regards to retirement ('However, never had that with any type of retirement talk. So yes, I would find that very useful.'). Of note, this participant never mentions the use of any type of knowledge or tools in regards to retirement, only the absence thereof.

#### VIIC1 - Passive tools / resources

Use of language/terminology that references or indicates beginning teachers' ability to use knowledge/tools of a passive nature to aid in their problem solving pertaining to their retirement plan regardless of whether they ultimately chose to use them for this purpose or not

*'Um, tools and resources. Probably just the, I'm not, I know we got a packet and the packet just explained out a login to the retirement system account. Then I'm sure that there were some like supplemental readings and like things like that.'* (Participant #8)

Select participants (9/12 w/ 10 references) use language/terminology that references or indicates beginning teachers' ability to use knowledge/tools of a passive nature to aid in their problem solving pertaining to their retirement plan regardless of whether they ultimately chose to use them for this purpose or not. In this instance, participant #8 discusses 'receiving a packet that explained out a login to the retirement system account' and then an admission that 'I'm sure that there were some supplemental readings and things like that.'. Effectively saying that any and all knowledge/tools/resources given to her were passive and required independent action.

#### VIIC2 - Personally involved tools/resources

Use of language/terminology that references or indicates beginning teachers' ability to use knowledge/tools of a personally involved nature to aid in their problem solving pertaining to their retirement plan regardless of whether they ultimately chose to use them for this purpose or not

*'When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good. Um, but yeah, I feel, I feel pretty financially secure for the future and I'm glad I'm thinking about that now in my early twenties instead of later.'* (Participant #12)

*'Um, and it wasn't until a couple of, about a month ago, uh, we started getting with that financial planner I mentioned before and then she is working well. She has worked on a package for us, um, in order to have a, either a better retirement or to pay for our children's college.'* (Participant #2)

Select participants (7/12 w/ 10 references) use language/terminology that references or indicates beginning teachers' ability to use knowledge/tools of a personally involved nature to aid in their problem solving pertaining to their retirement plan regardless of whether they ultimately chose to use them for this purpose or not. In this case, participant #12 references personal interaction with an 'AXA representative' (supplemental retirement representative) who came to talk with her, while participant #2 references initial efforts towards working personally with a 'financial planner'.

#### VIIIA1 - Gradualized change over time

Use of language/terminology that directly references or indicates beginning teachers' history and appreciation of their financial literacy (as it relates to their retirement and more broadly) in terms of gradualized change over time

*'Mmm... Yes. I would definitely say it has changed. Um, it's kind of interesting cause I've been putting money in this for three years and I mean it looks, it looks solid. I would say with in comparison to what I could imagine, like my other friends in other fields they're doing. I just think that, yeah, what, you don't get this to this profession for the money, but it's like financial security is extremely important.'* (Participant #10)

Select participants (8/12 w/ 9 references) use language/terminology that directly references or indicates beginning teachers' history and appreciation of their financial literacy (as it relates to their retirement and more broadly) in terms of gradualized change over time. In this case, participant #10 notes that 'it has changed' and expresses that it looks 'solid' especially 'in comparison to what I could imagine, like my friends in other fields are doing'. Participant also notes that 'you don't get into this profession for the money, but it's like financial security is really important'.

#### VIIIA2 - Immediate change (even over course of interview...)

Use of language/terminology that directly references or indicates beginning teachers' history and appreciation of their financial literacy (as it relates to their retirement and more broadly) in terms of more immediate or rapid change

*'Well, even during this interview, I just know that honestly, I need like basic knowledge on like whether this is supplemental or the state, Oh, I need to go back.'* (Participant #10)

*'To be honest, I would say it probably hasn't until we started asking these questions. It's kind of a put it in perspective that I have absolutely no idea how much of a financial amount I'm including in retirement or what is honestly what even is my retirement package.'* (Participant #5)

*'After we've begun to have this dialogue, yes. The, I feel like there's a lot that I don't understand that I probably should be trying to understand knowing that it's money that I've worked for and stuff like that. Just making sure I'm set for once I do retire.'* (Participant #9)

Select participants (3/12 w/ 4 references) use language/terminology that directly references or indicates beginning teachers' history and appreciation of their financial literacy (as it relates to their retirement and more broadly) in terms of more immediate or rapid change. In this case, participant #5, 9, and 10 all communicate an evolution of their appreciation for financial literacy as more immediate and occurring even over the course of the actual interview.

#### VIIIA3 - No change

Use of language/terminology that directly references or indicates beginning teachers' history and appreciation of financial literacy (as it relates to their retirement and more broadly) in terms of no change over time

*'Um, so really I don't want to take any part in it. I have zero interest in like sitting down and talking about my retirement and planning. So I just want to, for someone to tell me what to do and then, you know, every month I know that I'm contributing to it. So that, that is good enough for me.'* (Participant #1)

Select participants (4/12 w/ 6 references) use language/terminology that directly references or indicates beginning teachers' history and appreciation of financial literacy (as it relates to their retirement and more broadly) in terms of no change over time. Participant #1 maintains here and throughout her interview that she has 'zero interest in sitting down and talking about my retirement and planning' and not 'wanting to take any part in it'. Further, 'she just wants for someone to tell me what do do' and that 'would be good enough for me'.

#### VIIIB1 - Financially Literate

Comments suggesting financial literacy resulting from specific, substantive connections between current financial perspectives and past personal experiences

*'Ooh. Um, I would define financial literacy as like understanding how, like, how everything in your finances work. So like what taxes are being taken out and why, um, where your money goes and how it's being used to benefit your, I'm stability and wealth.'* (Participant #12)

Select participants (10/12 w/ 11 references) make comments suggesting financial literacy resulting from specific, substantive connections between current financial perspectives and past personal experiences. In this case, participant #12 discusses the idea of 'how everything in your finances work', 'what taxes are being taken out', 'where your money goes', and 'how it's being used for your benefit'.

#### VIIIB2 - Financially Illiterate

Comments suggesting financial illiteracy resulting from specific, substantive connections between current financial perspectives and past personal experiences

*'Financial literacy. I think I'm, I'm financially illiterate, so I think knowing all of the terms, like the terminology you'd like a 401K and um, I don't know any of that stuff. My husband does. Um, he does our taxes and all that. Like when him and my sister get together and start talking about all these things, I have no idea what they're talking about. So I would say that I am financially illiterate.'* (Participant #11)

Select participants (2/12 w/ 2 references) make comments suggesting financial illiteracy resulting from specific, substantive connections between current financial perspectives and past personal experiences. Participant #11 openly admits to being 'financially illiterate' and 'not knowing any of that stuff'. She notes though 'that her husband does and does all our taxes and all that'. She further notes that when her husband talks with her sister (banker) that 'she has no idea what they're talking about'.

#### VIIIB3 - Financially Curious

Comments suggesting financial curiosity, or a desire to gain additional financial literacy related to their own financial circumstances and planning

*'Yes I have. I tried to see if I could determine where the money for my pension was going/being invested in but I couldn't. I also tried to look up what the benefit to having a 403B is compared to a pension plan or having both.'* (Participant #6)

*'I am still confused about how the money finds it's way to me once I retire. Do i receive it in the form of a paycheck or does it just show up in my bank account. Also What happens to that money if I leave the state to work somewhere else.'* (Participant #6)

Select participants (6/12 w/ 13 references) make comments suggesting financial curiosity, or a desire to gain additional financial literacy related to their own financial circumstances and planning. Participant #6 in this case is particularly curious discussing 'trying to determine where the money for my pension was going' although to no avail as well as 'trying to look up what the benefit of having a 403B is compared to a pension plan or having both'. He goes further and asks questions in regards to 'how money finds its way to me once I retire' and 'do I receive it in the form of a paycheck or does it just show up in my bank account' Additionally wondering, 'what happens to that money if I leave the state to work somewhere else?'

#### VIIIB4 - Financially Not Curious

Comments suggesting a lack of financial curiosity, or a desire to gain additional financial literacy related to their own financial circumstances and planning

*'I haven't really given any extra thought other than the fact that it's probably an issue I don't know much about my retirement plan!'* (Participant #1)

Select participants (4/12 w/ 7 references) made comments suggesting a lack of financial curiosity, or a desire to gain additional financial literacy related to their own financial circumstances and planning. Participant #1 openly admits that she 'has given no thought' to her retirement and acknowledges that this is 'an issue'.

## APPENDIX I: CODING STRUCTURE

### I. What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement Systems (TSERS) operates?

- A) Participant knowledge of TSERS operation
  - 1. Content of knowledge
    - a) IA1a. -- Knowledge of varied retirement plan options
    - b) IA1b. -- Knowledge of paying into TSERS
    - c) IA1c. -- Knowledge of TSERS payouts upon retirement
  - 2. Volume of knowledge
    - a) IA2a. -- Large volume of specific info/examples
    - b) IA2b. -- Small volume of specific info/examples
    - c) IA2c. -- No specific info/examples (generalizations only)
  - 3. Accuracy of knowledge
    - a) IA3a. -- Accurate statements
    - b) IA3b. -- Inaccurate statements
- B) Participant perceptions of knowledge of TSERS operation
  - 1. Volume of knowledge
    - a) IB1a. -- Perception with large volume
    - b) IB1b. -- Perception with small volume
    - c) IB1c. -- None perceived
  - 2. Accuracy of knowledge
    - a) IB2a. -- Perception with accuracy
    - b) IB2b. -- Perception with inaccuracy

### II. How do beginning teachers develop knowledge and understanding of their retirement plan options?

- A) Sources of information
  - 1. People
    - a) IIA1a. -- Representatives
    - b) IIA1b. -- Private financial advisor
    - c) IIA1c. -- Family
    - d) IIA1d. -- Check-ins
  - 2. Documents
    - a) Printed materials
      - (1) IIA2a(1). -- "Booklets"
      - (2) IIA2a(2). -- Information pages
    - b) Virtual resources
      - (1) IIA2b(1). -- Employee portal
      - (2) IIA2b(2). -- Public websites
      - (3) IIA2b(3). -- App/digital platform
- B) Contexts of information-gathering
  - 1. Formal/official
    - a) IIB1a. -- Employer orientations
    - b) IIB1b. -- Sessions with "representatives"
  - 2. Informal/unofficial
    - a) IIB2a. -- Conversations with family
    - b) IIB2b. -- Independent research
- C) Participant perceptions of information-gathering in formal contexts
  - 1. IIC1. -- Quantity of info provided
    - a) IIC1a. -- Too much information
    - b) IIC1b. -- Too little information
  - 2. IIC2. -- Rate of information provided
    - a) IIC2a. -- Too quickly
    - b) IIC2b. -- Not fast enough
  - 3. IIC3. -- Onus on teacher to research/make sense of info
  - 4. IIC4. -- Not enough support in understanding info

- D) Participant misconceptions about information and its sources
  - 1. Misconceptions about information
    - a) IID1a. -- Conflating TSERS & supplemental plans
  - 2. Misconceptions about sources of information
    - a) IID2a. -- Uncertainty about “representatives” employers & functions

### III. What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?

- A) BT Knowledge of Current Retirement Package
  - 1. Content of Knowledge
    - a) IIIA1a. -- Knowledge of which package and what package includes
    - b) IIIA1b. -- Knowledge of which package but not what package includes
    - c) IIIA1c. -- Lack of knowledge of which package
  - 2. Accuracy of Knowledge
    - a) IIIA2a. -- Accurate statements
    - b) IIIA2b. -- Inaccurate statements
- B) Participant Attitudes toward Knowledge of Current Retirement Package
  - 1. Statements suggesting comfort with knowledge level
    - a) IIIB1a. -- Comfort with limited/no knowledge
    - b) IIIB1b. -- Comfort with specific knowledge
  - 2. Statements suggesting discomfort with knowledge level
    - a) IIIB2a. -- Comfort with limited/no knowledge
    - b) IIIB2b. -- Comfort with specific knowledge
- C) Connections between BT Knowledge of Current Retirement Package & Financial Security upon Retirement
  - 1. IIIC1. -- Specific connections
  - 2. IIIC2. -- General connections
  - 3. IIIC3. -- Lack of connections
- D) Participant Attitudes toward Financial Security upon Retirement
  - 1. IIID1. -- Specific expressions of concern
  - 2. IIID2. -- General expressions of concern
  - 3. IIID3. -- Lack of concern

### IV. How does beginning teachers' understanding of their retirement benefits inform their career decisions?

- A) Participant perceptions of degree to which retirement benefits informed career decisions
  - 5. IVA1. -- Significant degree (#12)
  - 6. IVA2. -- Partial degree (#6, 7)
  - 7. IVA3. -- Insignificant degree (#1, 2, 3, 4, 5, 8, 9, 10, 11)
- B) Role of retirement benefits in career decisions
  - 1. Factors that encouraged joining profession
    - a) IVB1a. -- Provides retirement income
    - b) IVB1b. -- NC plan is “solid”
  - 2. Factors that discouraged joining profession
    - a) IVB2a. -- May not transfer to other states
    - b) IVB2b. -- Other professions may offer better retirement benefits

### V. BT Language Used to Describe Knowledge of Retirement Benefits

- A) VA. -- Language referencing honesty
- B) VB. -- Hedging language
- C) VC. -- Uncertain language

### VI. The individual development of learners originates in social sources and subsequent Interactions (Theoretical Framework - Theme #1).

- A) New levels of understanding of retirement benefits
  - 1. VIA1. -- Formed individually
  - 2. Formed via social source / interaction
    - a) VIA2a. -- Formal vs. Informal
    - b) VIA2b. -- One-on-One vs. Large Group
    - c) VIA2c. -- Stranger vs. Known Mentor

3. Levels of Understanding developed through social source / interaction
  - a) VIA3a. -- Confident in Understanding
  - b) VIA3b. -- Not Confident in Understanding

VII. The actions of individual learners are mediated and controlled by semiotic means (Theoretical Framework - Theme #2).

- A) Use of tools to construct new knowledge as it pertains to retirement benefits (*NOTE: These are the same as those found in Section II; therefore, keep listed here but no need to code twice in Nvivo software.*)
  1. Documents
    - a) Printed materials
      - (1) VIIA1a(1). -- "Booklets"
      - (2) VIIA1a(2). -- Information pages
    - b) Virtual resources
      - (1) VIIA1b(1). -- Employee portal
      - (2) VIIA1b(2). -- Public websites
      - (3) VIIA1b(3). -- App/digital platform
  - B) Use new knowledge/tools to inform problem solving as it pertains to retirement benefits
    1. VIIB1. -- Demonstrated use of knowledge/tools regarding retirement benefits
    2. VIIB2. -- No demonstrated use of knowledge/tools regarding retirement benefits
  - C) Passive vs. Personally involved tools/resources
    1. VIIC1. -- Passive tools / resources
    2. VIIC2. -- Personally involved tools/resources

VIII. The two prior themes are best studied through historical and developmental analysis (Theoretical Framework - Theme #3)

- A) Studying the history of their understanding and appreciation of financial literacy (both retirement benefits and more broadly)
  1. VIIIA1. -- Gradualized change over time
  2. VIIIA2. -- Immediate change (even over course of interview...)
  3. VIIIA3. -- No change
- B) Financial Perspectives and Personal Experiences / Connections
  1. VIIB1. -- Financially Literate
  2. VIIB2. -- Financially Illiterate
  3. VIIB3. -- Financially Curious
  4. VIIB4. -- Financial Not Curious



Table of Code Definitions &amp; Examples

RQ1 - What do beginning teachers know about how the North Carolina Teacher and State Employees Retirement System (TSERS) operates?

- A) Participant knowledge of TSERS operation
1. Content Knowledge
  2. Volume of Knowledge
  3. Accuracy of Knowledge
- B) Participant perceptions of knowledge of TSERS operation
1. Volume of Knowledge
  2. Accuracy of Knowledge

Code	Definition	Example
IA1a - Knowledge of varied retirement plan options	Use of language/terminology that directly references criterion contained within or regarding the TSERS or alternative supplemental plans	'So from what I gather from the information that I looked at is that even though we put in 6% and it's matched, it almost seems like this is kind of like social security where it really doesn't matter how much we put in as long as we get through re as long we teach long enough to be retired, then our pension kicks in with some percentage of like the last few years that we worked and we get a percentage of that salary.' (Participant #2)
IA1b - Knowledge of paying in to TSERS	Use of language/terminology that directly references criterion related to the processes and/or amounts paid into TSERS	'I believe that my retirement is taken out pretax and I think it's 6% of my paycheck' (Participant #12)  'I think it's a percentage' (Participant #3)  'I want to say that it's 6% taken out' (Participant #8)
IA1c - Knowledge of TSERS payouts upon retirement	Use of language/terminology that directly references processes, timelines, or amounts paid into TSERS	'I think it's something like they take the average of your monthly paychecks and um, and I think it's something to do with like the last few years of your working, cause I know your paychecks changed every year.' (Participant #7)  'I know that the special number is 30 years. Um, so I know that you have to commit that much in order to get like the best amount of retirement benefits, but that's pretty much all I know.' (Participant #1)
IA2a - Large volume of specific info/examples	Use of language/terminology that directly references or indicates larger, more significant amounts of knowledge pertaining to the TSERS system	'I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.' (Participant #12)  'I don't know how it calculates the retirement income. I do know

		like if you try to retire at 20 years, it only gives you 50%, but then every year after that it goes up 10%. So they want you to be in the system for 30 years. Mmm... And if you retire early, it, uh, impacts your retirement and negatively. Um, but I do know like if you put in your full 30 years, you get 100% of the benefits.' (Participant #12)
IA2b - Small volume of specific info/examples	Use of language/terminology that directly references or indicates smaller, less significant amounts of knowledge pertaining to the TSERS system	'I believe that is when you get your, um, are able to get your pension. That's as good as I can go cause I have no idea what the word actually means, but that's what I believe' (Participant #1)  'Yeah. Um, I, I think they are. Um, I think it's done by a percentage, uh, post-tax. That will be my guess. I'm not sure.' (Participant #4)
IA2c - No specific info/examples (generalizations only)	Use of language/terminology that references or indicates no significant amounts of knowledge pertaining to the TSERS system	'I'll have to say that I don't think there's a lot of information at all to beginning teachers about what their packages. It just kind of automatically happens. There's nothing you can really do to it or change it. And so it just kind of happens without your knowledge.' (Participant #2)  'Yes. Yes. Yeah. Almost like people think it's kind of like investment and I don't know if it's similar to that, so I don't know.' (Participant #11)
IA3a - Accurate Statements	Use of language/terminology that directly references or indicates accurate knowledge pertaining to the TSERS system	'I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.' (Participant #12)  'I know there's formulas in there and it has to do with length of service and they're in your age.' (Participant #2)
IA3b - Inaccurate Statements	Use of language/terminology that directly references or indicates inaccurate knowledge pertaining to the TSERS system	'From my understanding, I think that the teacher can decide how much of their paycheck percentage, right?' (Participant #1)  'No, I think, I think it's about 10%. Um, if I'm not mistaken. I do remember looking at this with my mom, but it, it's, it was way back then, so I think it's about 10% honestly.' (Participant #9)

IB1a - Perception w/ Large Volume	Use of language/terminology that directly references or indicates participant perceptions of having larger, more significant amounts of knowledge pertaining to the TSERS system	'Yeah, I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.' (Participant #12)
IB1b - Perception w/ Small Volume	Use of language/terminology that directly references or indicates participant perceptions of having smaller, less significant amounts of knowledge pertaining to the TSERS system	'I, I know that it's dependent on how long you have been in a teacher in the, uh, I don't think it's district, I think it's in the state that you're in. Um, maybe it is district, I'm not sure. But I know that the special number is 30 years.' (Participant #1)
IB1c - None Perceived	Use of language/terminology that directly references or indicates participant perceptions of having no significant amount of knowledge pertaining to the TSERS system	'I honestly have zero clue.' (Participant #1)  'Honestly, I don't know' (Participant #10)  'I could not tell you that at all' (Participant #5)  'I've heard it before, but I don't really know what it means.' (Participant #9)
IC2a - Perception w/ Accuracy	Use of language/terminology that directly references or indicates participant perceptions of accurate knowledge pertaining to the TSERS system	'Yeah, I know that I am not vested yet, um, because I haven't taught in the state of North Carolina for five years. You have to teach in North Carolina for five years before you invested into the retirement program.' (Participant #12)
IC2b - Perception w/ Inaccuracy	Use of language/terminology that directly references or indicates participant perceptions of inaccurate knowledge pertaining to the TSERS system	'Um, it's and job title, it probably matters as well.' (Participant #4)  'I think you have to sign up.' (Participant #7)

RQ2 - How do beginning teachers develop knowledge and understanding of their retirement plan options?

- A) Sources of information
  - 1. People
  - 2. Documents
    - a) Printed Materials
    - b) Virtual Resources
- B) Contexts of Information-gathering
  - 1. Formal / Official
  - 2. Informal / Unofficial
- C) Participant Perceptions of Information-gathering in Formal Contexts
  - 1. Quantity of Information Provided
  - 2. Rate of Information Provided
  - 3. Onus on Teacher to make Sense of Information Provided
  - 4. Not Enough Support in Understanding Information
- D) Participant Misconceptions about Information and its Sources
  - 1. Misconceptions about Information
  - 2. Misconceptions about Sources of Information

Code	Definition	Example
IIA1a - Representatives	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of representatives	<p>'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests.' (Participant #11)</p> <p>'I did just recently talked to the AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that's the only place that I've gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.' (Participant #12)</p>
IIA1b - Private Financial Advisor	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of private financial advisor(s)	<p>'And as I mentioned before, uh, talking to our financial planner, uh, she asked for more information and so both my wife and I took it upon ourselves to try to find more information. But I would say that information is a scarce.' (Participant #2)</p> <p>'I haven't really taken any steps, but I think eventually I'll meet with like an advisor or something that helps me make better decisions on, you know, options or change my plan to make sure I'm maximizing the benefits available to me.' (Participant #4)</p>
IIA1c - Family	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of family	<p>'Uh, I mean, I would say probably the most I've gotten is just from like talking to people like my dad and my boyfriend who, you know, don't even know my personal retirement plan. But really I've, I have not done really anything. (Participant #1)</p> <p>Yeah! I just, I just asked my husband and everything and he, he liked either banks. You're also, he works for Wells Fargo, so he helps me with all that stuff. I'm not, yeah, numbers are not my thing.' (Participant #11)</p> <p>'Um, no, just like, again, like I said before, um, me and my mom will talk about it every now and then. She wants me to go ahead and get on top of it, uh, making</p>

		sure that, um, I take or I change my percentage, a higher percentage to take more out of my paycheck. Um, but other than that, we've haven't really had any other conversation.' (Participant #9)
IIA1d - Check-ins	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as people in the form of those carrying out check-ins	'Yeah, I get check ins, you know, texts or calls. Um, just to go over things every now and then. Um, as far as like supplemental resources and things that I could kind of look over on my own, Nope. But I do get phone call checking.' (Participant #10)
IIA2a(1) - Booklets	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as printed material in the form of a booklet(s)	'Uh, I think when I made that visit, I, I think I'm remembering receiving a booklet. Um, but the booklet I could be thinking of might've just been medical and dental benefits and those kinds of things that may not have been your paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet.' (Participant #3)
IIA2a(2) - Information Pages	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as printed material in the form of informational page(s)	'Um, I did read, he gave me, um, some information he wrote down for me to read and then I did like a little research as much as I could because I really don't like numbers cause they're more boring.' (Participant #11)  'Um, you know, I get something in the mail from the company, you know, once a month to just tell me like, this is what is in your retirement fund as of now. Um, you know, and really I, I just, they have offered to talk with me.' (Participant #1)
IIA2b(1) - Employee Portal	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an employee portal	'Um, I do know that like in the intranet that we can log into, um, I have access to view all of my benefits. Um, so I guess technically that was shared with me when I became an employee. Um, but other than that, um, I don't think I've received, I haven't received any like physical information.' (Participant #12)  'Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own. Um, and then of course they

		have the individuals that'll come out that you can make an appointment with.' (Participant #4)
IIA2b(2) - Public Websites	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of a public website	'The only thing that was given to me was that website where I can check my retirement and check benefits healthcare. And all that kind of stuff is kind of located in the same area.' (Participant #2)  'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.' (Participant #4)
IIA2b(3) - App/Digital Platform	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an app/digital platform	'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.' (Participant #11)
IIB 1a - Employer Orientations	Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being formal / official and carried out through employer orientations	'We had this three day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it. And from that kind of answers the beginning question, which is I know that we need to go to the CMS web page and then you can click on benefits and then you can kind of see where your money's going per paycheck.' (Participant #2)
IIB 1b - Sessions w/ Representatives	Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being formal / official and carried out through sessions with representatives	'I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really.' (Participant #1)  'I did just recently talked to the

		<p>AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that's the only place that I've gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.'</p> <p>(Participant #12)</p>
IIB2a - Conversations w/ Family	<p>Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being informal / unofficial and carried out through conversations with family</p>	<p>'Uh, I mean, I would say probably the most I've gotten is just from like talking to people like my dad and my boyfriend who, you know, don't even know my personal retirement plan. But really I've, I have not done really anything. (Participant #1)</p> <p>Yeah! I just, I just asked my husband and everything and he, he liked either banks. You're also, he works for Wells Fargo, so he helps me with all that stuff. I'm not, yeah, numbers are not my thing.'</p> <p>(Participant #11)</p> <p>'Um, no, just like, again, like I said before, um, me and my mom will talk about it every now and then. She wants me to go ahead and get on top of it, uh, making sure that, um, I take or I change my percentage, a higher percentage to take more out of my paycheck. Um, but other than that, we've haven't really had any other conversation.'</p> <p>(Participant #9)</p>
IIB2b - Independent Research	<p>Use of language/terminology that directly references or indicates beginning teachers' contexts for information-gathering regarding their retirement plan as being informal / unofficial and carried out through independent research</p>	<p>'Uh, yes, it's been my own self doing my own research and reading.'</p> <p>(Participant #2)</p> <p>'Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own.'</p> <p>(Participant #4)</p> <p>'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.'</p> <p>(Participant #4)</p>
IIC1a - Too much Information	<p>Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including too much information</p>	<p>'Ooh, boy. Um, I would probably say it was during the very brief, very quick, uh, orientation I had sitting in the office where they broken down my licensure, what it, what it was being a lateral entry, um, person. Um, it went over my pay and I'm sure it probably talked about all the other benefits all within a 30</p>

		<p>minute time slot that was literally a 30 minute time slot where they covered everything. You know, they asked the question, do you have any questions? But how do you answer that when you've changed careers and under 24 hours and just been given all this material to process. So that was probably the last time I received any information on that. And that was the, in December of 2018.' (Participant #5)</p>
<p>IIC1b - Too little Information</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including too little information</p>	<p>'Honestly, not nothing. I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really. Cause you know, I'm at my age and this was my first, you know, real job, obviously, like I had zero clue. So I would say really nothing. You know, you weren't given options of companies to work with or really you weren't really told what your retirement would look like and the benefits of that. So I would say very little.' (Participant #1)</p>
<p>IIC2a - Too Quickly</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including information provided too quickly</p>	<p>'Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me. And I think they, they did a good job explaining it. They, I remember they had like a notepad and they kind of drew out, you know, how it works. And I remember understanding it at the time. Of course I forgot it almost immediately.' (Participant #1)</p>
<p>IIC2b - Not Quickly Enough</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as including information not provided fast enough</p>	<p>N/A</p>
<p>IIC3 - Onus on the Teacher to make sense of Information</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' perceptions of information-gathering in formal contexts as placing too much burden on the teacher to gather information</p>	<p>'Uh, yes, it's been my own self doing my own research and reading.' (Participant #2)</p> <p>'Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own.' (Participant #4)</p> <p>'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if</p>



		you care enough about it type of thing.’ (Participant #4)
IIC4 - Not enough Support in Understanding Information	Use of language/terminology that directly references or indicates beginning teachers’ perceptions of information-gathering in formal contexts as not providing enough teacher support	‘Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out. Other than that, no clear understanding.’ (Participant #10)
IID1a - Conflation of TSERS & Supplemental Plans	Use of language/terminology that directly references or indicates beginning teachers’ misconceptions about information and its sources when TESRS is conflated with supplemental retirement plans	‘Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me.’ (Participant #1)  ‘Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.’ (Participant #10)
IID2a - Uncertainty about ‘Representative’ Employer & Functions	Use of language/terminology that directly references or indicates beginning teachers’ misconceptions about information and its sources when teachers are uncertain about representatives’ employers and functions	‘And we had a state representative, um, a representative of the, um, insurance or the retirement plan, sorry. Um, cap came in and kind of threw all of the 401k and all those other options out about us. Um, and she gave us a packet and that was about it.’ (Participant #7)

RQ3 - What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?

- A) Beginning Teacher Knowledge of Current Retirement Package
  - 1. Content Knowledge
  - 2. Accuracy of Knowledge
- B) Participants Attitudes toward Knowledge of Current Retirement Package
  - 1. Statements suggesting comfort with knowledge level
  - 2. Statements suggesting discomfort with knowledge level
- C) Connections Between Beginning Teacher Knowledge of Current Retirement Package and Financial Security upon Retirement
- D) Participant Attitudes towards Financial Security Upon Retirement

Code	Definition	Example
IIIA1a - Knowledge of which package and what package includes	Use of language/terminology that directly references or indicates beginning teachers’ knowledge of their current retirement package in relation to what that package includes	‘Mmm... my state retirement plan will not be my only source of income because my, for my 401k with AXA will also be a source of income. Um, but, uh, I don’t

		<p>know. I've thought about, I know a lot of people work after they retire because of if you can retire in your mid to late fifties, you're still pretty young. And so, um, I thought about maybe doing a like education consulting or something like that after I'm talking about retiring.'</p> <p>(Participant #12)</p>
<p>IIIA1b - Knowledge of which package but not what package includes</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' knowledge of their current retirement package being referenced in the interview but now what the package includes</p>	<p>'The only thing I have done to save for retirement is setting up a 401k and I know that I think I put, so, yeah, I don't even know the number of like, I think I put \$500 out of my paycheck that I, I requested, I don't even want to see it. I just want it to disappear into my retirement fund. So I know it's there. I do that every month. Um, that is essentially all that I do.'</p> <p>(Participant #1)</p>
<p>IIIA1c - Lack of knowledge of which package</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' lack of knowledge of their current retirement package being referenced in the interview</p>	<p>'Well, it, it's stable. It comes every month. Um, he gets, he has, um, health, health care for the whole family, um, dental for the whole family. And I just think it's a nice thing that, um, that you can get after you retire.'</p> <p>(Participant #11)</p> <p>'Right, exactly. So we have retirement built from my former career and Dan's current career and then his life in the Navy. So, so this one does, does not figure in, um, just by the nature of me coming to it. Totally.'</p> <p>(Participant #3)</p>
<p>IIIA2a - Accurate statements</p>	<p>Use of language/terminology that directly references or indicates beginning teachers' accurate knowledge of their current retirement package</p>	<p>'Um, I feel like, uh, I feel like my participation, I feel like I feel very secure about my financial wellbeing. Um, I do know, um, like I'm not vested yet. Um, so as a beginning teacher, that's a little worrisome, but I know that I'll be in North Carolina for at least five years. Um, so I'll be vested after that. And so, yeah, I feel like, uh, as a beginning teacher, I realized the importance of saving for retirement. When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good. Um, but yeah, I feel, I feel pretty financially secure for the future and I'm glad I'm thinking about that now in my early twenties instead of later.'</p> <p>(Participant #12)</p>
<p>IIIA2b - Inaccurate statements</p>	<p>Use of language/terminology that directly references or indicates beginning teachers'</p>	<p>'It is... it's mandated. Um, so everyone, it's not mandated, but</p>

	inaccurate knowledge of their current retirement package	you start off, every teacher is put on a pension plan. That is the pension plan for the, maybe it's the state. I thought it was. Um, but you can change it. You can, um, change it to a fourth would be, you just have to apply for that.' (Participant #6)  'Retirement age is around eighty.' (Participant #10)
IIIB1a - Comfort with limited/no knowledge	Use of language/terminology that expresses participant comfort level with limited or no knowledge of their current retirement package	'Um, I think for me, I just want to know that I have something set up and it's kind of doing what I'm supposed to do for me. Um, so really I don't want to take any part in it. I have zero interest in like sitting down and talking about my retirement and planning. So I just want to, for someone to tell me what to do and then, you know, every month I know that I'm contributing to it. So that, that is good enough for me. I mean, of course I, I would want to be doing that and not doing nothing, but that's the extent that I care about.' (Participant #1)
IIIB1b - Comfort with specific knowledge	Use of language/terminology that expresses participant comfort level with specific knowledge of their current retirement package	'Um, I would say that I have been, lots of people have told us, I guess the people who have come from, well just speaking with other teachers, but also the people who have come to talk about these supplemental plans have made it pretty clear that you cannot rely on just the, just the state plan. Um, it's not going to be enough to carry you through retirement. And it seems like they make changes to it a lot. And then of course the state, the insurance health insurance plan seems like it's going through a lot of changes. So it just seems like a lot of people have said, yeah, you need to have something else because this 6% or whatever it is, is not going to be, cannot be your only retirement option.' (Participant #8)
IIIB2a - Discomfort with limited/no knowledge	Use of language/terminology that expresses participant discomfort level with limited or no knowledge of their current retirement package	'As of now, yes. Um, but I think in the future I don't, honestly, I don't know if I'm supposed to have some other form of income or some other way that I'm saving for retirement, but as of now, that is my soul, my soul way of saving for retirement.' (Participant #1)
IIIB2b - Discomfort with specific knowledge	Use of language/terminology that expresses participant discomfort level with specific knowledge of their current retirement package	'I would, I, cause like I said, like I don't even know where to look or if there is even somewhere for me to look, um, at my state

		benefits or retirement. Like, I don't know if there's a way to like see how much money I've put into it or anything like that. Um, but I do know, like if I log into my AXA account, I can see all of that information right in there.' (Participant #12)
IIIC1 - Specific connections	Use of language/terminology that draws specific connections between participants' knowledge of their current retirement package and its relationship to financial security	'Yeah, I think when I first started teaching, I thought, okay, this is great. Like I've got this retirement plan. I don't have to do anything. It's set up. But then I think as I asked more questions about it, I realized, okay, maybe it's not. It's good to have, but it's not. It can't be the only, I need to be smarter about this. It can't be the only thing that I rely on.' (Participant #8)
IIIC2 - General connections	Use of language/terminology that draws general connections between participants' knowledge of their current retirement package and its relationship to financial security	'Yeah, I think it's, it's comforting to know that I have something going now as, as opposed to before when I started teaching, I didn't have anything work. That kind of gives me a little bit of sense of security that as long as I work 25 years, you know, mandated to access my full retirement package and I'm going to be a lot better off than I was before I started before I started teaching. So it gives me a little bit of comfort.' (Participant #2)
IIIC3 - Lack of connections	Use of language/terminology that draws a lack of connections between participants' knowledge of their current retirement package and its relationship to financial security	'So I'm thinking it will help pay for your rent and food. I don't really think it pays for much, really honestly, unless you're rich. Um, and I got these ideas from people that I've seen who have saved for their retirement. And I mean they were making decent money when they were young and now let's see them 80 years old and they don't have any money. Hardly. They can just pay for food and rent, barely.' (Participant #11)
IIID1 - Specific expressions of concern	Use of specific expressions of concern regarding participants' current retirement package and its relationship to financial security	'Yeah, I think when I first started teaching, I thought, okay, this is great. Like I've got this retirement plan. I don't have to do anything. It's set up. But then I think as I asked more questions about it, I realized, okay, maybe it's not. It's good to have, but it's not. It can't be the only, I need to be smarter about this. It can't be the only thing that I rely on.' (Participant #8)
IIID2 - General expressions of concern	Use of general expressions of concern regarding participants' current retirement package and its relationship to financial	'Again, this is the first time in my life I've ever had to even consider the concept of retirement. I mean,

	security	everybody knows about it. Everybody wants it. But when you've worked the careers that I have, the financial stability and... Mmm... Security of a set numerical amount, every paycheck has almost made that... Mmm... Uh, inability to do, now that I've had this new career in this set salary, it's, it's something you could focus on a little bit more.' (Participant #5)
IIID3 - Lack of concern	Lack of expressions of concern regarding participants' current retirement package and its relationship to financial security	'It's 30 years down the road and I've got time to save.' (Participant #6)

RQ4 - How does beginning teachers' understanding of their retirement benefits inform their career Decisions?

- A) Participant perceptions of degree to which retirement benefits informed career decisions
- B) Role of retirement benefits in career decisions
  - 1. Factors that encouraged joining the profession
  - 2. Factors that discouraged joining the profession

Code	Definition	Example
IVA1 - Significant Degree	Use of language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to a significant degree	'Um, I would say yes. Um, but I wouldn't say that that was, I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan. Um, whether or not I know all the details about that retirement plan, I know that it's, um, a really solid plan.' (Participant #12)
IVA2 - Partial Degree	Use of language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to a partial degree	'I think it has, um, because, and I know, I don't know the technical terms, so I know like if you leave the state, different States may have, um, you know, different plans and sometimes you can't transfer that built up money. Um, because I don't know if I'm gonna you know, move States or maybe I'll meet the love of my life. I need to move to South Carolina or something.' (Participant #7)  'Yes. Um, it has changed a bit, but um, only when I'm looking at other teachers, especially those that are getting ready to retire and I see that they are really, um, wanting to depend on their benefits when they're finished teaching and, um, I think of it as something that is beneficial to them because, um, they don't really plan on doing anything else afterwards.' (Participant #11)

IV A3 - Insignificant Degree	Use of language/terminology that directly references or indicates beginning teachers' perceptions that retirement benefits have informed their career decisions to an insignificant degree	'Okay. Um, I, I, I, I is remained pretty much the same and that's probably a little to no information on it. Uh, and I think if I were to ever like switch careers, it wouldn't be a factor because I don't ever consider retirement benefits in terms of, you know, why I'm employed somewhere.' (Participant #4)
IV B1a - Provides retirement income	Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge of retirement benefits providing retirement income informed their career decisions in terms of encouraging joining the profession	'Just in the sense of like now I am aware that if teachers are committed to teaching and put in the time that it ends up worth it in the end. Um, when it comes to retirement and that a lot of teachers can retire fairly early and comfortably. Um, which definitely has influenced my wanting to remain a teacher.' (Participant #1)
IV B1b - NC plan is "solid"	Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge of NC retirement benefits being "solid" informed their career decisions in terms of encouraging joining the profession	'Um, I would say yes. Um, but I wouldn't say that that was, I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan. Um, whether or not I know all the details about that retirement plan, I know that it's, um, a really solid plan.. (Participant #12)
IV B2a - May not transfer to other states	Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge that retirement benefits may not transfer to other states informed their career decisions in terms of discouraging joining the profession	'Um, she's the one that, um, ultimately told me about the five years of teaching in North Carolina to be vested in the retirement plan. Um, she also had some kind of retirement plan from another state that also had that requirement of the five years. Um, and then, uh, we were talking about all the documents that you have to fill out when you are retiring and exiting, um, district and just making sure that, um, you know, what benefits that you have and what's provided because she was also retiring and the moving States made sure that she had everything, you know.' (Participant #12)
IV B2b - Other professions may offer better retirement benefits	Use of language/terminology that directly references or indicates beginning teachers' perceptions of the way in which knowledge that retirement benefits in other professions may offer better retirement benefits informed their career decisions in terms of discouraging joining the profession	'So it's, there are other companies that I think have more appealing retirement plans and so I think that they, it has, it has factored in a little bit. If I decided to leave teaching, the thought has crossed my mind. Oh well, you know, I could find another job where we're with a company that matches, you know, 6% of my paycheck or whatever.' (Participant #8)

## Beginning Teacher Language Used to Describe Knowledge of Retirement Benefits

Code	Definition	Example
VA - Language referencing honesty	Use of language/terminology that describes knowledge of retirement benefits and that directly references honesty or suggests conscious attention to giving an honest/open response	<p>'I honestly have zero clue.' (Participant #1)</p> <p>'Honestly, I don't know.' (Participant #10)</p> <p>'I gotta be honest. I don't know.' (Participant #2)</p> <p>'Well, again, to be brutally honest, I don't know without pulling up my, my pay stub.' (Participant #5)</p>
VB - Hedging language	Use of language/terminology that describes knowledge of retirement benefits and that is hedging/giving a guarded response	<p>'Although I think I chose a monetary amount, so I'll go with that.' (Participant #1)</p> <p>'That's as good as I can go cause I have no idea what the word actually means, but that's what I believe.' (Participant #10)</p> <p>'No, I think, I think it's about 10%. Um, if I'm not mistaken. I do remember looking at this with my mom, but it, it's, it was way back then, so I think it's about 10% honestly.' (Participant #9)</p>
VC - Uncertain Language	Use of language/terminology that describes knowledge of retirement benefits and that directly references uncertainty or suggests an uncertain response	<p>'From my understanding, I think that the teacher can decide how much of their paycheck percentage, right?' (Participant #1)</p> <p>'Once again, sadly so, so sad. I am not sure.' (Participant #10)</p> <p>'Um, vested um, I'm guessing that has to do with, um, the money you put in.' (Participant #11)</p> <p>'Um, I, I think they are. Um, I think it's done by a percentage, uh, post-tax. That will be my guess. I'm not sure.' (Participant #4)</p>

TF1 - The individual development of learners originates in social sources and subsequent Interactions (Theoretical Framework - Theme #1).

A) New levels of understanding of retirement benefits

1. Formed Individually
2. Formed via social source / interaction
3. Levels of Understanding developed through social source / interaction

Code	Definition	Example
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VIA1 - Formed Individually	Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed individually	<p>'I guess I don't know what setting I develop that in. I guess that's just like a personal, personal thing or a personal goal that I have for myself.' (Participant #4)</p> <p>'I didn't at all. I didn't converse with anybody. I didn't even look up the information. I think I just clicked through on the options I was in doing the enrollment paperwork.' (Participant #4)</p>
VIA2a - Formal or Informal Social Interaction	Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either a formal or informal social source / interaction	<p>'Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me.' (Participant #1) FORMAL</p> <p>'Um, when I sat down with my aunt and she asked about my retirement, the school never informed me. I never, I never asked, but I also never got an explanation during school. So whenever it was a year into teaching, I had been teaching for a year and I sat down with a paycheck and my, um, yeah, with one of my paychecks, with my aunt and she told me.' (Participant #6) INFORMAL</p>
VIA2b - One-on-One or Large Group Social Interaction	Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either a one-on-one or large group social source / interaction	<p>'Mmm... One of the representatives came to my classroom. I never, I'm sure at the beginning of the school year they probably get you all together with hopefully HR or someone and they meet together. But I think I missed that.' (Participant #11) ONE-ON-ONE</p> <p>'We had this three day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it.' (Participant #2) LARGE GROUP</p>
VIA2c - Stranger or Known Mentor Social Interaction	Use of language/terminology that directly references or indicates beginning teachers' new levels of understanding pertaining to their retirement benefits as being formed through either dialogue with a stranger or a known mentor in a social source / interaction	<p>'Mmm... no, I did not discuss, while the only person that I spoke with about it to what would have been my husband, he did tell me that I didn't know that teachers, um, received retirement.' (Participant #11) KNOWN</p> <p>'Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down</p>



		meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.' (Participant #10) UNKNOWN
VIA3a - Confident in Understanding	Use of language/terminology that directly references or indicates beginning teachers' confidence in their new levels of understanding pertaining to their retirement benefits due to a social source / interaction	'He was a, um, one of the, I guess he sets up your account and that was it. I saw him twice and he kind of explained everything to me. I was a little confused, but he went over and made it simple. He simplified the process and so it's, if he made it clearer.' (Participant #11)
VIA3b - Not Confident in Understanding	Use of language/terminology that directly references or indicates beginning teachers' lack of confidence in their new levels of understanding pertaining to their retirement benefits due to a social source / interaction	'Um, we had a sit-down meeting quite honestly. I like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out.' (Participant #10)

TF2 - The actions of individual learners are mediated and controlled by semiotic means (Theoretical Framework - Theme #2).

- A) Use of tools to construct new knowledge as it pertains to retirement benefits (NOTE: These are the same as those found in Section II; therefore, keep listed here but no need to code twice in Nvivo software)
1. Documents
    - a) Printed Materials
    - b) Virtual Resources
  2. Use of new knowledge / tools to inform problem solving as it pertains to retirement Benefit
  3. Passive vs. Personally involved tools/resources

Code	Definition	Example
VIIA1a(1) - Booklets	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as printed material in the form of a booklet(s)	'Uh, I think when I made that visit, I, I think I'm remembering receiving a booklet. Um, but the booklet I could be thinking of might've just been medical and dental benefits and those kinds of things that may not have been your paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet.' (Participant #3)
VIIA1a(2) - Information Pages	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as printed material in the form of an informational page(s)	'Um, I did read, he gave me, um, some information he wrote down for me to read and then I did like a little research as much as I could because I really don't like numbers cause they're more boring.' (Participant #11)

		<i>'Um, you know, I get something in the mail from the company, you know, once a month to just tell me like, this is what is in your retirement fund as of now. Um, you know, and really I, I just, they have offered to talk with me.'</i> (Participant #1)
VIIA2b(1) - Employee Portal	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an employee portal	<i>'Um, I do know that like in the intranet that we can log into, um, I have access to view all of my benefits. Um, so I guess technically that was shared with me when I became an employee. Um, but other than that, um, I don't think I've received, I haven't received any like physical information.'</i> (Participant #12)  <i>'Um, I would say the most of those resources are on like the employee intranet portal that you have to seek on your own. Um, and then of course they have the individuals that'll come out that you can make an appointment with.'</i> (Participant #4)
VIIA2b(2) - Public Websites	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of a public website	<i>'The only thing that was given to me was that website where I can check my retirement and check benefits healthcare. And all that kind of stuff is kind of located in the same area.'</i> (Participant #2)  <i>'Um, I don't think, I wasn't, I, I think the, I don't think I was really informed. I think it was a matter of looking at a website if you care enough about it type of thing.'</i> (Participant #4)
VIIA2b(3) - App/Digital Platform	Use of language/terminology that directly references or indicates beginning teachers' sources of information pertaining to their retirement plan as a virtual resource in the form of an app/digital platform	<i>'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.'</i> (Participant #11)
VIIB1 - Demonstrated use of knowledge/tools regarding retirement benefits	Use of language/terminology that directly references or indicates beginning teachers' use of knowledge/tools as a mechanism to	<i>'Uum, I know I did get a, it was a big older type thing. Um, going over like the portfolio, it was</i>

	save retirement income	<p>extremely extensive. Um, cause I'm online portal. I, I check it like once every, probably once every month, um, to look into the portfolio. But that's about it.' (Participant #10)</p> <p>'Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.' (Participant #11)</p>
VIIB2 - No demonstrated use of knowledge/tools regarding retirement benefits	Use of language/terminology that directly references or indicates beginning teachers' inability to use knowledge/tools as a mechanism to save retirement income	'I would say a few months back we had a health care, um, presenter come in and speak during a staff meeting and we were all able to sign up for one on one times and was able to look at my current health care package and break that down. So that was very beneficial. However, never had that with any type of retirement talk. So yes, I would find that very useful.' (Participant #5)
VIIC1 - Passive tools / resources	Use of language/terminology that references or indicates beginning teachers' ability to use knowledge/tools of a passive nature to aid in their problem solving pertaining to their retirement plan regardless of whether they ultimately chose to use them for this purpose or not	'Um, tools and resources. Probably just the, I'm not, I know we got a packet and the packet just explained out a login to the retirement system account. Then I'm sure that there were some like supplemental readings and like things like that.' (Participant #8)
VIIC2 - Personally involved tools/resources	Use of language/terminology that references or indicates beginning teachers' ability to use knowledge/tools of a personally involved nature to aid in their problem solving pertaining to their retirement plan regardless of whether they ultimately chose to use them for this purpose or not	<p>'When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good. Um, but yeah, I feel, I feel pretty financially secure for the future and I'm glad I'm thinking about that now in my early twenties instead of later.' (Participant #12)</p> <p>'Um, and it wasn't until a couple of, about a month ago, uh, we started getting with that financial planner I mentioned before and then she is working well. She has</p>

		worked on a package for us, um, in order to have a, either a better retirement or to pay for our children's college.' (Participant #2)
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TF3 - The two prior themes are best studied through historical and developmental analysis (Theoretical Framework - Theme #3)

- A) Studying the history of their understanding and appreciation of financial literacy (both retirement benefits and more broadly)
- B) Financial Perspectives and Personal Experiences / Connections

Code	Definition	Example
VIIIA1 - Gradualized change over time	Use of language/terminology that directly references or indicates beginning teachers' history and appreciation of their financial literacy (as it relates to their retirement and more broadly) in terms of gradualized change over time	'Mmm... Yes. I would definitely say it has changed. Um, it's kind of interesting cause I've been putting money in this for three years and I mean it looks, it looks solid. I would say with in comparison to what I could imagine, like my other friends in other fields they're doing. I just think that, yeah, what, you don't get this to this profession for the money, but it's like financial security is extremely important.' (Participant #10)
VIIIA2 - Immediate change (even over course of interview...)	Use of language/terminology that directly references or indicates beginning teachers' history and appreciation of their financial literacy (as it relates to their retirement and more broadly) in terms of more immediate or rapid change	'Well, even during this interview, I just know that honestly, I need like basic knowledge on like whether this is supplemental or the state, Oh, I need to go back.' (Participant #10)  'To be honest, I would say it probably hasn't until we started asking these questions. It's kind of a put it in perspective that I have absolutely no idea how much of a financial amount I'm including in retirement or what is honestly what even is my retirement package.' (Participant #5)  'After we've begun to have this dialogue, yes. The, I feel like there's a lot that I don't understand that I probably should be trying to understand knowing that it's money that I've worked for and stuff like that. Just making sure I'm set for once I do retire.' (Participant #9)
VIIIA3 - No change	Use of language/terminology that directly references or indicates beginning teachers' history and appreciation of financial literacy (as it relates to their retirement and more broadly) in terms of no change over time	'Um, so really I don't want to take any part in it. I have zero interest in like sitting down and talking about my retirement and planning. So I just want to, for someone to tell me what to do and then, you know, every month I know that I'm contributing to it. So that, that is good enough for

		me.' (Participant #1)
VIIIB1 - Financially Literate	Comments suggesting financial literacy resulting from specific, substantive connections between current financial perspectives and past personal experiences	'Ooh. Um, I would define financial literacy as like understanding how, like, how everything in your finances work. So like what taxes are being taken out and why, um, where your money goes and how it's being used to benefit your, I'm stability and wealth.' (Participant #12)
VIIIB2 - Financially Illiterate	Comments suggesting financial illiteracy resulting from specific, substantive connections between current financial perspectives and past personal experiences	'Financial literacy. I think I'm, I'm financially illiterate, so I think knowing all of the terms, like the terminology you'd like a 401K and um, I don't know any of that stuff. My husband does. Um, he does our taxes and all that. Like when him and my sister get together and start talking about all these things, I have no idea what they're talking about. So I would say that I am financially illiterate.' (Participant #11)
VIIIB3 - Financially Curious	Comments suggesting financial curiosity, or a desire to gain additional financial literacy related to their own financial circumstances and planning	'Yes I have. I tried to see if I could determine where the money for my pension was going/being invested in but I couldn't. I also tried to look up what the benefit to having a 403B is compared to a pension plan or having both.' (Participant #6)  'I am still confused about how the money finds it's way to me once I retire. Do i receive it in the form of a paycheck or does it just show up in my bank account. Also What happens to that money if I leave the state to work somewhere else.' (Participant #6)
VIIIB4 - Financially Not Curious	Comments suggesting a lack of financial curiosity, or a desire to gain additional financial literacy related to their own financial circumstances and planning	'I haven't really given any extra thought other than the fact that it's probably an issue I don't know much about my retirement plan!' (Participant #1)

## APPENDIX J: RESEARCH QUESTION 1 MEMO

RQ1 Memo

RQ1 - What do beginning teachers know about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates?

Part 1A – Representative Quotes Addressing the Research Question (1 per participant)

1. *I honestly have zero clue.*
2. *I gotta be honest. I don't know. I can, I can share, um, a short story, uh, because we've actually been dealing with this, which is why I thought it was interesting that you, uh, asked me to partake in this once I found out what you were studying and what you were researching is that we actually just talked to a financial planner and they asked us about our retirement. And neither my wife nor I and my wife's been teaching for 14 years. Neither one of us could tell her if we had a 401k or a pension and we went researching for it and we still couldn't find the information and we had our financial planner research it and we still couldn't find the information. And what we could gather from all three of us putting our heads together is that we have a pension. That's about all we know.*
3. *Um, wow. Okay. I've feel like I'm going to have a lot of these wrong. Um, I believe I wanna say it's in the, the, um, I want to say it's in the range of 6% 7% deduction every month. Um, I want to say that those are pre tax deductions.*
4. *Yeah. Um, I, I think they are. Um, I think it's done by a percentage, uh, post-tax. That will be my guess. I'm not sure.*
5. *Well, again, to be brutally honest, I don't know without pulling up my, my pay stub. I could not tell you that at all.*
6. *It's, um, I have that written down somewhere. It's your, how much you got paid your, they take the year that you were getting paid the most and then they, um, give you a percentage of that once you retire. Is that right?*
7. *I don't know where the money comes from. I do think I learned in Beginning Teacher training that it's a percentage of your check. Maybe 10%?*
8. *I just feel like the people who have come to our school have only been sales and they are looking for, you know, us to do something extra. So there's not really been anyone I felt like was from direct from the County that was just going to explain it or maybe had opportunities that I missed where I could go and ask them. But I think I have emailed once or twice, somebody in the HR and asked questions and they were just, they just gave me another email to, you know, go to.*
9. *I don't know anything about that. I think, I think it's about 10%. Um, if I'm not mistaken. I do remember looking at this with my mom, but it, it's, it was way back then, so I think it's about 10% honestly.*
10. *Honestly, I don't know. No clue. No clue.*
11. *I don't know.*
12. *Um, I believe that my retirement is taken out pretax and I think it's 6% of my paycheck. I think. I'm not sure. Um, and I am not entirely sure how the retirement is funded. Um, I have a feeling in the state of North Carolina that it's has something to do with the education lottery. Um, just because that I do know that they supplement some of the education budget with the lottery. Um, but I don't know if it's federally funded. I don't know if it's state funded.*

### Part 1B - Quote Categorization

Quotes appear to form two separate categories. The first category involves those who know so little about their involvement in the TSERS system that they are unable to even venture a guess. They are direct and simply say that they do not know. The second category involves those who know it exists and that they participate in it as beginning teachers, but they are unable to provide any sort of consistent accurate information regarding this participation without also expressing doubt and uncertainty. The three outliers in the cohort responses (#2, #8 & #12) were easily the most holistically informed in terms of financial literacy demonstrated over the course of their interviews, but they too expressed doubt and uncertainty. The categories share in common either the complete lack of understanding or very low-level understanding characterized by doubt and uncertainty demonstrated in their responses. Patterns visible within the largest group lacking understanding are quicker, more terse answers with the intent of answering the question so they can move on to the next question as quickly as possible without having to address the topic further. In short, avoidance through brevity. The outliers have a stronger foundational base in terms of financial literacy and were willing to explore the question in more detail and share connective stories. What's special about the outliers is that they can expound upon a process that they have gone through to learn (demonstrating an interest to do so), that they have the ability to connect financial aspects of their benefits (TSERS vs supplemental plans), and that they have a basic level of understanding that educational funding comes from state vs. federal coffers, but do not have the ability to differentiate or specify.

### Part 2 – Connections to Literature

The data that was gleaned from my participants in terms of RQ1 aligns with what the literature had to say and largely confirms the 'conversation' that scholars are having on the topic. It aligned in that the overwhelming majority lacked understanding or certainty in terms of the DB retirement plan and that this understanding spanned age, gender, race/ethnicity, etc. Responses supported the need for further financial literacy instruction to both understand their own benefits as well as teach the content eventually (NOTE: impending implementation within NC of a personal financial literacy class that all of the Soc Studies teachers could have to teach). Uniquely when compared with STUDY A (see below) none of the teachers appeared to be driven by the retirement plan as a primary driver, which contrasted with that study. This will also be addressed in a later research question.

- Pension and retirement programs often ignored (DeArmond & Goldhaber, 2010)
- Pensions comprise 6% or more of typical teacher's annual salary (Allgretto et al., 2008)
- Can provide up to 60% or more of salary replacement for retired teachers (Mitchell et al., 2001)
- Ability (or inability) to define financial literacy (Lusardi & Mitchell, 2013)
- Description of first years teaching as centering on simple survival (Woods & Earls, 1995)

- With the exception of annualized salary, little known as to what financially entices teachers (Kimball et al., 2005)
- Scant research exists as to teachers understanding of their defined benefit retirement plans (Kimball et al., 2005), thus providing the opportunity to ‘fill a gap’ with this study
- In order for plans to play a more active role, participants must have a working knowledge of them (Kimball et al., 2005)
- 50% did not know if they were in a DB or DC plan, of those in DB plan 50% could not identify their own eligible retirement date, 80% did not know how much early retirement would reduce their benefit, 40% with DB shortchanged themselves \$20,000 or more when estimating benefit (Gustman & Steinmeier, 2002)
- Additional research needed to see if this benefit is indeed what teachers desire and if districts can respond to this with further training to promote awareness and understanding (Kimball et al., 2005). Again, herein lies a gap in research and an opportunity for this work.
- Removal of barriers to understanding imperative for benefit to matter and role of districts/state in this process must be more involved (Kimball et al., 2005)
- Evolution of financial literacy needs to be more holistic vs. isolated on single principle (Davies, 2015)
- How financial education has historically occurred (Vitt et al., 2005)
- How financial education should occur to yield better results (Way, 2014)
- Financial literacy impacts young and old (Lusardi & Mitchell, 2013)
- Financial literacy impact in males and females with females experiencing higher degree (Lusardi et al., 2010; Lusardi & Mitchell, 2017; Lusardi & Tafano, 2015; Lusardi & Tafano, 2009)
- Financial literacy impact in whites and minorities with minorities experiencing higher degree (Lusardi & Mitchell, 2007a; Lusardi & Mitchell, 2007b; Lusardi & Mitchell, 2011a)
- Financial literacy impact courtesy of parental education level (Mahdavi & Horton, 2012)
- Methods to better teach women financial literacy (Jarecke et al., 2014) (Merriam et al., 2007) (Hira & Loibl, 2008) (English, 2014) (Thaler & Sunstein, 2010)
- 87% prefer to learn financial literacy from talking with another informed on the topic while 75% prefer to learn (Hira & Loibl, 2008)
- 80% prefer to learn financial literacy from independently driven methods (Livingstone, 2001)
- STUDY A- where health benefits and retirement primary drivers beyond annual salary and career advancement when choosing education (Sapolsky, 2000). So why is this not transferring to beginning teachers?
- STUDY B- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers



recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)

- STUDY C- conducted to show financial counseling within education necessary to increase knowledge base and decision making capability (Hensley et al., 2017)
- STUDY D-conducted showing teachers need more practice to learn financial literacy to not only teach it but to how to implement into their curriculum (Sawatzki & Sullivan, 2017)

### Part 3 – TENTATIVE Answer to Research Question

Beginning teachers have little to no understanding of how the North Carolina Teacher & State Employees Retirement System (TSERS) operates and what they do know is shrouded in doubt and uncertainty.

### Part 4 – Ongoing Interrogation Process

- 1) Why are so many of the responses from those with no understanding so quick and so curt?
- 2) Why are they uniquely positioned in a manner that so many in their first professional career-type position have little to no working knowledge of their retirement benefit? How does this connect with how they define (or fail to define) financial literacy?
- 3) Why are so many of the responses from those with some understanding still surrounded by uncertainty and doubt?
- 4) What is keeping these beginning teachers from learning about this significant benefit?
- 5) How are those able to better answer the question able to do so? What or who has prepared them this way?
- 6) How does this lack of understanding impact the short and long-term consequences of this for these beginning teachers as they look to continue their career as educators? What do they express they need to become more knowledgeable?
- 7) Why is an employment benefit of such significant financial importance so completely unknown and/or grossly misunderstood?

### Part 5 – Post Coding Reflections

Initial research indicates that beginning teachers know very little about how the North Carolina Teacher & State Employees Retirement System (TSERS) operates, and what they do know and are able to articulate is characterized by inaccuracy, uncertainty, and routinely conflated with optional supplemental retirement plan options. Outliers in this data exist though, and these participants were differentiated by some form of shared personal experience (family member or professional mentor) who communicated aspects of the plan to them.

Part 6 – Post Coding Reflections & Connections to Literature Review

- STUDY A- where health benefits and retirement primary drivers beyond annual salary and career advancement when choosing education (Sapolsky, 2000). *So why is this not transferring to beginning teachers?*
- STUDY B- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)
- STUDY C- conducted to show financial counseling within education necessary to increase knowledge base and decision-making capability (Hensley et al., 2017)
- STUDY D-conducted showing teachers need more practice to learn financial literacy to not only teach it but to how to implement into their curriculum (Sawatzki & Sullivan, 2017)

## APPENDIX K: RESEARCH QUESTION 2 MEMO

RQ2 Memo

RQ2 - How do beginning teachers develop knowledge and understanding of their retirement plan options?

Part 1A – Representative Quotes Addressing the Research Question (1 per participant)

13. *Honestly, not nothing. I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really. Cause you know, I'm at my age and this was my first, you know, real job, obviously, like I had zero clue. So I would say really nothing. You know, you weren't given options of companies to work with or really you weren't really told what your retirement would look like and the benefits of that. So I would say very little.*
14. *Um, so I believe that they informed us a little bit. We had this three-day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it. And from that kind of answers the beginning question, which is I know that we need to go to the CMS web page and then you can click on benefits and then you can kind of see where your money's going per paycheck.*
15. *Uh, I think when I made that visit, I, I think I'm remembering receiving a booklet. Um, but the booklet I could be thinking of might've just been medical and dental benefits and those kinds of things that may not have been your paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet to learn about it.*
16. *Um, I would say the most of most of those resources are on like the employee intranet portal that you have to seek on your own. Um, and then of course they have the individuals that'll come out that you can make an appointment with.*
17. *Ooh, boy. Um, I would probably say it was during the very brief, very quick, uh, orientation I had sitting in the office where they broke down my licensure, what it, what it was being a lateral entry, um, person. Um, it went over my pay and I'm sure it probably talked about all the other benefits all within a 30 minute time slot that was literally a 30 minute time slot where they covered everything. You know, they asked the question, do you have any questions? But how do you answer that when you've changed careers and under 24 hours and just been given all this material to process? So that was probably the last time I received any information on that. And that was in December of 2018.*
18. *So I know that, um, they have financial advisors come around to the school every October and they help you set up your benefits and they can also talk you through, um, your retirement plan and help you set up a 403B if you would like or if you want to stick with the pension plan and they help describe to you, um, all of that information. But they only come around in October and I did not sign up for it. It was provided for me, but I did not sign up for it because I knew that I was going to meet with my aunt and she would tell me.*

19. *So during our BT training, which was a week or so before school started, we, um, sat down for about eight hours and we had classes. Um, and one of the sections of that class was all about retirement. And we had a state representative, um, a representative of the, um, insurance or the retirement plan, sorry. Um, came in and kind of threw all of the 401k and all those other options out about us. Um, and she gave us a packet and that was about it.*
20. *Um, the County or our district has had people come to our faculty meetings. Um, and I've not really heard nobody from the County has or from my school has reached out to me and, or, you know, respond or responded or checked in. But there have been some, I guess people from different retirement companies that I've tried to check back in with me and you know, but they're all supplemental plans, so none of it was, none of, none of it is the actual North Carolina plan, I guess.*
21. *I don't think I was ever informed about it unless until my mom, me and my mom talked about it and I did my own research based off of the school system's portal. Okay. Uh, I don't think there was anybody professionally who came to me and told me anything about it.*
22. *Yeah, I get check ins, you know, texts or calls. Um, just to go over things every now and then. Um, as far as like supplemental resources and things that I could kind of look over on my own, nope. But I do get phone call checking.*
23. *Okay. Okay, good. Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interests. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.*
24. *Mmm... I don't think I sat down with anyone and talked about my state retirement plan. I did just recently talk to the AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that's the only place that I've gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.*

### Part 1B - Quote Categorization

Quotes appear to form two separate categories. The first category involves those who know so little about the TSERS system and their involvement in it, that they confuse supplemental retirement plan benefits and resources (403b & 401k options) with the TSERS system. This confusion seems to be the case because while there have been efforts by supplemental retirement plan vendors to communicate with and assist these beginning teachers, there have been no efforts by the state to communicate its plan (TSERS). Thus, when these beginning teachers think about retirement, they almost exclusively view it from the lens of supplemental plan options. The second category involves the frank and honest description of hurried, rushed, and busy initial orientation encounters where very little to no priority is put on this employee benefit. In terms of

outliers, the cohort responses were so similar in their description of hurried/rushed beginning teacher orientations and new hire orientations that there really was not a discernible difference between the participant responses in this regard. The categories share in common the resulting effect of trying to gloss over (at best) or disregard outright (at worst) a complex topic (DB pension plans) that beginning teachers (and adults in general) are apt to need more detailed explanation and time to question in order to appreciate. In both cases, from initial orientations to the 30-minute scheduled slots with supplemental plan vendors, the time and resources are not sufficient in helping these beginning teachers understand the topic let alone be able to effectively differentiate between the two. Patterns visible within the participants is the almost exclusive confusion of supplemental plan retirement benefits with the mandated DB retirement plan. Additionally, the hurried/rushed/busy beginning teacher or new hire orientations where the information is buried or ignored in favor of other information.

### Part 2 – Connections to Literature

The data that was gleaned from my participants in terms of RQ2 aligns with what the literature had to say and largely confirms the ‘conversation’ that scholars are having on the topic. It aligned in that the overwhelming majority of beginning teachers were not provided with sufficient time/training/opportunity to understand their DB retirement plan or the ability to successfully differentiate it from other available supplemental plans. This reality again spanned age, gender, race/ethnicity, etc. Responses supported the need for further financial literacy instruction to better understand their own benefits. Uniquely when compared with STUDY A & B (see below) increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit.

- Pension and retirement programs often ignored (DeArmond & Goldhaber, 2010)
- Pensions comprise 6% or more of typical teacher’s annual salary (Allgretto et al., 2008)
- Can provide up to 60% or more of salary replacement for retired teachers (Mitchell et al., 2001)
- Ability (or inability) to define financial literacy (Lusardi & Mitchell, 2013)
- Description of first years teaching as centering on simple survival (Woods & Earls, 1995)
- With the exception of annualized salary, little known as to what financially entices teachers (Kimball et al., 2005)
- Scant research exists as to teachers understanding of their defined benefit retirement plans (Kimball et al., 2005), thus providing the opportunity to ‘fill a gap’ with this study
- In order for plans to play a more active role, participants must have a working knowledge of them (Kimball et al., 2005)
- 50% did not know if they were in a DB or DC plan, of those in DB plan 50% could not identify their own eligible retirement date, 80% did not know how much early retirement would reduce their benefit, 40% with DB shortchanged themselves \$20,000 or more when estimating benefit (Gustman & Steinmeier, 2002)

- Additional research needed to see if this benefit is indeed what teachers desire and if districts can respond to this with further training to promote awareness and understanding (Kimball et al., 2005). Again, herein lies a gap in research and an opportunity for this work.
- Removal of barriers to understanding imperative for benefit to matter and role of districts/state in this process must be more involved (Kimball et al., 2005)
- Evolution of financial literacy needs to be more holistic vs. isolated on single principle (Davies, 2015)
- How financial education has historically occurred (Vitt et al., 2005)
- How financial education should occur to yield better results (Way, 2014)
- Financial literacy impacts young and old (Lusardi & Mitchell, 2013)
- Financial literacy impact in males and females with females experiencing higher degree (Lusardi et al., 2010; Lusardi & Mitchell, 2017; Lusardi & Tafano, 2015; Lusardi & Tafano, 2009)
- Financial literacy impact in whites and minorities with minorities experiencing higher degree (Lusardi & Mitchell, 2007a; Lusardi & Mitchell, 2007b; Lusardi & Mitchell, 2011a)
- Financial literacy impact courtesy of parental education level (Mahdavi & Horton, 2012)
- Methods to better teach women financial literacy (Jarecke et al., 2014) (Merriam et al., 2007) (Hira & Loibl, 2008) (English, 2014) (Thaler & Sunstein, 2010)
- 87% prefer to learn financial literacy from talking with another informed on the topic while 75% prefer to learn (Hira & Loibl, 2008)
- 80% prefer to learn financial literacy from independently driven methods (Livingstone, 2001)
- STUDY A- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)
- STUDY B- conducted to show financial counseling within education necessary to increase knowledge base and decision making capability (Hensley et al., 2017)

### Part 3 – TENTATIVE Answer to Research Question

Beginning teachers develop knowledge and understanding of their retirement plan options through rushed/hurried/busy beginning teacher/new hire orientations or through voluntary sessions lacking structure and explanatory context with supplemental retirement plan vendors who have an agenda to sell their own respective plan.

### Part 4 – Ongoing Interrogation Process

- 8) Why do so many of the beginning teachers describe their new hire or beginning teacher orientation sessions in the manner they do? Are there consequences of this beyond insufficient understanding of their retirement plan benefits?

- 9) Why are so many of the beginning teachers able to discuss steps taken by supplemental plan vendors but unable in most cases to even recognize their own participation in the state's mandated plan? Are there differences in the processes of these different plans that could be studied and thus improved upon?
- 10) Have district's and the larger state in general considered the idea that front loaded training or continuing professional development options, while coming with an expense, could entice these beginning teachers to understand their benefits in a different and more holistic way, thus reducing the constant attrition seen within the profession?

#### Part 5 – Post Coding Reflections

Initial research indicates that beginning teachers develop knowledge and understanding of their retirement plan options via a variety of means. Orientations, district intranet portals, online resources, booklets/brochures, and dialogue with supplemental retirement plan representatives all contribute to the development and understanding process. Of note however, almost all participants described methods that were largely passive in nature and put the onus on the individual to pursue and act upon necessary information. Participants expressed an interest in more interactive, responsive and meaningfully directed training on this topic.

#### Part 6 – Post Coding Reflections & Connections to Literature Review

- STUDY A- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)
- STUDY B- conducted to show financial counseling within education necessary to increase knowledge base and decision making capability (Hensley et al., 2017)

## APPENDIX L: RESEARCH QUESTION 3 MEMO

RQ3 Memo

RQ3 - What do beginning teachers know about their current retirement benefit package and its relationship to financial security upon retirement?

Part 1A – Representative Quotes Addressing the Research Question (1 per participant)

25. *Okay. Um, I think for me, I just want to know that I have something set up and it's kind of doing what I'm supposed to do for me. Um, so really I don't want to take any part in it. I have zero interest in like sitting down and talking about my retirement and planning. So I just want to, for someone to tell me what to do and then, you know, every month I know that I'm contributing to it. So that, that is good enough for me. I mean, of course I, I would want to be doing that and not doing nothing, but that's the extent that I care about.*
26. *Um, I think just my own general reading of the news and, you know, kind of just looking at my own retirement and, uh, just kind of learning as I am as I get older. Right. Just cause as I get older you start to focus on retirement a little bit more. Um, and you know, just as another backstory of what I didn't do right. You know, I, I never had a 401k, I've never had any kind of retirement thing set up before I started teaching. Um, you know, I'm 37 years old. So I know that that's more on the front burner than it was 10 years ago. So...*
27. *Hmm... Um, a financially secure retirement. I would say what you just described is, um, is definitely what I would say is deciding what, what your expenses are going to be. Um, when you reach retirement age and then making sure you've secured the necessary monthly income to sustain those monthly expenses. With also a little extra in there for, for special ad-ons, you know, traveling here, traveling there. The other thing though that I would say, and this is going to be just because of my age, I have parents that are 82, and they also have taken care of parents. And I think that what I didn't know when I was younger that I do know now is, um, something that's, that people don't factor in is the cost of assisted living or nursing care, which can be relatively expensive. So I would say there's that, that's kind of the, the two big components is having, having that, that monthly income to meet those monthly expenses for the way you want to live, but also somehow assuring that you have money set aside for that possibility.*
28. *Hmm...uh, characteristics. I would, I would say having, um, having enough money to live comfortably and that matches the same or hopefully somewhere the same amount that I was making before retirement.*
29. *To be honest, I would say it probably hasn't until we started asking these questions. It's kind of a put it in perspective that I have absolutely no idea how much of a financial amount I'm including in retirement or what is honestly what even is my retirement package.*
30. *Um, I am only, I'm only saving for retirement using the district, um, district mandated retirement system. Um, and that was by choice that I made, um, with my financial advisor. Um, because for now, I wanted to take the money that I was making that I could save the extra money, that I don't need to support my lifestyle now instead of putting it into retirement plan or investing it, I wanted to use it for... Mmm... Trips, vacations, things like that. And so that was my number one when she talked, when she*



- asked me about my goals, that was my number one priority over retirement.
31. *Um, well, like I said before, I have a 403B plan put into place and as of I think my first... Mmm... I set it up in about November or so, like November. So my first, um, contribution to it, I think I give about \$200 every paycheck and it comes straight out. Um, so that goes to my retirement. Other than that, nothing.*
  32. *Um, I would say that I have been, lots of people have told us, I guess the people who have come from, well just speaking with other teachers, but also the people who have come to talk about these supplemental plans have made it pretty clear that you cannot rely on just the, just the state plan. Um, it's not going to be enough to carry you through retirement. And it seems like they make changes to it a lot. And then of course the state, the insurance health insurance plan seems like it's going through a lot of changes. So it just seems like a lot of people have said, yeah, you need to have something else because this 6% or whatever it is, is not going to be, cannot be your only retirement option.*
  33. *Um, I think the first characteristic is just been able to, um, sustain where you're living at and maintain paying your bills and things like that. Um, the other thing I would say is just being able to do kind of what you want to do. You work all those years. Um, so you kinda wanna like take trips and things like that. I'm not saying once a month, but maybe every couple of months or maybe just once a year. So those are all things that I think are characteristics of that and I get that just from our grandmother, just being able to see her retire and my grandfather, um, and them being able to pull from their retirement and that they're not struggling for anything. They're able to take trips whenever they want to take them. Um, then again, just also through the conversations that me and my mom have. So she always stresses the importance of, um, making sure you have money at your retirement or making sure you have enough money in your retirement to sustain, um, your living style.*
  34. *Yeah, so I mean, I have their retirement fund, but I also use this dash app. Um, it's an app, it's a Starbucks app and I put a little side money in on average, try to play around with it, and the stock market, which is super interesting. Um, but I know that that money is going to build as well. So kind of like having money in a couple of different places.*
  35. *Yes. It has evolved because now I want to make sure, well, I'm, I get nervous sometimes, especially when the stock market is not acting in my favor. And so I'm just like, is this a good idea to have a 401k or whatever retirement, because I didn't realize that it was affected by the stock market and all that. I thought that it was just in a bank somewhere, but I'm like, wow, this is, I mean, you can either do really well and make a lot of money for your retirement or you can have nothing when you're finished. So that's kind of, it kind of makes me nervous. So I'm just hoping that by the time I retired that the market is still doing well or does it a lot better.*
  36. *Um, I would say having a financially secure in retirement would be like, uh, being able to continue with the budget that I've established throughout my life with my salary. Um, and still having access to the benefits that I have, like my medical benefits and everything. Um, that to me would be financially secure. Um, and I guess I would have learned about that through, uh, my mom, cause I know that she's retiring in a couple years and we've talked about that a little bit but not super in depth. Um, and then just reading through those documents at the beginning of the*

*year about my benefits.*

### Part 1B - Quote Categorization

Quotes appear to be categorized first by very uniform generalities in terms of appreciating financial security upon retirement. Second, they are categorized by vague if any connection to how their participation in the TESRS system will help them accomplish this goal. The three outliers in the cohort responses (#2, #8 & #12) remained the most holistically informed in terms of their understanding how the TSERS benefit and its relationship to financial literacy upon retirement. They talked about the need to be saving as one aged, the need to go above and beyond the mandated participation in TSERS in order to maintain full income replacement upon retirement and the incorporation of medical benefits into that equation as well. The categories share in common either a very, very basic and general appreciation for retirement and what that may look like financially as well as the lack of understanding of how participation in the TSERS program will help shape that reality. Patterns visible within the largest group lacking understanding are a general sense that while planning for retirement is an option, it is not a priority for them, they do not understand how to do so, and in some cases do not even want to understand. In short, excluding the outliers mentioned above (#2, #8, #12) the only other participant (#3) who provided depth, detail and nuance did so because she was significantly more mature and was faced with the costly reality of caring for aging parents.

### Part 2 – Connections to Literature

The data that was gleaned from my participants in terms of RQ3 aligns with what the literature had to say and largely confirms the ‘conversation’ that scholars are having on the topic. It aligned in that the overwhelming majority lacked understanding or certainty in terms of the DB retirement plan and that this understanding spanned age, gender, race/ethnicity, etc. Uniquely when compared with STUDY A (see below) none of the teachers appeared to be driven by the retirement plan as a primary driver, which contrasted with that study. Second, when compared with STUDY B & C the data demonstrated that increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit, and that some type of financial counseling within education is likely necessary to increase knowledge base and decision making capability in this respect.

- Pension and retirement programs often ignored (DeArmond & Goldhaber, 2010)
- Pensions comprise 6% or more of typical teacher’s annual salary (Allgretto et al., 2008)
- Can provide up to 60% or more of salary replacement for retired teachers (Mitchell et al., 2001)
- Ability (or inability) to define financial literacy (Lusardi & Mitchell, 2013)
- With the exception of annualized salary, little known as to what financially entices teachers (Kimball et al., 2005)
- Scant research exists as to teachers understanding of their defined benefit retirement plans (Kimball et al., 2005), thus providing the opportunity to ‘fill a gap’ with this study

- In order for plans to play a more active role, participants must have a working knowledge of them (Kimball et al., 2005)
- 50% did not know if they were in a DB or DC plan, of those in DB plan 50% could not identify their own eligible retirement date, 80% did not know how much early retirement would reduce their benefit, 40% with DB shortchanged themselves \$20,000 or more when estimating benefit (Gustman & Steinmeier, 2002)
- Additional research needed to see if this benefit is indeed what teachers desire and if districts can respond to this with further training to promote awareness and understanding (Kimball et al., 2005). Again, herein lies a gap in research and an opportunity for this work.
- Removal of barriers to understanding imperative for benefit to matter and role of districts/state in this process must be more involved (Kimball et al., 2005)
- Evolution of financial literacy needs to be more holistic vs. isolated on single principle (Davies, 2015)
- How financial education has historically occurred (Vitt et al., 2005)
- How financial education should occur to yield better results (Way, 2014)
- Financial literacy impacts young and old (Lusardi & Mitchell, 2013)
- Financial literacy impact in males and females with females experiencing higher degree (Lusardi et al., 2010; Lusardi & Mitchell, 2017; Lusardi & Tafano, 2015; Lusardi & Tafano, 2009)
- Financial literacy impact in whites and minorities with minorities experiencing higher degree (Lusardi & Mitchell, 2007a; Lusardi & Mitchell, 2007b; Lusardi & Mitchell, 2011a)
- Financial literacy impact courtesy of parental education level (Mahdavi & Horton, 2012)
- Methods to better teach women financial literacy (Jarecke et al., 2014) (Merriam et al., 2007) (Hira & Loibl, 2008) (English, 2014) (Thaler & Sunstein, 2010)
- 87% prefer to learn financial literacy from talking with another informed on the topic while 75% prefer to learn (Hira & Loibl, 2008)
- 80% prefer to learn financial literacy from independently driven methods (Livingstone, 2001)
- STUDY A- where health benefits and retirement primary drivers beyond annual salary and career advancement when choosing education (Sapolsky, 2000). So why is this not transferring to beginning teachers?
- STUDY B- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)
- STUDY C- conducted to show financial counseling within education necessary to increase knowledge base and decision making capability (Hensley et al., 2017)

### Part 3 – TENTATIVE Answer to Research Question

Beginning teachers have little to no understanding of their current retirement package and its relationship to financial security upon retirement and what they do know is characterized by generalization and lacking specificity.

### Part 4 – Ongoing Interrogation Process

- 11) Why are so many of the participants unable to provide any sort of specificity in terms of what financial security upon retirement entails? Growing out of that, is it a surprise that the perceived value of a benefit (TSERS) designed to address this very issue is almost completely negated?
- 12) What separates the outliers (#2, #8, #12) from the others in terms of their appreciation for aspects of retirement (including the necessity to plan, the understanding that supplemental planning is a must, and that medical benefits are imperative to a retirement plan)? How did they gain this knowledge and understanding where their peers did not?
- 13) What are the professional consequences to the individual and to the profession at large of misunderstood or ignored benefits?
- 14) Can the awareness, urgency, and will to act in terms of financial planning be created/implemented within beginning teachers (or any group) without external drivers (ie aging parents, immediate proximity to retirement, etc.) being the primary cause? And if so, what might be the benefits to this within the teaching profession and society at large?

### Part 5 – Post Coding Reflections

Initial research indicates that beginning teachers have very little understanding or immediate appreciation for their current retirement benefit package and its relationship to financial security upon retirement. While participant definitions and understanding of financial literacy rightly varied, few if any were able to connect their understanding of that concept to specifics related to their retirement plan. Uniquely, statements similar to that above were not uncommon over the course of the interviews and the process likely served as a litmus test for where individuals stood in relation to their thoughts on the topic.

### Part 6 – Post Coding Reflections & Connections to Literature Review

- STUDY A- where health benefits and retirement primary drivers beyond annual salary and career advancement when choosing education (Sapolsky, 2000). So why is this not transferring to beginning teachers?
- STUDY B- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit.

(DeArmond & Goldhaber, 2010)

- STUDY C- conducted to show financial counseling within education necessary to increase knowledge base and decision making capability (Hensley et al., 2017)

## APPENDIX M: RESEARCH QUESTION 4 MEMO

RQ4 Memo

RQ4 - How do beginning teachers' understanding of their retirement benefits inform their career decisions?

Part 1A – Representative Quotes Addressing the Research Question (1 per participant)

37. *I think that I would say no tools because I only say that because I know that I wasn't, I didn't think about it at all. So, I don't think that it was presented. I mean then that's, I'm not placing blame, but it's not on my radar just because I'm, you know, young and kind of an idiot when it comes to like finance. But also, I just, I don't think it was ever really brought up so I just never worried.*
38. *Um, I mean, I just know that if I want to access that retirement because it's not a 401k, uh, that I can't cash it out. So, it's pretty much like I'm in it for the long haul. So, to my knowledge, I mean, I have no idea if I'm even able to cash anything out and I'm, I'm assuming that I'd be able to reap what I've put in. I highly doubt that CMS would give me what was matched.*
39. *Um, so what was I expecting to be offered in the retirement plan? You know, it's so, I guess really a lot of my, um, because I come to teaching in such a different way, you know, it never even, it never even occurred to me what the plan was. No, I didn't, it didn't, it didn't meet or exceed any expectations at all.*
40. *I wouldn't say it was because I didn't even consider or look at, look up any of that information when I was getting a job. It was just a matter of I want to get a job. And, um, it wasn't even a factor of me choosing to work in CMS either. It was just a matter of, Hmm, I want to teach. So, it wasn't at all a factor.*
41. *Yes. To all the above. It was very much one of those situations where, um, from somebody who was, you know, is just still excited to be in the field. Um, the anxiety of getting offered to position, to all the emotions of that all rolled into one quick, come in, sit down, sign paperwork, here's the information, and do you have any questions? You know, mind overloaded, um, anxious as it is not really retaining a lot. And the fact that there has not been any follow-up is a little disconcerting.*
42. *My perception of it before I started working was that if you teach for 30 years, I don't know that 30 is the exact year, but there was a year that if you've spent that long in the state teaching that you... Mmm... retire and you can still get paid some... and that my mom is also a teacher and she's been working for that. So that is the only, that's my perception of, you know, her understanding. So again, it's not right for sure. It wasn't right. Sure. Mmm... But that was kind of where I got that perception from was my mom because she's a teacher and that's what she had been.*
43. *I think it has, um, because, and I know, I don't know the technical terms, so I know like if you leave the state, different states may have, um, you know, different plans and sometimes you can't transfer that built up money. Um, because I don't know if I'm gonna you know, move states or maybe I'll meet the love of my life and I'll need to move to South Carolina or something. Um, and then also... the... well they told me something about like, um, if you ever need to dip into your savings or your retirement, it will be, you know, you need to do this many years and like will have to pay things off and all that. And I just think it's, so, you know, it's very technical when I don't think it needs to be as technical.*

44. *Um, I, yeah, I think it has made it, it's one of those things that you could lump in with, it sounds bad, but I guess it's, it's one of the things that I feel like they could make it, they could make it better. So, it's, there are other companies that I think have more appealing retirement plans and so I think that they, it has, it has factored in a little bit. If I decided to leave teaching, and the thought has crossed my mind, oh well, you know, I could find another job where we're with a company that matches, you know, 6% of my paycheck or whatever.*
45. *After we've begun to have this dialogue, yes. The, I feel like there's a lot that I don't understand that I probably should be trying to understand knowing that it's money that I've worked for and stuff like that. Just making sure I'm set for once I do retire.*
46. *I honestly didn't have any perceptions, expectations. I didn't really know much about it. I just know that, you know, when people got older they were like, you know, their retirement benefits are kicking, man, that's it. But I never really inquired or nothing, it was like for the older me. Right. Yeah.*
47. *Mmm... I'm not exactly sure because, um, I know a lot of beginning teachers are young and I'm not a young beginning teacher. I have a family of, whoa, let's see, we're a family of five. And so, um, for me becoming a teacher, I did not really look into the retirement. And if it's like, 'Oh, I'm gonna, I'm not gonna work here because the benefits are not too good.' Um, it's kind of like supplemental income for my family. So, I'm thinking if I were a beginning teacher and if I were young, I would look at that and say, you know what, they don't offer a good benefit, um, retirement package for, for me. Maybe I want to work in, um, CMS or I'm not sure if it's different for each County or state. Um, I'm sure different States have different, uh, retirement benefits. Um, but I think, um, the teachers that are the new young teachers that I work with don't really get it too much because they don't have kids or families. They kind of just see it as a job and they don't really know too much about their benefits. There's still some of them are still being, um, taken care of by their parents.*
48. *Um, I would say yes. Um, but I wouldn't say that that was, I definitely think that that was something that I considered because I do know that North Carolina has a really solid retirement plan. Um, whether or not I know all the details about that retirement plan, I know that it's, um, a really solid plan. Um, but I wouldn't say that that was the only deciding factor in these taking a job in North Carolina.*

### Part 1B - Quote Categorization

Quotes appear to form one primary significant category with a singular outlier. The primary category is characterized by insufficient or near total absence of understanding as to how the plan functions and thus how it might impact potential career decisions as an educator. Participants articulate that the plan had zero bearing as to why they got into education, that no tools/resources were provided to understand said benefit, and that those components of the benefit that they did hang on to or gravitate towards (option to leave the state or option to take out a loan from the account) were not well or fully understood and would entail significant financial penalty that they were unaware of. The singular outlier in the cohort responses (#12) was again easily the most informed about the benefit, and while the participant's explanations were fairly general, it is clear that she had an appreciation for the benefit and awareness of it that the others did not. Again, this

is likely because of her mother having navigated the same system and nearing retirement age along with the experience she had with her clinical educator (mentor teacher) during student teaching.

Patterns visible within the largest group lacking understanding are disconnected references to facets of the plan without an appreciation for the bigger picture and the consequences therein. Again, the idea of switching states (to pursue the ‘love of my life to South Carolina’) and the idea of taking out a loan against the retirement account in a time of need are both very significant financial decisions that the participants simply talked about as if it would not (or should not) require significant thought or reflection prior to making the decision. In short, beginning teachers’ understanding of their retirement benefits is not informing their career decisions, at least at this point in their career.

### Part 2 – Connections to Literature

The data that was gleaned from my participants in terms of RQ4 aligns with what the literature had to say and largely confirms the ‘conversation’ that scholars are having on the topic. It aligned in that the overwhelming majority lacked understanding or certainty in terms of the DB retirement plan and that this understanding spanned age, gender, race/ethnicity, etc. Responses supported the need for further financial literacy instruction to both understand their own benefits as well as how these benefits may ultimately impact their future professional decisions within the field or even more broadly in general. Uniquely when compared with STUDY A (see below) none of the teachers appeared to be driven by the retirement plan as a primary driver towards initial employment, which contrasted with that study. STUDY B (see below) demonstrated that increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit along with STUDY C showing financial counseling within education necessary to increase knowledge base and decision making capability

- Pension and retirement programs often ignored (DeArmond & Goldhaber, 2010)
- Pensions comprise 6% or more of typical teacher’s annual salary (Allgretto et al., 2008)
- Can provide up to 60% or more of salary replacement for retired teachers (Mitchell et al., 2001)
- Ability (or inability) to define financial literacy (Lusardi & Mitchell, 2013)
- With the exception of annualized salary, little known as to what financially entices teachers (Kimball et al., 2005)
- Scant research exists as to teachers understanding of their defined benefit retirement plans (Kimball et al., 2005), thus providing the opportunity to ‘fill a gap’ with this study
- In order for plans to play a more active role, participants must have a working knowledge of them (Kimball et al., 2005)
- 50% did not know if they were in a DB or DC plan, of those in DB plan 50% could not identify their own eligible retirement date, 80% did not know how much



early retirement would reduce their benefit, 40% with DB shortchanged themselves \$20,000 or more when estimating benefit (Gustman & Steinmeier, 2002)

- Additional research needed to see if this benefit is indeed what teachers desire and if districts can respond to this with further training to promote awareness and understanding (Kimball et al., 2005). Again, herein lies a gap in research and an opportunity for this work.
- Removal of barriers to understanding imperative for benefit to matter and role of districts/state in this process must be more involved (Kimball et al., 2005)
- Evolution of financial literacy needs to be more holistic vs. isolated on single principle (Davies, 2015)
- How financial education has historically occurred (Vitt et al., 2005)
- How financial education should occur to yield better results (Way, 2014)
- Financial literacy impacts young and old (Lusardi & Mitchell, 2013)
- Financial literacy impact in males and females with females experiencing higher degree (Lusardi et al., 2010; Lusardi & Mitchell, 2017; Lusardi & Tafano, 2015; Lusardi & Tafano, 2009)
- Financial literacy impact in whites and minorities with minorities experiencing higher degree (Lusardi & Mitchell, 2007a; Lusardi & Mitchell, 2007b; Lusardi & Mitchell, 2011a)
- Financial literacy impact courtesy of parental education level (Mahdavi & Horton, 2012)
- Methods to better teach women financial literacy (Jarecke et al., 2014) (Merriam et al., 2007) (Hira & Loibl, 2008) (English, 2014) (Thaler & Sunstein, 2010)
- 87% prefer to learn financial literacy from talking with another informed on the topic while 75% prefer to learn (Hira & Loibl, 2008)
- 80% prefer to learn financial literacy from independently driven methods (Livingstone, 2001)
- STUDY A- where health benefits and retirement primary drivers beyond annual salary and career advancement when choosing education (Sapolsky, 2000). So why is this not transferring to beginning teachers?
- STUDY B- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)
- STUDY C- conducted to show financial counseling within education necessary to increase knowledge base and decision-making capability (Hensley et al., 2017)

### Part 3 – TENTATIVE Answer to Research Question

Beginning teachers' understanding of their retirement benefits inform their career decisions very little if at all. In fact, understanding of these benefits is so little that this

significant financial benefit likely has almost no impact whatsoever in terms of either recruitment and/or retention within the field in terms of beginning teachers.

#### Part 4 – Ongoing Interrogation Process

- 1) Why is such a significant financial benefit not being communicated, explained, and incorporated into the near constant search for new educators? Granted, the benefit is back loaded and not immediate, but it is financially significant. Is this situation so because the beginning teachers simply do not care, because they are not sufficiently financially literate to care, or because those onboarding them are afflicted with the same challenges as the beginning teachers themselves? Is financial illiteracy endemic across education, and if so, how far does it extend beyond this singular benefit? If so, what are the larger impacts on the system and the public at large?
- 2) Would communication, explanation, and incorporated training make a measurable difference in terms of beginning teacher understanding of their retirement benefit, and if so, would it be significant enough to alter significant attrition from the field?
- 3) What would this communication, explanation, and incorporated training look like? Who would do it? Where would it happen? When would it occur? Who would fund it? How would its effectiveness be measured?

#### Part 5 – Post Coding Reflections

Initial research indicates that beginning teachers' understanding of their retirement benefits does little to nothing in terms of informing their career decisions.

Overwhelmingly, participants expressed that their retirement benefits played almost no role in their initial processes and/or why they ultimately accepted a position.

Furthermore, the majority of participants did not discuss their retirement and/or implications with that retirement in terms of any potential career decisions. Again, a few outliers did exist, but these were individuals who had more developed understanding of what the retirement plan entailed and how it operated.

#### Part 6 – Post Coding Reflections & Connections to Literature Review

- STUDY A- where health benefits and retirement primary drivers beyond annual salary and career advancement when choosing education (Sapolsky, 2000). So why is this not transferring to beginning teachers?
- STUDY B- out of Washington State study demonstrating increased knowledge, desirability and the reduction of barriers are crucial to beginning teachers recognizing and appreciating their DB pension plans as a financial benefit. (DeArmond & Goldhaber, 2010)
- STUDY C- conducted to show financial counseling within education necessary to increase knowledge base and decision-making capability (Hensley et al., 2017)

APPENDIX N: THEORETICAL FRAMEWORK 1<sup>ST</sup> ELEMENTTF1 Memo

TF1 - The individual development of learners originates in social sources and subsequent interactions

Part 1 – Description and Impact of Theme

(From Chapter 2 / Theoretical Framework...) *With respect to the first theme, Wertsch and Wertsch (2009) stipulated that as learners involve themselves in a range of collaborative activities and internalize the benefits of these efforts they develop new levels of understanding and strategies for engaging with the world around them. Typically, this idea has been best illuminated via the critical comparisons between two learners with disparate levels of knowledge or understanding (Wertsch & Wertsch, 2009). Vygotsky stretched this further than simply the existing levels of knowledge brought by the learner in question through his interest in what that learner had experienced in terms of broader cultural or historical events that ultimately shaped the learning interaction (Tudge & Scrimsher, 2003).*

Prior to starting data collection, I believed that this theme would appear in the data via sources and interactions that these beginning teachers had at their schools, district offices, or other locales used for employment on-boarding purposes. I believed that these sources and interactions would be hurried, haphazard, rushed and not given their due care and attention. Additionally, I believed that any ongoing training or information offered (if at all...) on the topic would follow similar patterns, resulting in a cumulative net loss in terms of beginning teachers ability to understand their DB benefits. I felt like this theme was going to be a good fit for the study because it encapsulated well the effect that environments and interactions have on an individual's ability to learn and beginning teachers certainly demonstrate the need to learn on this topic.

Part 2 – Representative Quotes Addressing the Research Question (1 per participant)

49. *Um, I think it was, it was at school and again it was a, this company that came by and would kind of meet with us one-on-one usually during my planning period to explain to me. And I think they, they did a good job explaining it. They, I remember they had like a notepad and they kind of drew out, you know, how it works. And I remember understanding it at the time. Of course, I forgot it almost immediately. Um, but it was at, it was at school and kind of explaining how all of this works, um, and how it works for teachers and I remember understanding what they were talking about.*
50. *Um, so I believe that they informed us a little bit. We had this three-day teacher orientation for first year teachers before we began our first year. Most of that was related to content and you know like how to teach and materials that you can use. But there was a little bit of information about benefits, how to access it, how to reach it. And from that kind of answers the beginning question, which is I know that we need to go to the CMS web page and then you can click on benefits and then you can kind of see where your money's going per paycheck.*
51. *I would say when I went to the district office just signed the paperwork for accepting the job.*
52. *I didn't at all. I didn't converse with anybody. I didn't even look up the information. I think I just clicked through on the options I was in doing the enrollment paperwork.*

53. *Ooh, boy. Um, I would probably say it was during the very brief, very quick, uh, orientation I had sitting in the office where they broke down my licensure, what it, what it was being a lateral entry, um, person. Um, it went over my pay and I'm sure it probably talked about all the other benefits all within a 30-minute time slot that was literally a 30-minute time slot where they covered everything. You know, they asked the question, do you have any questions? But how do you answer that when you've changed careers in under 24 hours and just been given all this material to process? So that was probably the last time I received any information on that. And that was the, in December of 2018.*
54. *Um, when I sat down with my aunt and she asked about my retirement, the school never informed me. I never, I never asked, but I also never got an explanation during school. So, whenever it was a year into teaching, I had been teaching for a year and I sat down with a paycheck and my, um, yeah, with one of my paychecks, with my aunt and she told me.*
55. *So, during our BT training, which was a week or so before school started, we, um, sat down for about eight hours and we had classes. Um, and one of the sections of that class was all about retirement. And we had a state representative, um, a representative of the, um, insurance or the retirement plan, sorry. Um, came in and kind of threw all of the 401k and all those other options out about us. Um, and she gave us a packet and that was about it.*
56. *The, um, the new, like new hire orientation.*
57. *I don't think I was ever informed about it unless until my mom, me and my mom talked about it and I did my own research based off of the school systems portal. Okay. Uh, I don't think there was anybody professionally who came to me and told me anything about it.*
58. *Oh, the, my financial person that I was speaking of earlier, we had a sit in like just my first year of teaching. Um, we had a sit-down meeting quite honestly. It was like he was talking and it was all going over my head, but I knew that, you know, I wanted this amount of money taken out. Other than that, no clear understanding.*
59. *Mmm... One of the representatives came to my classroom. I never, I'm sure at the beginning of the school year they probably get you all together with hopefully HR or someone and they meet together. But I think I missed that. But at the previous school that I was at, Garinger, they didn't do that, so I'm not sure. I did have the, um, person comes to my class. He was a, um, one of the, I guess he sets up your account and that was it. I saw him twice and he kind of explained everything to me. I was a little confused, but he went over and made it simple. He simplified the process and so it's, he made it clearer.*
60. *Mmm... I don't think I sat down with anyone and talked about my state retirement plan. I did just recently talk to the AXA representative about my 401k plan and he touched briefly on my state plan. Um, but that's the only place that I've gotten information, um, other than just like, uh, reading through my benefits packet, um, at the beginning of the year.*

#### Part 1B - Quote Categorization

The data above seems to fall into the two primary categories of no social source or interaction regarding the TSERS program being provided to the beginning teacher in question OR the confusion with supplemental DC plan vendors coming to sell and sign

these same beginning teachers up for supplemental retirement plans. Both of the categories share in common and show the theme in action because these social sources and interactions were rushed/hurried/haphazard, resulting in insufficient comprehension; All the while, those who confused the supplemental vendors were at least able to talk about a retirement benefit in some capacity (when compared with their peers who could not), showing that some social sources and interaction are better than none. There was a single distinct outlier in this data set. Once again, the beginning teacher whose mother had navigated the very same system and state benefit plan for 30+ years and also had the luxury of having a clinical educator (mentor teacher) about to retire during her student teaching internship. She was able to clearly and succinctly differentiate between the two retirement plans which also gave more credence to her comments that while she had met with a supplemental vendor and recalled the value in that experience, she had never had such an experience with a state representative discussing the TSERS program.

### Part 3 – Connections between Data & Theme

My participants' experiences and their answers were not surprising and they were what I expected with regard to Theme #1. That said, I was surprised by the continued confusion between the TSERS plan (a DB plan) and the supplemental plans offered by various vendors (DC plans). This holds true to the theme that in terms of social sources and interactions, those more complex topics (ie the differences between DB and DC plans and how to navigate the pros/cons of each) need more sourcing and more interaction for the participants to effectively learn them. They are not currently getting these and the results are demonstrated in my data. As stated in the theory, learners need a *'range of collaborative activities and to internalize the benefits of these efforts they develop new levels of understanding and strategies for engaging with the world around them'*...currently, this isn't happening. I think this is a good fit between the data and the theme and I think it helps 'fill a gap' in terms of both educators' ability to understand this benefit as well as how do you effectively teach educators about finance. I have studies that could be linked to both.

### Part 4 – Ongoing Interrogation Process

- 1) I'm being more and more drawn to the idea that beginning teachers lack sufficient (or any...) context upon which to understand and/or base their conversations and ultimate decisions in this regard. As discussed above, they need *'range of collaborative activities and internalize the benefits of these efforts they develop new levels of understanding and strategies for engaging with the world around them'* and they are clearly not getting this.

So, my first question would be HOW could they get this followed then by would it make a discernible difference and in effect prove the theory correct in this context too?

- 2) I'm thinking more and more about the training of teachers and how they can converse for long periods with relative ease on classroom management, lesson

planning, dealing with parents, etc. but seem to have little if any understanding or appreciation for their financial benefit package.

My question becomes, is this common across industry or specific to just education? If endemic, could this be addressed in educator prep programs or more generally, in training programs for various fields? Shouldn't informing prospective employees about the benefits and pitfalls of an industry via the creation of and opportunity to engage with appropriate social sources and interactions be part of any ethical training and development? Can we really say this is going on?

#### Part 5 – Post Coding Reflections

Initial research indicates that Pillar #1 of the Theoretical Framework (The individual development of learners originates in social sources and subsequent interactions) has influence in regards to how beginning teachers learn about, value, and ultimately utilize subsequent knowledge of their defined benefit retirement program. Beginning teachers describe the social sources and interactions in which this knowledge is built and developed and overwhelmingly indicate that it was not sufficient, felt rushed/haphazard, and was poorly constructed. Further, subsequent reactions were largely non-existent.

#### Part 6 – Post Coding Reflections & Connections to Literature Review

I was surprised by the continued confusion between the TSERS plan (a DB plan) and the supplemental plans offered by various vendors (DC plans). This holds true to the theme that in terms of social sources and interactions, those more complex topics (ie the differences between DB and DC plans and how to navigate the pros/cons of each) need more sourcing and more interaction for the participants to effectively learn them. They are not currently getting these and the results are demonstrated in my data. As stated in the theory, learners need a *'range of collaborative activities and to internalize the benefits of these efforts they develop new levels of understanding and strategies for engaging with the world around them'*...currently, this isn't happening. I think this is a good fit between the data and the theme and I think it helps 'fill a gap' in terms of both educators' ability to understand this benefit as well as how do you effectively teach educators about finance. I have studies that could be linked to both.

APPENDIX O: THEORETICAL FRAMEWORK 2<sup>ND</sup> ELEMENTTF2 Memo

TF2 - The actions of individual learners are mediated and controlled by semiotic means.

Part 1 – Description and Impact of Theme

(From Chapter 2 / Theoretical Framework...) *With respect to the second theme, Wertsch and Wertsch (2009) argued that semiotics, or the use of tools and signs, was imperative for the learner to facilitate the construction of new knowledge as well then as the means by which this new knowledge was internalized to assist with individualized problem solving moving forward (Wertsch & Wertsch, 2009). An example of such tools or signs in terms of the financial literacy involved in understanding DB retirement plans include online retirement benefit calculators and associated retirement planning resources.*

Prior to starting data collection, I believed that this theme would be a powerful one in terms of the three themes detailed in the Theoretical Framework. Having worked as a beginning teacher myself and having supported these individuals for years, I knew (at least anecdotally) that beginning teachers are not provided with the tools or resources to understand this benefit. This assumption appeared in the data via the scarce and very general responses that these beginning teachers had in terms of what, if any, tools or resources had been provided to them in an effort to better understand their DB retirement program. I believed that these tools and resources would be absent or generalized as the data revealed. I felt like this theme was going to be a very good fit for the study because it encapsulated well the effect of having and then using the appropriate tools and resources to positively (or negatively) impact an individual's ability to learn and beginning teachers certainly demonstrate the need to learn on this topic

Part 2 – Representative Quotes Addressing the Research Question (1 per participant)

61. *Honestly, not nothing. I mean, other than those guys coming around, like I don't remember having anybody from my school or the district, like telling us how this works, telling us what we should do really. Cause you know, I'm at my age and this was my first, you know, real job, obviously, like I had zero clue. So, I would say really nothing. You know, you weren't given options of companies to work with or really you weren't really told what your retirement would look like and the benefits of that. So, I would say very little.*
62. *The only thing that was given to me was that website where I can check my retirement and check healthcare benefits. And all that kind of stuff is kind of located in the same area.*
63. *Uh, I think when I made that visit, I, I think I'm remembering receiving a booklet. Um, but the booklet I could be thinking of might've just been medical and dental benefits and those kinds of things that may not have been your retirement paperwork. Um, actually now that I think about it, I do feel like that could have been corrected. There was a booklet that had the medical and dental, but I want to say that the retirement, I want to say I was given a single sheet of paper with like the links for the internet.*
64. *Um, I would say the most of those resources are on like the employee intranet portal that you have to seek on your own. Um, and then of course they have the individuals that'll come out that you can make an appointment with.*
65. *Uh, we were given a checklist of things we should do as BTS before, like the first day*

- of employment. And then there was a little asterisk and a highlighted section that says after 60 days of employment login to this website and fill out, I would almost say like a beneficiary or something along those lines. Um, and uh, a small packet that went with that. Um, I did what was asked of me then and I haven't quite looked back at it.*
66. *So I know that, um, they have financial advisors come around to the school every October and they help you set up your benefits and they can also talk you through, um, your retirement plan and help you set up a 403B if you would like or if you want to stick with the pension plan and they help describe to you, um, all of that information. But you, they only come around in October and I did not sign up for it. It was provided for me, but I did not sign up for it because I knew that I was going to meet with my aunt and she would tell me and help me.*
67. *Um, my current, I am working with a different company and I have a 403B plan. So, a representative came to our school. Um, I think it was just at the beginning of the year when they always kind of make their rounds. Um, and he, we sat down for maybe a good 30 to 45 minutes and, um, he gave me a packet and we read through everything and we made decisions like that.*
68. *Um, tools and resources. Probably just the, I'm not, I know we got a packet and the packet just explained out a login to the retirement system account. Then I'm sure that there were some like supplemental readings and like things like that.*
69. *Um, I think the main one that I've used was just the portal online, our school portal or the school systems portal, um, where you can go on and just see, um, believe it's the bank which is handling everything and you can make your own account. But like I said, I did that through my own research going through the portal and just researching things like that.*
70. *Um, I know I did get a, it was a big folder type thing. Um, going over like the portfolio, it was extremely extensive. Um, cause in the online portal, I, I check it like once every, probably once every month, um, to look into the portfolio. But that's about it.*
71. *Um, this representative brought in a, um, kind of like a computer or a tablet and he showed me, um, how it works and I'm like, there's like an online app that you can use. You can go in and type in your information and it shows you like a spreadsheet of how your money is working and how they invest into different businesses so that you can earn money each year through interest. Um, but he did have it. Um, he did have it on a, um, a digital platform so that you can go in and then you can change it if you wanted to, um, increase your, the amount that they take out of your monthly paycheck. And so he did show me a lot of, a lot of that.*
72. *Um, I do know that like in the intranet that we can log into, um, I have access to view all of my benefits. Um, so I guess technically that was shared with me when I became an employee. Um, but other than that, um, I don't think I've received, I haven't received any like physical information.*

### Part 1B - Quote Categorization

The data above seems to fall into the two primary categories. These include passive tools or resources (pamphlets, website addresses, access to district portals) and then more direct or personally involved tools/resources BUT again misinterpreted as they were put forward by the supplemental retirement plan vendors rather than communicating anything about the state DB plan. Both of the categories share common ground and show the



theme in action because the lack of use and incorporation of meaningful tools/resources in any structured, meaningful, even perhaps mandated way results in ineffective and inopportune learning environments and opportunities for these beginning teachers. All the while, those who confused the supplemental vendors were at least able to realize some benefit (more personalized and meaningful) than their counterparts who chose not to participate or were not afforded the same opportunity. I did not observe any significant outliers in this data set as the described experiences were largely synonymous. Across the board, all of the participants discussed a situation where the tools and resources provided clearly did not provide them a suitable foundation upon which to build an understanding of their DB retirement plan benefit.

### Part 3 – Connections between Data & Theme

My participants' experiences and their answers were not surprising and they were largely what I expected with regard to Theme #2. That said, I was again surprised by the continued confusion between the TSERS plan (a DB plan) and the supplemental plans offered by various vendors (DC plans). This holds true to the theme that in terms of tools and resources, those more complex topics (ie the differences between DB and DC plans and how to navigate the pros/cons of each) need to incorporate more tools/resources in a more effective manner for the participants to effectively learn them. They are not currently getting these tools/resources and the results are demonstrated in my data. As stated in the theory, learners need *'the use of tools and signs, as it is imperative for the learner to facilitate the construction of new knowledge as well then as the means by which this new knowledge was internalized to assist with individualized problem solving moving forward'*...currently, this isn't happening. I think this is a good fit between the data and the theme and I think it helps 'fill a gap' in terms of both educators' ability to understand this benefit as well as how do you effectively teach educators about finance. I have studies that could be linked to both.

### Part 4 – Ongoing Interrogation Process

- 3) I'm being more and more drawn to the idea that beginning teachers lack sufficient (or any...) tools and resources upon which to build and develop an understand and/or base their conversations and ultimate decisions in this regard. As discussed above, they need *'the use of tools and signs, as it is imperative for the learner to facilitate the construction of new knowledge as well then as the means by which this new knowledge was internalized to assist with individualized problem solving moving forward'* and they are clearly not getting this.

So, my first question would be HOW could they get this followed then by would it make a discernible difference and in effect prove the theory correct in this context too?

- 4) I'm thinking more and more about the training of teachers and how they can converse for long periods with relative ease on classroom management, lesson planning, dealing with parents, etc. but seem to have little if any understanding or appreciation for their financial benefit package.

My question becomes, is this common across industry or specific to just education? If endemic, could this be addressed in educator prep programs or more generally, in training programs for various fields? Shouldn't informing prospective employees and providing them with access to the necessary tools/resources to understand and navigate the benefits and pitfalls of an industry be part of any ethical training and development? Can we really say this is going on?

#### Part 5 – Post Coding Reflections

Initial research indicates that Pillar #2 of the Theoretical Framework (The actions of individual learners are mediated and controlled by semiotic means) has influence in regards to how beginning teachers learn about, value, and ultimately utilize subsequent knowledge of their defined benefit retirement program. Beginning teachers discuss a variety of semiotic means (tools and resources) by which they might learn about their defined benefit retirement; however, the use of these tools is not maximized given the low levels of understanding demonstrated by beginning teachers. Researcher hypothesizes that combined use of a variety of tools in a strategic manner and timing might have more impact in this regard.

#### Part 6 – Post Coding Reflections & Connections to Literature Review

I was again surprised by the continued confusion between the TSERS plan (a DB plan) and the supplemental plans offered by various vendors (DC plans). This holds true to the theme that in terms of tools and resources, those more complex topics (ie the differences between DB and DC plans and how to navigate the pros/cons of each) need to incorporate more tools/resources in a more effective manner for the participants to effectively learn them. They are not currently getting these tools/resources and the results are demonstrated in my data. As stated in the theory, learners need *'the use of tools and signs, as it is imperative for the learner to facilitate the construction of new knowledge as well then as the means by which this new knowledge was internalized to assist with individualized problem solving moving forward'*...currently, this isn't happening. I think this is a good fit between the data and the theme and I think it helps 'fill a gap' in terms of both educators' ability to understand this benefit as well as how do you effectively teach educators about finance. I have studies that could be linked to both.

APPENDIX P: THEORETICAL FRAMEWORK 3<sup>RD</sup> ELEMENTTF3 Memo

TF3 - The two prior themes are best studied through historical and developmental analysis

Part 1 – Description and Impact of Theme

(From Chapter 2 / Theoretical Framework...) *With respect to the third theme, Wertsch and Wertsch (2009) supported Vygotsky's (1978) assertion that to study a learner in a historical fashion equates to studying their process of change over time. In effect, to study someone over time and include all their changes during that time is fundamental to discovering their essential nature and in doing so most accurately display what they really are; therefore, the historical study of a learner should not be viewed as ancillary but rather foundational in seeking to better understand where they have been and where they might be going (Vygotsky, 1978). For the purposes of this study and seeking to better understand the element of beginning PK-12 public education teachers' financial literacy development over time, the researcher will ask study participants to self-report via interview questions and subsequent follow up prompt how their knowledge acquisition or developmental growth in this area (financial literacy involving their DB retirement plan) evolved over time.*

Prior to starting data collection, I believed that this theme would be impactful. Having discussed the topic of teacher benefits and retirement with a variety of experienced clinical educators (mentor teachers for student teachers) over the years, I knew (at least anecdotally) that beginning teachers would be apt to evolve their views over time and that studying this evolution as a progression over time would be important. This assumption appeared in the data very immediately given the fact that 20% (3/12) articulated that their perspectives had evolved even over the course of a 30-minute interview. 75% (9/12) articulated that their perspectives had begun to shift as they were exposed to more dialogue and resources/tools to inform them about the subject. I believed that this process of change over time would be present in these beginning teachers because I believed them to be not only interested, but capable of understanding their financial benefits, if given the explanation, tools, resources, and opportunities to understand them. I felt like this theme was going to be a very good fit for the study because it encapsulated well the potential effect of engaging these beginning teachers in a dialogue of this sort and in that same vein began to indicate the potential interests that could arise if these beginning teachers were simply given the opportunity, tools and resources to have these conversations and be exposed to the information.

Part 2 – Representative Quotes Addressing the Research Question (1 per participant)

73. *I think it's really only changed based on what people around me say. There's a lot of just talk from teachers and other people about how teachers do really well in retirement and they have really good benefits and they can retire early. So that's really all I know just from hearsay. Um, but I don't really know how, but I just know that that's a thing.*
74. *Mmm...yes. I would definitely say it has changed. Um, it's kind of interesting cause I've been putting money in this for three years and I mean it looks, it looks solid. I would say with in comparison to what I could imagine, like my other friends in other fields they're doing. I just think that, yeah, what, you don't get this to this profession*

- for the money, but it's like financial security is extremely important. So sometimes it's a little discouraging.*
75. *No, it hasn't yet. But I do know that once I hit that five-year mark, um, that if I, if I'm going to keep teaching, um, I would imagine that it'll integrate into conversations eventually if I'm still teaching when, if I'm 55, 56, 57, because I think those, those reduced benefits would be there for me when I turned 60. Um, I think that that we would probably have a lot of conversations about if it was financially, um, if there was a financial incentive for us or for me to go ahead and teach until I'm 60. Once I hit that five-year mark, I think we will definitely have those conversations then.*
76. *Okay. Um, I, I, I is remained pretty much the same and that's probably a little to no information on it. Uh, and I think if I were to ever like switch careers, it wouldn't be a factor because I don't ever consider retirement benefits in terms of, you know, why I'm employed somewhere.*
77. *To be honest, I would say it probably hasn't until we started asking these questions. It's kind of a put it in perspective that I have absolutely no idea how much of a financial amount I'm including in retirement or what is honestly what even is my retirement package.*
78. *My, um, perspective on my, my, my perspective on it has not changed at all. Um, I'm still not focused on the retirement plan enough to change it or research other plans that I'm offered and choose one of those or add more money to a different one, add another one on. I am still very content to just have the district. Mmm... The normal district one, the pension plan for now.*
79. *Um, well, right now I'm currently living at home with my parents, so I do think now is the time that I can put more into it while I'm not having so many bills to pay. Um, but I'm, I still kind of feel like, you know, I know it's important. I don't know a whole bunch about it. Um, but I'll put my, what I can into it and just, you know, see what happens in the future.*
80. *Um, the county or our district has had people come to our faculty meetings. Um, and I've not really heard nobody from the County has or from my school has reached out to me and, or, you know, responded or checked in. But there have been some, I guess people from different retirement companies that I've tried to check back in with me and you know, but they're all supplemental plans, so none of it was, none of, none of it is the actual North Carolina plan, I guess.*
81. *After we've begun to have this dialogue, yes. The, I feel like there's a lot that I don't understand that I probably should be trying to understand knowing that it's money that I've worked for and stuff like that. Just making sure I'm set for once I do retire.*
82. *Well, even during this interview, I just know that honestly, I need like basic knowledge on like whether this is supplemental or the state, Oh, I need to go back.*
83. *Yes. It has evolved because now I want to make sure, well, I'm, I get nervous sometimes, especially when the stock market is not acting in my favor. And so I'm just like, is this a good idea to have a 401k or whatever retirement, because I didn't realize that it was affected by the stock market and all that. I thought that it was just in a bank somewhere, but I'm like, wow, this is, I mean, you can either do really well and make a lot of money for your retirement or you can have nothing when you're finished. So that's kind of, it kind of makes me nervous. So, I'm just hoping that by the time I retired that the market is still doing well or does it a lot better.*

84. *Um, I feel like, uh, I feel like my participation, I feel like very secure about my financial wellbeing. Um, I do know, um, like I'm not vested yet. Um, so as a beginning teacher, that's a little worrisome, but I know that I'll be in North Carolina for at least five years. Um, so I'll be vested after that. And so, yeah, I feel like, uh, as a beginning teacher, I realized the importance of saving for retirement. When the AXA representatives come in and they talk to you for like 30 minutes, they'll sit down and lay out everything for retirement, which is really good. Um, but yeah, I feel, I feel pretty financially secure for the future and I'm glad I'm thinking about that now in my early twenties instead of later.*

### Part 1B - Quote Categorization

The data above seems to fall into the two primary categories. These include those who have developed an interest and thus demonstrate the ability to change their perspective over time, and then those who retain the perspective of being uninterested and disengaged from the topic as they do not see it relevant to them at this juncture in their career. The categories share common ground and show the theme in action because both groups seem to be able to recognize the value in obtaining new information (developmental process over time), yet it is only the one group that places the more immediate value on it in the here and now. I did observe an outlier in this data set as the eldest participant communicated that while the DB plan was not important or a significant factor at this moment, she could see it becoming so down the road a few years. All the other participants either realized that it was important and needed greater attention now or they realized it was important but did not feel compelled enough to concern themselves with it. Across the board, all of the participants discussed a situation where their perspectives on the DB had changed over time with some articulating change even during the course of the interview itself. This leads me to believe that if given the means, opportunities, resources, tools, etc. beginning teachers could and would value the opportunity to learn about this DB retirement plan benefit.

### Part 3 – Connections between Data & Theme

My participants' experiences and their answers were somewhat surprising in this case and not necessarily what I expected with regard to Theme #3. I was surprised by two facets. First, I was surprised by the urgency with which some of the participants said their perspectives were changing even over the course of a 30-minute interview. It was almost as if these individuals craved that information and had simply never been afforded the opportunity, tools, resources, to understand it. Further, I remained surprised by the other subset of participants who despite being exposed to the information and aware of it like the other participants, still did not care to learn more or appreciate the financial benefit they were entitled to. This holds true to the theme that in terms of a learner's process of change over time, there are going to be discrepancies between individuals based off of the unique learning needs of each individual involved. Those participants more financially curious and literate were more apt to realize the urgency involved than those who were not. I was left with the fact that they are not currently getting these opportunities to develop their understanding further over time, and the results are demonstrated in my data. As stated in the theory, learners need *'to be studied over time and include all their changes during that time as it is fundamental to discovering their*

*essential nature and in doing so most accurately display what they really are; therefore, the historical study of a learner should not be viewed as ancillary but rather foundational in seeking to better understand where they have been and where they might be going* ...currently, this isn't happening. I think this is a good fit between the data and the theme and I think it helps 'fill a gap' in terms of both educators' ability to appreciate and understand this benefit as well as how do you effectively teach educators about finance. I have studies that could be linked to both.

#### Part 4 – Ongoing Interrogation Process

- 5) I'm being more and more drawn to the idea that beginning teachers lack sufficient (or any...) opportunities to effectively and meaningfully engage with others on this topic and in doing so build and develop an understanding over time to better inform themselves and their ultimate decisions in this regard. As discussed above, they need *'to be studied over time and include all their changes during that time as it is fundamental to discovering their essential nature and in doing so most accurately display what they really are; therefore, the historical study of a learner should not be viewed as ancillary but rather foundational in seeking to better understand where they have been and where they might be going'* and they are clearly not getting this.

So, my first question would be HOW could they get these opportunities followed then by would it make a discernible difference and in effect prove the theory correct in this context too?

- 6) I'm thinking more and more about the training of teachers and how they can converse for long periods with relative ease on classroom management, lesson planning, dealing with parents, etc. but seem to have little if any understanding or appreciation for their financial benefit package. Their ability to understand these complex educationally-centric topics and speak on them intelligently is something that was developed over time and involved historical process and evolution.

My question becomes, is this common across industry or specific to just education? If endemic, could this be addressed in educator prep programs or more generally, in training programs for various fields? Shouldn't informing prospective employees and providing them with access to the necessary opportunities to grow and develop over time to better understand and navigate the benefits and pitfalls of an industry be part of any ethical training and development? Can we really say this is going on?

#### Part 5 – Post Coding Reflections

Initial research indicates that Pillar #3 of the Theoretical Framework (The two prior themes are best studied through historical and developmental analysis) has influence in regards to how beginning teachers learn about, value, and ultimately utilize subsequent knowledge of their defined benefit retirement program. Beginning teachers descriptions

of social sources / interactions and semiotic means / tools evolve and change over time indicating that their own historical and developmental analysis is justified.

#### Part 6 – Post Coding Reflections & Connections to Literature Review

As stated in the theory, learners need *‘to be studied over time and include all their changes during that time as it is fundamental to discovering their essential nature and in doing so most accurately display what they really are; therefore, the historical study of a learner should not be viewed as ancillary but rather foundational in seeking to better understand where they have been and where they might be going’*...currently, this isn't happening. I think this is a good fit between the data and the theme and I think it helps 'fill a gap' in terms of both educators' ability to appreciate and understand this benefit as well as how do you effectively teach educators about finance.