A15360S1 Research and Development Project

Developing an Orthodox Christian RE Teacher's Theology and Theology Teaching Knowledge through an adapted Lesson Study Cycle Mentoring Intervention evaluated through the Knowledge Quartet and Relation Knowledge Frameworks

by

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1. Introduction

1.1 Background of the Project, Learner Teacher, and Teacher Educator:

This research project centers on the mentorship of a local religious education (RE) learner teacher in the Philippines, hereafter referred to as Peter, to maintain anonymity. Peter specializes in high school science and practices the Coptic Orthodox (ancient Egyptian) Christian tradition. He is also a beginning theology teacher working with his church's acolytes (altar boys), aged 12 and above, from a nearby economically disadvantaged community served by the church.

As an adherent of Greek Orthodox Christianity, I have been allowed the unique opportunity to train the Coptic church's Religious Education (RE) instructors. I aim to draw from the ancient educational traditions of Orthodox Christianity to facilitate teachers' professional development (PD). Despite doctrinal and historical variances between the Greek Orthodox and Coptic Orthodox communities—categorized as Eastern Orthodox (Greek) and Oriental Orthodox (Coptic) Christians—my perspective asserts that our shared theological teachings, practices, and historical trajectories foster a congruent, if not nearly synonymous, paradigm for religious education. Consequently, as the teacher educator, I intend to derive from the educational traditions of diverse Eastern and Oriental Christian churches to enhance the learner teacher's grasp of Orthodox Christian theology and theology teaching.

1.2 Purpose

This project seeks to harness the Orthodox Christian liturgy—comprising communal worship rites such as rituals, hymns, readings, and prayers—as a resource for Orthodox RE teacher professional development (PD). Orthodox theological literature underscores the liturgy's essential function as a pedagogical tool for theology knowledge and spiritual practice (Bradshaw, 2015; Alfayev, 2002). Moreover, this project investigates the translation of professional development in theology teaching into secular teaching contexts relevant to the learner teacher's role as a high school science educator. Orthodox Christian tenets on personal development argue that growth from spiritual practices should permeate all life facets, both professional and personal (Wood, 2018). Thus, the learner teacher's growth within the church context should ideally enhance his teaching capabilities beyond its confines.

1.3 Research Questions and Structure of the Research and Development Project

The primary research question guiding this project is:

> How does mentoring utilizing a Lesson Study-like strategy, evaluated through the Knowledge Quartet (with the addition of relation knowledge), cultivate an Orthodox Christian RE teacher's knowledge base in theology and teaching theology?

This will be pursued through two sub-questions:

Sub-Question 1	What knowledge (foundation, transformation, connection, contingency, and relation knowledge) has the learner teacher developed? And to what degree has the learner teacher developed any of these?
Sub-Question 2	How has the mentoring intervention program developed such knowledge in the learner teacher?

This project primarily explores mentoring intervention methods in the realm of theological teaching.

Initially, a literature review will be conducted to understand collaborative planning based on the Lesson Study Cycle (Takahashi & Yoshida, 2004) and evaluation methods like the Knowledge Quartet (KQ) (Rowland et al., 2005; Rowland, 2013) and Relation Knowledge framework. The potential and challenges of these methodologies in cultivating teacher knowledge will be assessed.

Subsequently, a pre-intervention interview will be conducted with the learner teacher to gauge his theological knowledge. This will guide the design of the intervention program to enhance his teaching proficiency.

The core of the project involves a three-step mentoring process, repeated from January to March 2023:

(a) Collaborative theology study and planning of the lesson,
(b) Observing the lesson delivery, and
(c) Reflecting on the lesson for improvement.

The research will culminate in a post-intervention interview to understand the learner teacher's growth in his theological and theology teaching knowledge. The collected data will then be analyzed to deduce insights and implications for religious educator professional development (PD).

1.4 Significance

1.4.1 To My Role as an Orthodox Christian teacher educator

Having experienced the Orthodox Christian liturgy as an immersive reservoir of theology and theology teaching knowledge, I aim to explore how the elements of the Orthodox liturgy can serve as a source for deepening an Orthodox RE teacher’s understanding of theology, theology teaching, and religious practice. Orthodox Christian RE literature asserts that continual growth in religious practice underpins effective theology teaching (Amaximoaie, 2021). My interest lies therefore in understanding how, as an Orthodox teacher educator, I can assist in-service theology educators to introspect, develop, and

apply liturgical knowledge for Orthodox religious education. This, in turn, enables them to translate their spiritual development into teaching methods that guide students towards spiritual growth and addressing challenges in their communities and personal lives.

1.4.2 To My Learning Community

Conducted within a Coptic Orthodox community in the Philippines, where many families grapple with issues like poverty, broken families, human trafficking, and drug abuse, this project offers insights into effectively nurturing educators. Such insights can empower this Christian community to equip teachers, students, and families in addressing and surmounting these challenges.

1.4.3 To the Field of Religious Education PD

This project also contributes insights into how in-service theology educators can harness early Christian pedagogy, philosophy, history, and traditions to foster spiritual growth, constructing professional development frameworks that enrich both teaching knowledge and practice. Furthermore, while the liturgy's pedagogical significance is recognized, a gap in the literature pertains to studies investigating the explicit use of the liturgy as a pedagogical framework, particularly for teacher PD. This project can serve as a reference for other religious learning communities seeking to integrate their religious traditions into the design of their PD frameworks.

2. Literature Review

This section commences with a review of the literature on teachers' knowledge. Subsequently, a framework for Relation Knowledge will be constructed. Additionally, specific knowledge pertinent to Orthodox Christian teachers will be introduced to address the primary sub-question: What knowledge can a teacher develop from a mentoring program?

Following this, the review will present various definitions of mentoring, with an emphasis on the Lesson Study cycle as the selected mentoring instrument. Notably, given the sparse literature on Orthodox RE mentoring, this review will venture into constructing mentoring approaches. This will be done through an analysis of 2nd Temple Jewish teacher training traditions, the Early Christian methodologies that grew from them, and the continued practices observed in Eastern Orthodox and Oriental Orthodox Christianity. Such an exploration aims to contextualize the project's mentoring approach within its specific RE setting and address the second sub-question of how an Orthodox RE mentoring intervention can develop teacher’s knowledge.

In conclusion, the review will highlight the potential contributions of this project to the ongoing dialogue addressing the interplay between traditional and constructivist teacher training paradigms.

2.1 Teacher's Knowledge

2.1.1 Evolution of Pedagogical Content Knowledge (PCK)

In 1986, Shulman introduced Pedagogical Content Knowledge (PCK) as a pivotal facet of teacher knowledge in the classroom. According to Shulman, PCK can be described in two primary ways: First, it involves the effective representation of subject matter. This is achieved through a variety of strategies such as analogies, illustrations, examples, explanations, and demonstrations, ensuring content becomes understandable to students (Shulman, 1986, p.9). Secondly, PCK is about understanding the elements that influence the simplicity or complexity of learning particular subjects. This includes considering the pre-existing ideas and misconceptions students bring into the classroom (Shulman, 1986, p.9). Therefore, PCK encapsulates a teacher's array of subject-specific methodologies along with a cognizance of the ways students' prior knowledge and backgrounds affect their learning.

Building upon Shulman's foundation, Grossman (1990) further nuanced our understanding. She suggested that PCK is a synthesis of three distinct realms of teacher knowledge: Subject Matter Knowledge, General Pedagogical Knowledge, and Knowledge of Content. Grossman's perspective not only elaborates on the multifaceted nature of teacher knowledge but also underscores the interplay between these domains in shaping PCK.

Research on PCK, while rooted in foundational concepts, has found applicability across a myriad of disciplines. This includes geography (Lane, 2015), history (Harris & Bain, 2011), and mathematics (Even, 1993). While the core tenets of representation, strategies, student learning, and conceptions have been championed by Shulman (1987), other scholars, such as Cochran et al. (1993), have incorporated elements like subject matter, general pedagogy, and context. However, amid these variances, a consensus emerges around PCK necessarily involving representation, strategies, student learning, and conceptions, with several frameworks integrating additional elements (Tamir, 1998; Grossman, 1990; Marks, 1990; Fernandez-Balboa & Stiehl, 1995; Magnusson et al., 1999; Carlsen, 1999; Louhgran et al., 2001).

Delving deeper, Gess-Newsome (1999) offered two innovative models of PCK. The integrative model, depicting the PCK of novice teachers, emphasizes subject matter, pedagogy, and context as distinct knowledge domains. Their interrelation enhances the overall teaching experience (Lee & Luft, 2008). Conversely, the transformative model illustrates the PCK of more seasoned educators. Here, subject matter and pedagogy are seamlessly integrated and adapted in real-time classroom scenarios (Lee & Luft, 2008). Lederman et al. (1994) echoed this idea by suggesting that heightened PCK in experienced educators minimizes compartmentalized thinking.

Expanding on PCK's conceptual boundaries, the notion of Pedagogical Content Knowing (PCKg) emerged. This framework, stemming from Cochran et al. (1993),

transitions from the static perception of "knowledge" to the dynamic process of "knowing", emphasizing the constructivist view. Such a stance posits that 'knowing' is more of an active construction through the blending of pedagogy, subject matter, students' individual attributes, and the prevailing educational environment.

Rowland et al. (2005) introduced a contemporary framework termed the Knowledge Quartet (KQ), initially crafted with primary math educators in mind. It encompasses four key pillars: Foundation Knowledge (Fk), Transformation Knowledge (Tk), Connection Knowledge (CTk), and Contingency Knowledge (CYk). While Fk captures beliefs, subject expertise, and pedagogical strategies, Tk revolves around communicating this foundational knowledge effectively to students. CTk is about strategically sequencing topics and weaving connections between lessons. In contrast, CYK addresses the teacher's adeptness at navigating unforeseen classroom challenges. The KQ framework harmonizes past research insights while spotlighting unique facets, particularly emphasizing contingency skills.

Shulman (2023) has recently critiqued his own work around PCK. While the essence remains, Shulman opines that the initial focus perhaps skirted student outcomes. This refocus calls for a closer alignment of teacher knowledge research with tangible student outcomes and the emphasis on localized, precision-driven studies. This perspective echoes Rowland's emphasis on localized context, wherein he underscores the crucial role of experienced teacher educators in guiding these introspections (2013).

Research into the distinct knowledge base of RE teachers has garnered attention only in recent times. Freathy et al. (2014) noted that broader studies on teacher professionalization frequently bypassed RE educators. However, foundational works such as Jackson (1997) began addressing this gap. Subsequent research by Bryan and Revell (2011) and Everington (2011) underscored the interconnectedness of an RE teacher's professional role with personal facets like cultural identity and religious affiliation. Everington (2012) emphasized that RE teachers uniquely leverage personal experiences, feelings, and thoughts to elucidate RE subject matter while fostering trust and open communication with students. Delving deeper, Freathy et al. (2014) pinpointed specific knowledge categories for RE teachers. While some mirrored the types found in general teacher knowledge, such as subject expertise and pedagogical strategies (Rowland et al., 2005), others, like a general psychological understanding of students and the ontological connection of lessons to students' broader existential experiences, offered a unique lens for RE teacher knowledge. Baumfield (2016) further characterized addressing societal and psychological issues as a pivotal goal for RE educators. Therefore, RE teacher training should holistically encompass generic teaching principles and those particular to RE.

2.1.2 Relation Knowledge (Rk)

In examining the corpus of literature that addresses the distinct knowledge types relevant to RE teachers, this project introduces "Relation Knowledge" as a new, integral component in the pedagogical toolkit of an RE teacher. While earlier discussions focus

on philosophical, psychological, social, and personal life knowledge as essential facets of RE teaching, "Relation Knowledge" derives its theoretical basis from Fraser-Pearce (2003), Vokey (2003), Hand (2003), and Hay (2017). This innovative form of knowledge specializes in the spiritual domain, emphasizing the teacher's ability to cultivate spiritual connections with oneself, others, and God.

Vokey (2003) offers foundational insights into spirituality by claiming that, “Spirituality typically manifests as or leads to experiences of connectedness.” This notion of connectedness is crucial for understanding spirituality. To prevent confusion with Rowland et al.'s (2015) "Knowledge Quartet," this project deliberately refrains from using the term "connection knowledge." Hay (2017) further clarifies this concept by describing spirituality in terms of "relation conscience," which encompasses (a) heightened psychological and physical awareness, and (b) connections with oneself, others, the environment, and God. Therefore, the first layer of Rk involves an educator grounding their teaching in an authentic awareness and connection across these multiple domains. Similarities can be drawn with the pedagogical intervention of explicit modeling, where the educator explicitly demonstrates desired behaviors or thought patterns to their learner teachers (Loughran & Berry, 2005). In the context of Rk, however, teachers must embody spiritual qualities and actions, such as prayer, loving-kindness and theological knowledge, which they intend to pass onto their learners.

Hand (2003) offers another perspective, focusing on a student's spiritual bond with the divine. He suggests that educators need the knowledge to influence a student's intentions, character, and broader personality. This form of knowledge equips teachers to integrate shared spiritual practices, such as prayer, chanting or meditative reading, in their teaching methodologies. Drawing a parallel with experiential learning as described by Savery (2006), educators are encouraged to use real-world scenarios as teaching tools, emphasizing problem-solving. Hand's (2003) approach, however, would diverge from a non-religious experiential learning by emphasizing the use of religious practices such as prayer and liturgical actions in the classroom, rather than mere real-world problems, as activities for spiritual growth and theology knowledge acquisition.

Fraser-Pearce (2022) introduces another dimension, emphasizing an overarching purpose. He suggests that activities aim not just at human interaction but at forming a bond with the transcendent — or God. This view implicitly recognizes a higher reality. Consequently, the apex of Rk, involves an educator's knowledge to align classroom strategies and interactions toward the overarching goal of connecting with the divine. While Hand (2003) and Hay (2017) allow different interpretations of the purpose behind spiritual formation, Fraser-Pearce's (2022) perspective is more explicit about the centrality of directing all learning phenomena to the primary aim of connecting with the divine. In other words, this is the knowledge of a teacher to make decisions about the purpose of each lesson, activity, and the program as a whole, the purpose being to know God.

In conclusion, Relation Knowledge distinguishes itself as a unique facet of the RE teaching toolkit, particularly for educators with a religious affiliation. It unfolds in three layers: the knowledge required for modeling religious or spiritual qualities, the knowledge needed for using shared spiritual practices to foster holistic student growth, and the knowledge for directing all educational activities toward the ultimate goal of communion with the Divine.

2.1.3 Orthodox Theological Knowledge

In Orthodox Religious Education (RE), there exists a unique content knowledge framework often employed in Orthodox religious schools. This framework has its origins in the exegetical approach of Origen, a 2nd-century Christian church father. As elucidated in his work "Philocalia" – translated as “Love of the Beautiful” – this ancient framework remains pivotal in Orthodox theological discourse even today (Kurdybailo, 2017; Blaski, 2019; Edwards, 2023). However, some scholars have raised concerns from within the Orthodox tradition regarding Origen. Their criticisms largely center around potential imbalances in his work, suggesting he might have merged Christianity with Greek (Hellenic) philosophy without sufficient critique. Others argue that his texts may have been altered by students or editors posthumously, potentially pushing them more towards Hellenic thought rather than an apt synthesis of Christian theology and Greek philosophy (Lyman, 2011; Martens, 2015; Daniélou, 2016).

Origen's exegetical method identifies three primary components of theological knowledge. The first, "Literal Knowledge," delves into the histories and narratives within Christian scriptures. It involves detailed studies of religious texts, emphasizing linguistic nuances, syntax, wordplay, and other literary techniques. The second, "Moral Knowledge," is defined by the ethical standards, principles, and ideals derived from sacred scriptures. The third, "Spiritual Knowledge," encompasses the allegorical aspects of religious texts, portraying characters, narratives, and symbols as representations of Christ, the Divine, and the wider church community. This form of knowledge offers deep insights into existential questions about reality and human nature, interpreting overarching patterns of human development from historical events. It also delves into nuanced facets of human psychology (Origen, Gregory, & Basil, 1893) with prayers, hymns, scriptural readings, and rituals from the liturgy as potent sources for all three types of knowledge (Bradshaw, 2015).

From a pedagogical perspective, a primary goal for a specialized Orthodox RE Professional Development (PD) would be, using Rowland et al.'s (2005) framework, to enhance the Orthodox learner teacher's Fk with these three theological knowledge types. Furthermore, it is imperative to equip the learner teacher with the Tk needed to impart this knowledge effectively to students. In the context of Rk, an Orthodox learner teacher would employ literal, moral, and spiritual knowledge as tools to deepen their theology knowledge and connection with God, nature, and others (Hay, 2017). This knowledge then enables them to guide students' own development (Hand, 2003) primarily to foster a connection with the Divine (Fraser-Pearce, 2023). However, given

the critiques above on Origen, any PD program should be approached with nuance, addressing the intricacies and potential pitfalls of adopting Origen as a central figure in shaping Orthodox RE theology Fk.

2.2 Mentoring

This section will cover general frameworks for mentoring, followed by a treatment on the Lesson Study Cycle and its possibilities for teacher knowledge development and mentoring interventions for both general and RE teacher training. It will then cover mentoring approaches and teacher knowledge development, which can be derived from 2nd Temple Jewish teacher education, the Early Christian tradition that grew from it, and the Oriental Orthodox and Eastern Orthodox RE teacher training approaches that continue these traditions.

2.2.1 General Frameworks for RE Teacher Mentoring

Pennanen et al. (2015) delve into the intricate etymology of mentoring:

- Drawing inspiration from Fénelon’s Les Aventures de Télémaque, Roberts (2000) highlights the character 'Mentor'. Based on the Greek word Mentor, this character represents a form assumed by the goddess Athena to guide Odysseus. Here, the mentor is visualized as a guiding figure with profound or divine knowledge, steering the younger or less experienced individual.

- Another interpretation stems from the Proto-Indo-European term *mon-eyo*, translating to “one who thinks.” This view molds the mentor as a reflective figure, imparting wisdom to those under their guidance.
- Collectively, these insights sculpt the conventional notion of mentorship: a relationship anchored between a mentor and protégé or between master and disciple.

However, Pennanen et al. (2015) articulate concerns surrounding these classical interpretations of mentoring. A salient issue is the insinuated power hierarchy. Such traditional views can often depict a unilateral authority structure, potentially positioning the mentee as subordinate. This can inadvertently lead mentors to enforce their methodologies, stifling the mentee's creative prowess.

To address these concerns, Pennanen et al. (2015) introduce socio-constructivist and sociocultural perspectives on mentoring. At the heart of these views lies a focus on social engagement, immersive social learning environments, and active involvement in professional communities. This approach blossoms into co-mentoring, mutual mentoring, and reciprocal mentoring. All of these advocate asymmetrical, cooperative partnerships where both parties evolve, mentor one another, and foster a vibrant exchange of ideas. Such models hold promise for stimulating innovation in educational settings. Nonetheless, the project underscores an evident gap: the lack of precise definitions for mentoring within the educational realm, signifying current constraints in modernizing mentorship paradigms.

Orland-Barak & Wang (2015) argue against compartmentalizing the multi-dimensional essence of mentoring into discrete approaches. Instead, they advocate for the creation of a framework, enabling mentors to intentionally harness the strengths of consructivist and traditional methods tailored to the unique contexts of their pre-service teachers. Such a scaffold addresses the challenge of intentionality, equipping mentors with a theoretical compass to address the diverse needs of their pre-service teachers with more precision and reflection. This blueprint begins with three knowledge types for the mentor, or teacher educator:

- **Diagnostic:** At this juncture, the mentor becomes adept at gauging the learning and personal trajectories, strengths, extant knowledge, and professional aspirations of the pre-service teacher. Armed with these insights, mentors can curate a bespoke learning journey.
- **Deliberative:** This is the realm of tactical mentoring. With a repository of teaching strategies and resources at their disposal, mentors judiciously choose which to employ, ensuring alignment with the pre-service teacher's professional objectives and their learning community's goals. Thus, mentors possess the acumen to transition seamlessly from emphasizing core teaching principles to encouraging pre-service teachers to critically assess them.
- **Inquiry:** Under this umbrella, mentors exhibit introspective acumen. They critically assess the merits and limitations of their mentoring arsenal and methodologies. This profound self-awareness translates into addressing

mentorship challenges – both their own and those encountered by their pre-service teachers – with a heightened sense of comprehension. It fosters a mentorship ethos underpinned by reflective discernment.

Orland-Barak & Wang's research refrains from staunchly advocating either traditional or contemporary mentoring paradigms. Instead, they present a pragmatic lens through which mentors can draw from a diverse spectrum of methodologies, thereby catering to the evolving needs of their learner teachers. The essence of their proposition lies not in the contention of modernizing mentorship but in harnessing both conventional and novel approaches to holistically serve the pre-service teacher.

Recently, Orland-Barak & Wang's (2020) research have culminated into four distinct mentoring strategies, each embodying elements from both pedagogical realms, though the strategies lean more towards one end.

- **Personal Growth Approach:** Here, the mentor's role pivots towards nurturing. They become instrumental in recognizing and addressing the personal challenges of their pre-service teachers. This approach advocates for an environment where experimentation is encouraged, ensuring the mentor doesn't unduly impose their beliefs or methodologies.
- **Situated Learning Approach:** Rooted in experiential learning, this method sees the mentor assuming the role of a prototype. They leverage their vast experience and expertise, serving as an exemplar for their pre-service teachers to emulate.

This strategy places a premium on the technicalities and procedural intricacies of teaching, leaving personal needs at the periphery.

- **Core Practice Approach:** The essence of this approach lies in its foundation. Mentors emphasize instilling cardinal teaching principles. The goal is to ensure pre-service teachers internalize these tenets, enabling them to adapt and apply them across diverse teaching contrxts.
- **Critical Transformative Approach:** Pivoting towards introspection and critical analysis, this strategy casts the mentor as a co-learner. The objective is dual-fold: fostering a keen analytical eye in the pre-service teacher to identify and rectify teaching issues and acquainting them with diverse pedagogical methodologies. The overarching aim? Advocacy for social justice in the education sphere.

Drawing parallels with Pennanen et al.'s (2015) insights, it can be posited that both B and C mirror the more traditional mentoring schemas. The emphasis in these approaches on mentors as exemplars, whether they are disseminating technical knowledge or foundational teaching principles, aligns with classical mentorship connotations. Such connotations often are reminiscent of mythical or divine inspirations intrinsic to the term "mentor."

Conversely, A and D are reflective of the more socio-constructivist and sociocultural paradigms elucidated by Pennanen et al. (2015). Approach A is predicated on fostering independence in the pre-service teacher, deliberately undermining the imposition of the

mentor's personal beliefs. Meanwhile, approach D champions critical thinking, even pushing pre-service teachers to scrutinize established teaching practices, including those of their mentors. Collectively, both these approaches challenge and deconstruct conventional mentor-mentee power dynamics. They recast the pre-service teacher as a proactive contributor, capable of critiquing entrenched educational hierarchies and pioneering alternatives. This is a marked deviation from traditional mentorship paradigms that often perceive these power dynamics as sacrosanct, something to be revered and perpetuated from the master teacher to the novice.

In summary, the mentoring literature reveal discussions, debates and attempts at synthesis between various traditional and constructive mentoring approaches.

2.2.2 Lesson Study

This section will detail Lesson Study, its definition and history followed with an analysis of how it can to develop teacher knowledge and serve as a teacher mentoring instrument. It will then conclude with a survey of LS variations from the literature and the variation adapted for this project.

2.2.2.A Origins

Lesson Study (LS) was first introduced by Makoto Yoshida as "jugyo kenkyuu," translated from Japanese as "research study" (Takahashi and Yoshida, 2004). It

comprises four primary activities: study, collaborative planning, joint observation, and group reflection, executed in repeated cycles by teachers observing a classroom lesson on the same topic. The goal is to collect and analyze data to formulate principles for instructional improvement (Lewis and Tsuchida, 1998; Wang-Iverson and Yoshida, 2005). This distinguishes LS from certain teacher education approaches in North America, where the emphasis has typically been on large-scale, national studies (Lewis, 2002b; Perry and Lewis, 2004).

Central to successful LS is the notion of "local proof," emphasizing its execution within local teaching communities rather than on a broad national scale (Lewis et al., 2006). Several studies have showcased the efficacy of LS across various professional development areas (Marble, 2007; Pang and Marton, 2003; Perry and Lewis, 2009). **Figure 1** illustrates a Lesson Study cycle, consisting of four steps, repeatable at the discretion of the learning community.

Study	Teaching material, curriculum, school and district standards, principles and long-term goals
Plan	Lesson goals, activities, sequence, anticipate student reaction and challenges, choose mode of data collection from lesson
Collect Data	One colleague teaches and the other observes taking notes

Reflect	Share and discuss data to draw implications for future lessons, teaching strategies, student learning results,

Figure 1

Dudley (2011) offers a model emphasizing the interconnectedness of multiple LS cycles. He suggests that the optimal implementation of LS interventions is through iterative cycles, honing instructional improvement insights via constant implementation, observation, and analysis.

For the development of a teacher's knowledge, as delineated in Rowland et al's (2015) Knowledge Quartet and relation knowledge, LS holds implications. Subject knowledge (Fk) on a specific topic can be honed through repetitive planning in an LS cycle. Tk can also evolve as pedagogical strategies are jointly determined, observed, and enhanced. Particularly, the "Study" phase of LS focuses on curriculum analysis, ensuring lesson plans align with curricular sequencing decisions, school standards, and more. More experienced teachers can model CTk during the data collection phase, and it can also be reflected upon and improved in the reflection phase. Opportunities to build Rk within the LS framework include examining overarching theology teaching standards, reading theological texts, and suggesting spiritual disciplines during the planning phase. Both the planning and reflection phases can bolster an RE teacher's ability to facilitate students' spiritual growth and showcase genuine concern for their students' personal and spiritual lives (Arko, 2022; Fraser-Pearce, 2022).

In terms of teacher mentoring, LS's foundational studies accommodate both traditional and constructivist approaches. The planning phase is conducive to a traditional approach where the teacher educator models lesson planning and takes the lead in deciding lesson activities. In such a scenario, they function authoritatively, conveying pedagogical insights and setting the lesson's tone (Pennanen et al, 2015). Yet, even early Japanese studies of LS (Lewis and Tsuchida, 1998; Wang-Iverson and Yoshida, 2005) endorsed a constructivist mentoring approach. Here, the experienced teacher can be critiqued by the learner teacher during the reflection phase. The chance for novice teachers to critically dissect their senior's teaching methods aligns with the constructivist, critical transformative approach (Orland-Barak & Wang, 2020). LS can be construed as predominantly fitting this transformative approach, albeit without an explicit emphasis on social justice advocacy (Lewis and Tsuchida, 1998).

2.2.2.B Variations in the Literature

LS adaptations have surfaced in various countries. Takahashi and McDougal (2016) detail a variant termed Collaborative Lesson Research, a deviation from the traditional Japanese model. In Hong Kong, a unique LS variant, Learning Study, has gained prominence, melding Lesson Study with design experiments (Marton and Morris, 2002; Marton and Tsui, 2004). A notable distinction between LS and Learning Study is the latter's explicit focus on theory development, while LS emphasizes instructional enhancement (Dudley, 2014; Elliott, 2019).

2.2.2.C Variations Specific to this Project

This project will apply a customized LS variant, tailored to our learning community's teaching schedule. It will align with the foundational elements of the original LS (Lewis, 2002b; Lewis et al., 2006). The primary deviation will be a shift from repeated lessons on the same topic to varied theology topics, given that we are working with a single learner teacher who covers a different topic in each class. As a result, the derived theology teaching knowledge will lean more towards refining general pedagogical strategies, with theology knowledge selection contingent on the inaugural topic of each cycle.

In conclusion, LS provides a structured pathway for enhancing knowledge types outlined in the Knowledge Quartet (Rowland et al., 2015) and Rk. Additionally, it offers flexibility for employing both traditional and constructivist mentoring methodologies, which presents opportunities to compare the strengths and limitations of the respective approaches should this project employ both mentoring methodology types in its unique adaptation of LS.

2.2.3 Mentoring Approaches Derived from Early Judeo-Christian Methods

2.2.3.A 2nd Temple Judaism Mentoring Approaches

The section transitions from a general examination of research on mentoring learner-teachers to a targeted look at mentoring practices from the Jewish tradition based on the religious practice oriented on the 2nd Jewish temple constructed in Jerusalem (Cohn, 2013) and which Jesus and his own learner teachers, or disciples, reportedly arose in (Church, 2017). This tradition is the historical origin for the Orthodox Christian communities that my learner student and I are part of (Bucur et al., 2009).

Firstly, Ueberschaer (2017) provides a conceptualization of the ideal religious teacher or sage, drawing insights from the book of Ben Sira (Sirach). This early Jewish scribe's work is a cornerstone in both Greek Jewish and Christian scriptures. Contextually, a sage operates not only as a teacher but also as an RE (Religious Education) teacher educator since their students typically progress to become religious educators within the Jewish community. Ueberschaer illustrates how an RE teacher educator nurtures a father-son kinship with their learner-teachers. This resonates with Pennanen et al. (2015), who suggest that traditional mentorship often mirrors a master-disciple dynamic. Pouchelle (2017) expands on this master-disciple kinship, portraying the sage's impartation of Torah knowledge (Jewish law and wisdom) as akin to a son receiving an inheritance from his father. While this aligns with Orland-Barak & Wang's (2020) depiction of core practice mentorship, the portrayal of RE knowledge as inherited sacred knowledge distinguishes it from mere academic principles.

Secondly, the teacher educator, as posited by Ueberschaer (2017), is an adept educator, capable of innovating within traditional teaching frameworks. Such innovation

may include unique methodologies to interpret theological texts and formulating structures for philosophical reasoning, both of which can then become integral to Jewish theology subject knowledge. While there is semblance between this and Orland-Barak & Wang's (2020) constructivist personal growth approach, a stark distinction emerges: it is the teacher educator who pioneers these methods, not the learner-teacher, who can also pioneer, but only when they have become master RE teachers. The contributions of the teacher educator thus serve as model practices for honing technical RE skills, aligning with Orland-Barak & Wang's (2020) situated learning mentoring.

Uusimäki (2017) also comments on Ben Sirah's vision for shaping a sage, outlining a reservoir of activities available to a 2nd Temple teacher educator. While some activities, like reading, interpreting, and writing theological knowledge, can be seen as generic training methods that develop Fk subject knowledge (Rowland et al., 2015), others are distinctly spiritual. These include reflecting on the lives of esteemed sages and engaging in communal prayer of which the Jerusalem temple's liturgical traditions alongside liturgical traditions practiced in synagogues outside of Jerusalem and Israel were the main source. Further activities center on self-cultivation, such as impulse control and altruism (Hay, 2017). The ultimate objective of these activities is the internalization of Jewish wisdom (Torah), echoing Pennanen et al. (2015) by emphasizing the mentor's role in imparting divine knowledge to the mentee.

In conclusion, 2nd Temple Jewish RE mentoring predominantly aligns with traditional approaches, as evident from Ueberschaer's (2017) and Uusimäki's (2017) research,

which mirrors Orland-Barak & Wang's (2020) traditional paradigms. However, while the focus of this mentorship is on imparting Jewish wisdom, it arguably does not render the knowledge static. The Torah, passed from generation to generation, serves as an empowering source of creativity, exemplified by the innovative contributions learner teachers can produce once they have grown into master teachers.

2.2.3.B Early Christianity Mentoring Approaches

In this section, I endeavor to extrapolate insights on early Christian teacher training and mentoring practices from existing literature. While direct evidence on early Christian mentoring is scant, an examination of St. John Chrysostom's influential teachings on priestly training might shed light on potential mentoring approaches. As priests inherently assume the role of educators, Chrysostom's guidelines can offer valuable insights into an early Christian mentoring approach.

St. John Chrysostom begins by emphasizing that the journey to priesthood must start with a profound experience and response to God's love found in Christ. This sentiment aligns with Fraser-Pearce's (2022) emphasis on the paramount importance of connecting with the divine in religious education (RE) mentoring. Drawing from this, it can be inferred that an early Christian mentor would perceive themselves not as the primary catalyst in a learner teacher's development (a role reserved for God) but rather as a supportive figure guiding to and sharing in this connection with God. Further, Chrysostom calls for the necessity for aspiring priests to achieve self-mastery over their

emotions and psyche. This mirrors the emphasis seen in 2nd temple Judaism (Uusimäki, 2017). Such mastery ensures clarity, fostering empathy and the ability to guide other Christians. Chrysostom likens this to a physician administering treatment based on a patient's healing capacity rather than the disease's severity (Arko, 2022). This parallels Baumfield's (2016) characterization of RE teachers' knowledge base, particularly its psychological facet. Such a mentoring approach would also aligns with Orland-Barak & Wang's (2020) personal growth model, emphasizing a mentor's role in addressing learner-teachers' personal challenges.

Furthermore, Chrysostom's guidelines for priestly training are rooted in Christian incarnational theology. This asserts that just as Christ, who is God, incarnated as man to transform human reality, a Christian priest must also "become their student" and immerse themselves in their students' experiences. Consequently, mentoring would involve a profound understanding of the learner-teacher's emotional realm, challenges, and personality (Barbu, 2015). Emulating Christ's "kenosis" or self-emptying (Barbu, 2015), an ideal mentor would prioritize the needs of their learner-teachers thereby approaching mentoring as a support especially in its attention to addressing the learner teacher's personal needs. This psychological emphasis mirrors Orland-Barak & Wang's (2020) personal growth model, emphasizing the personal challenges of the learner-teacher. However, instead of promoting free experimentation as suggested by Orland-Barak & Wang, the early Christian methodology leans traditional. It positions addressing the learner teacher's personal needs as the pathway to impart foundational

teaching principles, equipping them for the varied roles of priesthood and the array of challenges they might face.

In addition, Chrysostom promotes a unique ascetic-scholarly methodology. This blends academic rigor with ascetic disciplines like fasting and the spiritual activity of prayer, framed as athletic endeavors for spiritual development (Arko, 2022). Such holistic training, encompassing academic, psychological, and physical realms, was imparted in learning communities, which blended elements of seminary and monastery environments (Arko, 2022) as aspiring priests and their teachers lived and prayed together, paralleling monastic life, but with the purpose of eventually leaving to serve various churches. This communal aspect underscores that early Christian mentoring was not an isolated relationship but deeply rooted in the religious community, reminiscent of Orland-Barak & Wang's (2015) deliberative approach, which focuses on the learning community and preparing learners teachers for its goals.

In summary, Chrysostom's teachings can suggest a mentoring approach that nurtures the learner-teacher psychologically, academically, and physically within a communal setting drawing upon scholarly and spiritual activities such as reading and praying practiced especially during the liturgy. This methodology, with its roots that could be traced back to 2nd Temple Jewish practices, would align most closely with traditional approaches in both its goals and execution of passing down sacred, higher knowledge (Pennanen et al, 2015), culminating in a connection with Christ (Arko, 2022).

2.2.4 Orthodox Christian Frameworks

This segment delves into the Eastern and Oriental Orthodox paradigms for RE teacher enhancement. Similar to the prior section, the majority of the literature primarily addresses broad RE teacher training or RE teaching, with a scant focus on mentoring. Consequently, I will once again extrapolate and suggest potential mentoring methodologies from these approaches.

2.2.4.A Coptic (Egyptian) and Tewahedo (Ethiopian) Oriental Orthodox Traditions

Literature on the development of teachers' expertise within the Coptic Orthodox RE realm is sparse. However, insights can be drawn from Suriel's (2014) exploration of the teachings of the recently canonized deacon, Habib Giris, on guiding Coptic Sunday school educators in rural regions. The strategies intertwine social and spiritual dimensions (Suriel, 2014). On the societal side, teachers engage in (a) discussions about local village concerns, along with periodic village visits, (b) liaising with a central committee for Coptic Sunday schools for guidance and materials to enhance their teaching skills, and (c) procuring the village's official census to gain insights into family outreach, community layout, and local transport logistics. Spiritual practices encompass (a) contemplative planning and prayer sessions, (b) evening assemblies intertwined with prayer, educational studies, and scheduling activities, and (c) dedication to fasting, praying, and memorizing various holy scriptures (Suriel, 2014). The first suite of activities underscores the pivotal role of community engagement, aligning a Coptic RE

teacher's role with facets of social work. Given this context, a mentor guiding a novice Coptic teacher would integrate the community-centered strategies found in Orland-Barak & Wang's (2015) deliberative approach. Yet, the ascetic practices such as fasting and nightly prayers, outlined in the latter set, mold the mentoring approach to mirror the early Christian pedagogies, akin to Chrysostom's ascetic-academic ethos (Arko, 2022). This combination potentially bestows a traditionally grounded framework to a Coptic RE teacher mentorship program, but one that would emphasize knowledge of community issues as critical Fk (Rowland et al, 2015).

The Ethiopian Orthodox tradition offers a distinct blend of ascetic, scholarly, and contemplative methodologies to cultivate their RE teachers or *Qene* (poetry/psalm) scholars (Mulualem et al., 2022). According to Lee (2022), Ethiopian Orthodox RE is rooted in a practice where profound contemplation is built upon memorization. For example, novices, often children, start by committing prayers, hymns, church liturgies, and biblical or patristic texts to memory. These scholars then progress to spontaneously craft liturgical poems and hymns that intertwine biblical narratives, societal commentary, and profound theological insights. Master scholars achieve the feat of memorizing the entire biblical canon and extensive early Christian theological works, all in Ge'ez, Ethiopia's liturgical Semitic language. Training transpires in ascetic settings, where scholars reside in monasteries or churches, often in remote areas, dependent on community alms. Their daily rituals involve extended sessions of chanting, committing scripture, theology, and hymns to memory, aspiring towards an ideal Fk (Rowland et al, 2015) where they can access this wealth of knowledge sans reference materials. This

rigorous training culminates in them becoming RE teachers. Essentially, theological education and RE teacher training in this paradigm are intertwined. Regarding Tk (Rowland et al, 2015), Qene teachers hone their adaptive teaching skills, catering to diverse student groups in open-air classes, usually congregated in natural landscapes. In other words, these aspiring scholars commit to living in voluntary poverty. Such physical rigor is believed to develop moral virtue and physical discipline, leading to an acute sense of the divine (Mulualem et al., 2022). A mentoring methodology derived from this Ethiopian RE system would resonate with Chrysostom's ascetic-scholarly approach (Arko, 2022), yet integrated with the constructivist element seen in Orland-Barak & Wang's (2020) personal growth model as this synthesis would emphasize tradition and community within the confines of the Ethiopian church's traditional linguistic and theological knowledge but would also require teacher innovation in theology knowledge in the form of self-composed and spontaneous liturgical hymns and poems. Therefore, the mentor-mentee bond would remain traditional, but it would foster creative exploration contrary to the notions presented by Pennanen et al. (2015). Moreover, all of this would be set in natural, but spartan learning spaces in the wilderness or distant villages.

Consequently, potential mentorship programs stemming from the Oriental Orthodox tradition, as exemplified by the Coptic and Ethiopian churches, would predominantly lean towards the traditional. However, constructivist aspects manifest in the Coptic mentoring approach, in its focus on social engagement (Pennanen et al., 2015) while

the Ethiopian approach would emphasize nurturing religious scholar-poets expected to create original theological knowledge (Fk).

2.2.4.B Russian and Romanian Eastern Orthodox Tradition

Amaximoaie's (2021) biographical examination of Romanian Orthodox RE teachers underscores the indispensable role of a spiritual father—be it a married priest or monk—in what could be a mentorship approach rooted in the Romanian Orthodox tradition. The research focuses on the regular practice of confession (i.e. weekly and as a requisite to partaking of the rite of communion during liturgy) to this spiritual father, who, because of their profound understanding of the teacher’s personality, theology knowledge, and insight into human psychology, is deeply trusted. The teacher dives into self-examination prior to confession to identify personal faults, unhealthy habits, excessive or obsessive thoughts, and tendencies committed consciously or unconsciously to disclose to the spiritual father. In response, this guide offers counsel, pinpoints underlying causes for these flaws, and prescribes remedies such as prayer, meditation, or reconciliation with others, all aimed at allowing the teacher to experience what is believed to be the redemptive love of God. This process is believed to yield both personal and professional transformation for the teacher. This dynamic already resembles a mentor-mentee relationship, with distinct traditional overtones: a master-disciple interaction where the spiritual father bestows wisdom through reflection (Pennanen et al., 2015), but more importantly, genuine parental care (Amaximoaie, 2021). Additionally, this mentoring aligns with Orland-Barak & Wang's (2020) personal

growth approach, especially given its emphasis on the mentor's sustained attention to the mentee's personal challenges. Yet, its primary objective mirrors Chrysostom’s traditional psychological methodology (Arko, 2022), where personal transformation is foundational, intertwined with growth in theological knowledge and deepened connection to the divine. It would then be a mentoring approach focused on developing self-awareness and a deepening connection with God, the first type of relation knowledge (Hay, 2017).

A Russian study by Komashinskaia & Tsurkan (2019) outlined the primary aims of Russian Orthodox Sunday school teachers as focusing on upbringing rather than mere education. These objectives encompassed fostering pupils' intellectual and spiritual growth, promoting physical exercise, and instilling occupational skills. These aims were summarized into three knowledge domains: theological (liturgical rituals alonsgide knowledge and development of virtue), academic (subjects like math, physics, arts, and Russian history), and technological (familiarity with technology and craftsmanship). The study references St. John of Kronstadt's emphasis that Orthodox RE should address societal "ignorance of God and of themselves" Holy Righteous John of Kronstadt, 2014) and posits that teachers, serving as moral exemplars, impart such social engagement through modeling and instruction. The research underscored the stringent moral criteria for teachers, reflecting the belief that a teacher can only teach a societally concerned spiritual approach they possess in the first place. This mirrors the concept that spiritual education mandates the educator's self-discipline and divine connection (Hay, 2017), as instruction is primarily through modeling. Given the overarching aim to support a child's

comprehensive upbringing, a mentorship approach derived from this would likely align with Orland-Barak & Wang's (2020) personal growth approach, emphasizing holistic care. However, the extent to which personal experimentation is encouraged remains ambiguous. Considering the central role of modeling in this tradition, the situated learning approach's (Orland-Barak & Wang, 2020) depiction of mentors as exemplifying RE teaching as supporting holistic child upbringing and social engagement would most closely resonate with this practice, making the mentorship program predominantly traditional.

Similar to their Oriental Orthodox counterparts, RE teacher mentoring methods which could be drawn from Eastern Orthodox traditions also lean heavily into the traditional paradigm rooted in earlier Jewish and Christian sources. However, these mentoring strategies counter Pennanen et al. (2015) critiques of traditional methodologies, asserting that the knowledge acquired is both psychologically reflective—as could be gathered from the Romanian Orthodox confessional practice—and socially engaged, as suggested in a Russian Orthodox paradigm of child upbringing and social immersion.

2.2.4.C Summary

The mentoring methods derived from both Jewish and Christian traditions lean heavily towards traditional, hierarchical relationships (Pennanen et al., 2015). However, rather than stifling creativity or engagement, the mentee teacher's growth within such a structure can arguably be seen as socially and academically engaged and even

generating original subject knowledge (Fk). Contrary to the perception that a stringent, traditional mentoring environment might constrict, these traditions, in practice, could actualize the creative prowess of the teacher.

In terms of this project, it is then likely the project's adaptation of LS may lean more traditional in its approach to teacher mentoring, especially given its context within a Coptic Orthodox learning community that aims to focus lesson content on the church's liturgy to address social issues. Yet, in these RE teacher education traditions, the mentoring process is argued to be enriched by the unique nature of theological knowledge being shared. Such mentoring would not merely be about transmitting concepts or principles or even an abstract notion of wisdom, but about what these Jewish and Christian sources would consider a dynamic, transformative, and loving connection with the divine, or the presence of God. It remains to be seen, however, whether this dynamism is evident in this project's findings.

2.3 Conclusion of Literature Review

This literature review explored research on teachers' knowledge, subsequently formulating a framework for Relation Knowledge tailored to accompany the Knowledge Quartet (Rowland et al, 2015) for its RE context. This framework was further enhanced by integrating specific knowledge types essential for an Orthodox Christian RE setting. These deliberations sought to address the primary sub-question concerning the knowledge an Orthodox RE teacher might develop within a mentoring program.

The review then transitioned into the field of teacher mentoring, starting with general definitions and frameworks, and particularly emphasizing the adoption of the Lesson Study Cycle (LS) as the mentoring instrument. The review dissected the potential of LS in fostering teachers' knowledge and its potential utilization in either traditional, constructivist, or a blended approach. The specific adaptation of LS for this project was also detailed.

Subsequently, the literature review delved deeper into contextualizing mentoring within an Orthodox Christian RE teacher training milieu to construct possible Orthodox RE mentoring methodologies which can answer the second sub-question of how this project's intervention program can support the learner teacher's theology and theology teaching knowledge development. This entailed extracting mentoring methodologies from Jewish, early Christian, and both Oriental and Eastern Orthodox traditions which focused on preparing scholars, teachers, and priests largely by and for liturgical work. A critical observation highlighted the predominantly traditional nature of the discerned approaches. The review then reflected upon critiques of traditional mentoring paradigms, positioning this project to contribute to this particular issue.

3. Methodology

The methodology section delineates the research's foundational elements. It commences with an exposition on the nature of this research and the underlying rationale **(3.1)**. This is succeeded by a comprehensive outline of the adapted Lesson Study cycle employed **(3.2)**. Subsequent sections detail the data collection instruments **(3.3)**, emphasizing their alignment with the research questions, and the data analysis procedures instituted for coding the accumulated data **(3.4)**. The narrative then segues into depicting the collaborators integral to the project and their respective contributions **(3.5)**. The chapter addresses the ethical considerations woven into the project's fabric **(3.6)** and the potential limitations inherent to this project's methodology **(3.7)**.

3.1 The nature of this project

This project adopts an action research intervention approach (Tomal, 2010), beginning with the identification of a problem articulated through its research question. This question focuses on the development of theology and theology teaching knowledge for an Orthodox RE teacher. To address this, a coaching intervention program was designed, aiming specifically at bridging gaps in theology and teaching knowledge for the learner teacher within my community. This program's data informed findings that offer insights not only for potential future interventions in my context as an Orthodox RE teacher educator but also for the broader RE Teacher Professional Development (PD) realm.

I chose action research for its emphasis on resolving specific educational challenges (Tomal, 2010). Unlike traditional research, which often aims for broad generalizations, action research's tailored approach aligns more closely with my goal of producing findings relevant to the learner teachers I engage with.

3.2 Mentoring Session Structure: Adapting the Lesson Study Cycle

Drawing inspiration from the Lesson Study (LS) cycle as detailed by Lewis et al. (2006), the intervention in this project adopted an interplay between theory and practice. This model, known for its collaborative approach.

Given the unique character of our Sunday school program, which introduces a new lesson topic weekly without repetition, our intervention modified the original LS cycle into an adapted format.

3.2.A Study Phase

Our study phase encompassed texts from early Christian theologians, personal prayer books, non-religious research relevant to theological knowledge, and Orthodox theological education methods, as well as discussions on our specific Coptic Orthodox religious school's educational goals.

3.2.B Planning Phase

The planning phase involved collaborative discussions to structure lessons, predict potential student misconceptions, and design content activities tailored to the lesson's objectives. This phase mirrored the LS's collaborative nature.

3.2.C Data Collection Phase

For data collection, our primary focus was observation notes on the learner-teacher's instruction and, occasionally, on the teacher educator's teaching.

3.2.D Reflection Phase

The reflection phase was instrumental. Together, we reviewed data, assessed lesson outcomes, identified areas for improvement, and conceptualized or refined teaching strategies for future sessions.

3.2.E Collaborators and Mentor (Teacher Educator) Contributions

Collaborators sporadically participated in the full cycle or specific phases, contributing feedback on theological knowledge, pedagogical approaches, and student reactions.

As a mentor, my responsibilities ranged from selecting theological materials, guiding lesson planning, suggesting teaching methodologies, and offering feedback, to noting

deviations from the plan during observations. We utilized post-lesson reflection meetings to collaboratively assess the lesson, share observations, and strategize for upcoming sessions.

To summarize, the mentoring program's structure was as follows:

- Study and co-planning meetings: Often combined into one session due to scheduling constraints.
- Observation session: Data collection focused on teaching practice and student reactions.
- Post-lesson reflection meeting: Using collected data, we jointly assessed the lesson, shared insights, and planned for the next session.

This cycle was reiterated eight times from early January to mid-March 2023. Of these, six cycles will be scrutinized in this project, selected for their audio clarity and diverse data.

The mentoring process was bookended by a pre-intervention interview to understand the teacher's beliefs and knowledge, and a post-intervention interview was conducted after a delay due to scheduling challenges.

3.2.1 Sessions (Cycles) Analyzed

While this project consisted of 8 LS cycles, only 7 (**LS 1-7**) will be included in the Findings and Discussion section. The audio recording for LS 2 was corrupted and deemed incomprehensible, rendering its data unusable for rigorous academic analysis. **Appendix 1** includes a table of each LS' topics to clarify the specific theology subject knowledge (Fk) covered in each lesson.

3.3 Data Instruments

Figure 2 presents the research question of this project and the data collection methods employed to address it. This section will detail each method.

Research Question	Data Collection Methods
How does mentoring utilizing a Lesson Study-like strategy, evaluated through the Knowledge Quartet (with the addition of relation Knowledge as a knowledge type), cultivate an Orthodox Christian RE teacher's knowledge base in	(i) Audio recordings of the feedback of pre- and post-intervention interviews with the learner teacher (these will be transcribed) (ii) Audio recordings of the adapted LS mentoring sessions between teacher educator and learner teacher (these will be transcribed) (iii) Field Journal of Teacher Educator's thoughts and beliefs and reflections on mentoring sessions and learner teacher lesson classes

theology and teaching theology?	

Figure 2

3.3.1 Interview

As stated in **Section 1.3**, this project's research question is divided into two sub-questions:

Sub-Question 1	What knowledge (Foundation, Transformation, Connection, Contingency, and relation Knowledge) has the learner teacher developed? And to what degree has the learner teacher developed any of these?
Sub-Question 2	How has the mentoring intervention program developed such knowledge in the learner teacher?

To address Sub-Question 1, an initial step was taken through a pre-intervention interview, establishing a baseline of the learner-teacher's existing knowledge and practices within theological teaching.

I chose a semi-structured format for both the pre- and post-intervention interviews (questions can be seen in **Appendix 2**). This format allows both the interviewer and

interviewee to delve into and expand on their ideas (Birmingham and Wilkinson, 2003). Such flexibility is conducive to reflecting on theology and teaching knowledge, especially given the often personal and unstructured nature of reflecting on spiritual experiences.

The pre-intervention questions, specifically open-ended in nature, were formulated to gauge the learner-teacher's existing stances and methods concerning the knowledge types, as delineated in the Knowledge Quartet (Rowland et al., 2005) and the Relation Knowledge frameworks. By probing his theological knowledge, the strategies he employs in instruction, and the methodologies he adopts to emphasize Orthodox theology subject's significance, I was better equipped to discern his baseline knowledge across the enumerated categories.

Furthermore, queries were posed regarding the academic and personal challenges perceived by the learner-teacher within his students, alongside his aspirations for enhancements in his instructional methods and in his church's educational setting, were posed. These inquiries were enabled a fine-tuning of the mentoring intervention to optimally cater to the learner teacher's professional growth, as well as to better address his church's and his students' academic and social concerns.

Moving to the post-intervention phase, the focus shifted to the progression in the learner-teacher's progression across the five knowledge domains. These open-ended post-intervention queries were instrumental in evaluating the extent and depth of

Orthodox RE teacher knowledge development, directly addressing the nuances of Sub-Question 1.

To elucidate Sub-Question 2, feedback was extracted from the learner teacher regarding the mentorship program's approach and its perceived impact on him. This evaluative feedback was vital in ascertaining the program's proficiency in enriching the stated knowledge areas. A comparative analysis between the pre- and post-intervention responses illuminated the tangible effects of the mentoring intervention on the learner teacher's journey in theology and theology teaching knowledge.

3.3.2 Audio recordings of the mentoring sessions

The decision to employ audio recordings in the mentoring sessions was based on the project's emphasis on verbal data. As supported by Tomal (2010), participants are generally believed to offer candid information during verbal exchanges. Such recordings, once transcribed and coded according to the system detailed in **3.4.5**, serve as a repository of the learner teacher’s viewpoints. This method is particularly useful in addressing the sub-question regarding the depth and nuances of the learner teacher's theological understanding, ensuring a clear alignment with the project's objectives. Additionally, audio recordings, unlike video, posed minimal privacy issues while still capturing detailed verbal interactions, making it a preferred method in this context.

3.3.3 Field Journal

Opting for a field journal was a deliberate choice to capture the nuances of non-verbal communication. Drawing from Birmingham and Wilkinson's (2003) assertion that a significant portion of communication is non-verbal, the field journal aids in discerning learner teacher beliefs, emotions, and growth trajectories that might not surface in verbal interactions. Preferring this method over video recordings, especially considering the privacy concerns of the students involved, who are minors, was crucial. Notes taken during lesson observations throughout the adapted lesson study cycles aimed at offering a holistic understanding, bridging both verbal and non-verbal cues, further enriching the understanding of the learner teacher's professional knowledge developments.

3.4 Data Analysis

To address the main research question and its sub-questions, this project used a structured coding approach combined with the evaluative framework. This method allowed for a systematic assessment of the data from transcribed audio recordings of interviews and mentoring sessions' study, planning, and reflection phases ensuring that data was coded and interpreted in line with the Knowledge Quartet (KQ) and the added relation Knowledge (Rk) to track which of the five knowledge domains from these frameworks the intervention program developed and to what extent it influenced their development.

This project employs deductive analysis due to its alignment with established theoretical frameworks. Given that the project employs the Knowledge Quartet (enhanced with relation Knowledge) as its foundation, a deductive approach ensures that data is scrutinized through this predetermined lens. Such a method not only streamlines the analysis by using predefined categories like Fk, Tk, CTk, CYk, and Rk, but also allows for a systematic evaluation of the data with these frameworks. Furthermore, the nature of deductive analysis offers an avenue to rigorously test the assumptions, especially those related to general and Orthodox Christian RE mentoring approaches, as they pertain to developing a learner teacher's understanding of Orthodox Christian theology and theology teaching.

The procedure for dataanalysis will now be described:

1. Preliminary Review: An initial review of the raw data was executed to familiarize with the content's nuances. This comprehensive reading provided a grounding understanding and allowed for effective coding

2. Manual Coding:

- **Fk (Foundation Knowledge):** Data segments that revealed subject knowledge of theology and knowledge of how to teach theology.
- **Tk (Transformation Knowledge):** Whenever the data indicated growth in decisions regarding theological teaching, Tk was the designated code.

- **CTk (Connection Knowledge):** For data segments showing associations between diverse theological lessons and designing a theology teaching curriculum CTk was used.
- **CYk (Contingency Knowledge):** Instances indicating response to spontaneous student feedback warranted the CYk code.
- **Rk Rrelation Knowledge):** I marked data that highlighted examples of personal spiritual cultivation andmodeling, participation in shared spiritual experiences, or alignment of lesson planning, teacher development, and class activities with a connection to God using the label Rk.

Each data segment received manual coding using the defined codes. The data underwent review, and appropriate codes were designated to ensure a consistent coding approach.

3. Review and Refinement: After an initial coding phase, codes were further reviewed to detect and clarify ambiguous or disputed codings.

Exemplification: To elucidate this project's coding procedure, consider the following examples in **Figure 3**:

Data	Code

“There is one notion of salvation that classes it into three phases - purification of the body, mind, and heart, illumination on the nature of reality, and deification as union with God."	Fk
“I want to try role-playing in my lesson. The students will act as the priests and deacons to teach them the meaning of the prayers of thanksgiving."	Tk
"The connection between baptism and confirmation in our theology is intrinsic and deep-rooted."	CTk
“Hey (mentions student’s name), you just said out of nowhere this saint reminds of your brother, why?”	CYk
"I’ll take the acolytes to lunch now that the lesson’s done. You should come with us so that you can also bond with them more."	Rk

Figure 3

These samples depict this project’s coding methodology, and its use for systematic data analysis. By utilizing this combined methodological approach, the intent is to produce insights regarding the effectiveness of the mentoring intervention in shaping an Orthodox Christian RE teacher's knowledge of theological subject content and teaching theology.

3.5 Collaboration,

The initial phase of the action research program, was characterized by me as the only teacher-educator mentoring one learner teacher. However, the research environment shifted with the return of key figures in our learning community.

The church's priest, known as "Abouna" (meaning "father"), and his wife and director of the church school, "Tassouni" (translating to "older sister"), play pivotal roles in the spiritual and educational guidance of the community. With their return, along with a team of missionary teachers, our program began to benefit from a richer collaborative dynamic in the middle of our intervention.

Tassouni's proactive engagement, based on student feedback and her own observations, had a defining impact. She questioned the objectives of our program, thereby guiding us toward a more targeted theological curriculum that included ESL components. Her influence was directive, shaping the vision, pedagogy, and practical aspects of our program.

Abouna, on the other hand, provided theological insights, particularly concerning liturgical rituals within the Coptic church services. These insights encompassed historical, linguistic, and symbolic dimensions. His participation in 1 complete LS cycle phases helped identify moral and spiritual Orthodox theology knowledge to build the

learner teacher's Fk integrated into lessons to support his Tk and classroom management strategies that could support CYk development.

Of the 2 missionary teachers, the first, a deacon, is of particular note. He spontaneously led one of our planning sessions, possessing strong Orthodox theology knowledge. His role also encompassed classroom management aspects and thereby helped develop Tk and CYk. Another missionary teacher primarily offered moral support to students and teachers without delving deeply into theological or disciplinary facets and thereby served as an example of Rk.

3.6 Ethics

Engaging with a learner-teacher necessitated attention to ethical considerations. I have deliberate in maintaining his anonymity, refraining from mentioning his name at all junctures. Furthermore, I secured his explicit consent prior to audio recording any segment of our adapted Lesson Study cycle.

The timing of our sessions presented an additional ethical consideration. We convened on Saturday mornings, essentially at the tail end of my learner-teacher's work week. Recognizing the potential for this schedule to induce stress, given his occasional weekend commitments, underscored the importance of flexible scheduling.

The physical environment of some of our sessions also posed challenges. Our initial meetings took place in a cramped room, reminiscent in size to a shoe closet, sans air conditioning amidst the sweltering Philippine summer heat thereby creating considerable physical discomfort for the learner teacher and his students. Fortunately, by our second planning session, the church had installed a robust air conditioning unit, considerably enhancing our teaching environment.

A paramount ethical point to note was the dynamic of our relationship. As disclosed in my CUREC 1a application, I acted as the patron for the learner-teacher, covering his teaching fees. This inherently introduced a power differential between us. It was imperative to communicate—both in the consent form and verbally—that the program's sole intent was his professional development. I reiterated my commitment to supporting his teaching endeavors, emphasizing that he was at liberty to exit the project whenever he chose, without any ramifications on my support.

3.7 Limitations of the Methodology

The methodology employed in this project possesses inherent limitations that must be acknowledged. Interviews, while instrumental in providing deep insights, are intrinsically subjective. The responses elicited from the learner-teacher could have been influenced by factors such as the rapport with the interviewer or even subconscious pressures to present themselves in a positive light. Additionally, the reliance on memory for these

interviews introduces the possibility of recall bias, whereby the accuracy of recollections may diminish over time or be influenced by subsequent experiences.

Audio recordings were used to maintain an objective record of interactions. However, the very act of being recorded might alter a participant's behavior, calling into question the authenticity of the interactions. The decision to abstain from video recordings, while made in the interest of preserving student privacy, poses its own set of challenges. Without visual cues, the research may miss nuanced non-verbal interactions which could offer richer insights into the learner-teacher’s knowledge development.

In capturing non-verbal cues through the field journal, there's a risk of observer bias. My interpretation, based on personal beliefs or experiences, might inadvertently influence perceptions and color interpretations. This approach's deductive nature, grounded in established frameworks like the Knowledge Quartet and the relation Knowledge framework, ensures a structured analysis. Yet, it could potentially overlook insights that fall outside the designated categories.

Collaborative dynamics introduced with the return of Abouna, Tassouni, and the missionary teachers also presented limitations. The varying roles these individuals played could affect the consistency and predictability of the intervention, impacting the learner-teacher's responses. Ethical concerns around the timing of the sessions and their physical environment, such as the initial cramped room, could have influenced the overall quality and outcomes of the sessions.

Lastly, the power dynamic, introduced by my role as both mentor and benefactor for the learner-teacher, could have subtly shaped his behaviors or responses. Despite assurances, the underlying financial relationship might have placed unintended pressures on him, potentially influencing the project's results.

In recognizing these limitations, the aim is to present a transparent and reflexive stance, providing a clearer context for interpreting the project's findings.

4.0 Findings and Discussion

This section commences with the findings derived from the pre-intervention interview concerning Peter's teacher knowledge. Following this, I will present and discuss the data related to the theological and teaching knowledge that Peter acquired during our program. Additionally, an analysis will be provided on how our mentoring intervention program might have contributed to this development.

4.1 Pre-Interview

The initial interview with Peter aimed to establish a baseline understanding of his existing knowledge in the realm of Orthodox theological education. This exploration delved into his perception of the education's purpose, effective teaching methods,

challenges encountered in its instruction, and the integration of this education into the spiritual life—what we term as 'relation knowledge.' Establishing this baseline was crucial to subsequently design our mentoring sessions, which utilized an adapted Lesson Study cycle format, and assess the impact and effectiveness thereof.

4.1.2 Peter's Fk

At first, Peter emphasized the importance of apologetics, or the systematic defense of the Christian faith, in his teachings. He articulated,

> "I want to teach my students the tradition of the church, especially how to defend the church, and of course the dogmas and theologies."

Drawing from this statement, Peter's awareness of purpose becomes evident, aligning with the concept of Fk as suggested by Rowland et al. (2015). Within the Orthodox perspective on theological knowledge, apologetics centers on more literal and moral knowledge, as outlined by Origen et al. (1893). This form of instruction predominantly emphasizes the rational argumentation surrounding the veracity of faith, God's existence, and its inherent truth. Consequently, Peter's focus on defending the church and its dogmas appears to resonate with a foundational or basic level of theological knowledge within the Orthodox tradition. This suggested a potential avenue for Peter to delve deeper and explore more advanced theological dimensions.

Diving deeper into the relevance of apologetics, Peter shed light on its significance in addressing students' existential questions—those that wrestle with the core meaning of existence, particularly in relation to their faith. He remarked,

> "There's a confusion between science and religion. So, of course, existential problems will confront students and apologetics can help them address their personal existential problems."

Expanding on this, Peter introduced a spiritual dimension to his perspective, emphasizing the pivotal role of Orthodox education during formative years. He articulated,

> "Sunday school can especially be improved. We consider it as a training ground for our youth, for our children. So, such a young age is critical. At the age of 7, their brains are developing, so their spiritual lives should also accompany their cognitive development. Instead of just learning about secularism, they should also learn about spirituality, and not just learn spirituality without much thought, or just learn any theology, but Orthodox theology."

Upon closer examination, Peter's perspective on Orthodox theological education emerges as multi-dimensional. He envisions it not only as a tool for defending faith but also as a means to address existential dilemmas. He underscores the symbiotic

development of spirituality and cognition, especially within a secular context. Yet, when reflecting on his class, a profound spiritual purpose does not immediately surface. This might indicate that while spiritual knowledge was not absent from his Fk, there remained room to deepen this aspect of his Orthodox theology knowledge.

4.1.3 Peters' Transformation knowledge (Tk)

In the analysis of Peter's interview, several insights into his Transformation knowledge emerge. Firstly, Peter demonstrates a strong commitment to traditional Orthodox theological materials (Lee, 2022). His assertion,

> “I use primary resources, the writings of the church fathers especially,"

is evidence to his foundational grounding in Orthodox tradition teaching approaches, which uses core theological texts and materials that forms the bedrock of his teaching approach.

Yet, Peter's methodology is not rigidly confined to tradition. He complements his foundational Orthodox materials with secular and academic resources. This is evident when he explains,

> "...as well as more theologically open resources that are not necessarily related to our church, like the writings of historians that can still also support our beliefs."

Through this, he aims to show students that there is external validation for their beliefs, ensuring that his personal opinions do not serve as the sole foundation for their faith.

Moreover, Peter's pedagogical approach appears to implement interactivity beyond the content of his teachings. He elaborates,

> “Especially when it comes to teaching about the church fathers and the saints, I like to touch upon how they handled their struggles. Then, they will realize that some are practicing apologetics, but not in a spiritual sense. Instead, within the other churches, it is more about dogmatic theology and not approached in a spiritual way.”

This sheds light on his preference for inquiry-based and role-playing techniques, pushing students to not just passively receive information, but to actively engage, question, and apply it in their daily lives. Drawing perhaps from the rich spiritual traditions of Orthodox luminaries like Origen et al. (1893), Peter's approach suggests a desire to navigate beyond a purely theoretical understanding of faith. However, while he seems to align with these historical and spiritual understandings, his specific definition of 'spirituality' in this context remains somewhat ambiguous and could have benefited from further elaboration.

In conclusion, Peter's transformational knowledge integrates traditional theological texts with secular academic sources. This integrated approach mirrors Chrysostom's early Christian pedagogical recommendations for priests to utilize academic and religious learning (Arko, 2022) and modern Orthodox Christian methodologies that couple theological teaching with academic subjects (Komashinskaia & Tsurkan, 2019). Furthermore, Peter's active learning strategies emphasize his aspiration to propel his students' religious knowledge beyond mere conceptual comprehension and into what could be the spiritual knowledge Orthodox RE prioritizes (Origen et al., 1893). Such a methodology not only resonates with Orthodox pedagogies but also aligns with traditions like the Ethiopian poet-scholar practices as highlighted by Lee (2022).

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4.1.4 Peter's CTk

In the pre-interview analysis, Peter's foundational and transformational knowledge, particularly its constructivist elements, is complemented by evidence of his connection knowledge. This connection knowledge is not only profound but also anticipatory, recognizing complexities in both classroom dynamics and broader societal views on theological education.

Peter observes,

> "It's hard for students to grasp these topics as it seems quite deep for young children. Sometimes I noticed they get bored of classes full of discussion as

> they’re unlike their school activities which are more physical. I think the students are a bit discouraged. And when it comes to their families, it seems that spirituality isn’t necessary to their parents so our students also adopt the mindset that spirituality and religion aren't necessary.”

From Peter's observations, connection knowledge (CTk) emerged as a vital area for support in our mentoring program. Peter anticipates potential classroom challenges stemming from both content and teaching methodology. However, these classroom concerns extend beyond the walls of the classroom, tying into larger issues: the devaluation of theological education by both students and their families. Recognizing these connections indicates Peter's acute awareness of the larger educational context, understanding that classroom dynamics are deeply affected by external attitudes, particularly those from the family. Thus, our program was designed to assist Peter in developing the theology teaching knowledge to navigate and address these multifaceted challenges.

4.1.5 Peter’s Rk

From our initial interview with Peter, snippets of his relation knowledge began to emerge. He voiced,

> "So, when I look at the church fathers, I want my students to emulate their lives and how they too can be pure and holy. At the same time, I also want to grow as

> I teach. I do not just want my students to become holy. The teacher also must become holy, and not just I or the students, but all of our community, the whole church."

Peter's reflections display an acute concern not just for his students' spiritual development, but also for his own and that of the broader church community. This aligns with the first two layers of relation knowledge: the first being self-cultivation (Hay, 2017), and the second, aiding others in their spiritual growth (Hand, 2003). Furthermore, Peter's frequent reference to "holiness" taps into the third layer of relation knowledge which prioritizes connecting with the divine (Fraser-Pearce, 2022). In Orthodox Christianity, becoming "holy"—or wholly devoted to loving God and others (Origen et al., 1893; Bradshaw, 2015)—is an embodiment of this Rk, emphasizing a profound connection to God above all else. Such insights shaped the design of our mentoring program, aiming to expand on this level of Rk.

In conclusion, the initial interview illuminates Peter's Rk, which is deeply anchored in the Orthodox theological framework. While there was a noticeable emphasis on literal and moral knowledge, there remained potential for Peter to further hone his spiritual knowledge, a cornerstone of Orthodox theological education (Origen et al., 1893). Peter's Tk stands out in its multifaceted nature, drawing from both religious and secular instructional materials. Notably, he prefers interactive and inquiry-based teaching techniques, always ensuring these methods align with the primary objective: immersing students deeper into the Orthodox tradition's spiritual knowledge. Due to challenges

such as student boredom and the perceived reduced significance of Orthodox religious education, there were areas for Peter to further develop his CTk. Furthermore, Peter's desired to enhance his Rk is clear, and commendably, he displayed a foundation across its three layers. These insights into Peter's teacher knowledge domains were instrumental in tailoring the program to nurture further a promising level of knowledge in theology and theology teaching.

4.2 Post-intervention Findings

This section outlines the observed outcomes following the intervention, directly addressing the primary research questions. The findings are organized into two distinct subsections:

Section 4.2.1 answers Sub-Question 1 and details the progression in Peter's RE Teacher’s knowledge throughout the intervention period. The data suggests notable improvements in Peter’s Fk and Tk. Meanwhile, his CTk and CYk saw moderate enhancements, with a significant increase noted in his Rk.

Section 4.2.2 answers Sub-Question 2 and delves into the potential factors from our mentoring intervention that contributed to these developments. The data highlights the influential role of modeling from the educator and collaborators and the reflective component present in the co-planning activities of the adapted Lesson Study Cycles. Additionally, the shared spiritual experiences between the educator and the learner

teacher, particularly those in the second layer of Rk (Hand, 2003) and the foundational personal spiritual formation (Hay, 2017) necessary for teaching Orthodox theology (Arko, 2022), seem to have impacted both Fk and Rk. The reflective processes in lesson planning also played a role in shaping Tk. As the intervention progressed, data indicated that a strong foundation in Rk, especially personal spiritual formation, potentially influenced the growth in Tk. Therefore, the data suggests the influence of developing Rk in the development of all other knowledge domains

4.2.1 First Sub-question Developments in Teacher Knowledge

This section will analyze what knowledge was developed. As said above, significant developments in Fk, Tk, and Rk can be argued from the data while only modest developments in CTk and CYk were tracked.

4.2.1.A Developments in Fk

The data collected displayed significant developments in Peter's Fk regarding Orthodox theology. When initiating the project in LS 1, I quizzed Peter on foundational concepts like spiritual purification, illumination, and deification — fundamental elements relating to the overarching theme of salvation. Drawing a parallel with Origen's framework (Origen et al., 1893), these notions correspond to various forms of spiritual understanding: purification resonates with literal theological knowledge, illumination reflects moral knowledge, and deification epitomizes spiritual knowledge. Peter's initial admission to

only having come across deification through independent research highlighted a discernible gap in the Fk anticipated from a teacher of Orthodox theology.

Lookin at LS 5, Peter's Fk showcased tangible progress.
A conversation illustrates this growth:

> Teacher Educator: So, last time we talked about the prayers of thanksgiving. How would you like to teach that?
>
> Peter: I would like to connect it to the problem of evil, particularly issues happening in their school and in their families, those very heavy problems for them. They might say, I'm a deacon, why do I go through this? I always go to church, why do I always face these problems? So, we can answer these questions through the problem of evil. Even when we're facing problems, the problem of evil, we can say the prayers of Thanksgiving. They can recite this, but only in Tagalog. Also, you are a servant of God. How will you thank God? To serve people, to spend time. It's the best way to thank God - to spread the love of God.

In this instance, Peter weaves together literal and moral knowledge. The literal knowledge emerges from the personal tribulations students endure and the ensuing theological questions, while the moral knowledge surfaces as Peter employs the problem of evil to elucidate these experiences. He then draws from the purifying and

illuminative aspects of Orthodox theology, seeking to employ thanksgiving and altruism as instruments for solace and becoming socially concerned, both emblematic of the experience of purification (Origen et al., 1893).

By our final Lesson Study, Peter's Fk had flourished further. During a lesson planning session, he reflected:

> “So, something came to my mind about how God directs us. It might be not so related to our main point, but let me explain. There’s a passage from Christ in the Gospels where he tells us to go the extra kilometer or carry an extra load for others even if they harm us. But it’s doubtful why people do this. But I know that in those times people treated Roman soldiers with such privileges and I think that’s how much God loves us and our neighbors, that he loves us generously like this. I got this historical information from a medieval historian and a secular New Testament scholar. So, he shouldn’t be biased since even religious people hate him.”

Here, Peter combines foundational theological insights with historical knowledge, juxtaposing God's generous love with Roman soldiers' historical privileges. He further accentuates the notion of deification by correlating our actions (like going the extra mile) with becoming more like God, thereby demonstrating more spiritual knowledge in his Fk (Origen et al., 1893).

This growth trajectory culminated in our post-interview, where Peter's reflections on theological knowledge more growth. He shared,

> “In terms of knowledge, it’s history, of course. But more importantly, children see how you apply theology to your life. I’m guilty of knowing a lot of apologetics knowledge but I lost the care for my neighbor. It happened that when I saw a beggar, I had no care for them. I forgot the love of Christ. I focused only on knowledge.”

In his reflections, Peter recognizes that theological knowledge is deeply intertwined with history, a perspective foundational to both traditional Christian and Jewish understandings of theology (Uusimäki, 2017; Ware, 1991). Yet, he ventures beyond this historical context, emphasizing love for the disenfranchised as a mirror of God's own love. This perspective, pushing beyond mere conceptual understanding, resonates with the teachings of Origen et al. (1893) on spiritual knowledge as characterized by love.

Therefore, Peter's Fk showed notable progress. From his initial standpoint, where he viewed the theology subject more so as an argumentative discipline highlighted in his pre-interview, he has made progress towards emphasizing the moral and spiritual dimension of theology (Origen et al., 1893), a key attribute for a theology educator (Arko, 2022). More profoundly, his emphasis on altruism and divine love also signifies increased resonance with the foundational Orthodox spiritual knowledge.

4.2.1.B Developments in Tk

Peter's Transformation Knowledge (Tk) exhibited significant development. In our initial LS, Peter outlined his lesson's primary activities, which centered on distributing handouts and displaying images of St. Justin Martyr. These materials aimed to elucidate the significance of holy communion, a foundational Christian spiritual practice. Peter entertained the idea of having the students compose songs. However, he left the process ambiguous, not specifying if he would provide guidance on melodic or lyrical frameworks, akin to those inherent in traditional Ethiopian Orthodox theological teachings (Lee, 2022). As a result, Peter's Tk, while rooted in tradition, seemed to lack depth. It could have potentially integrated more inventive practices characteristic of Orthodox Tk traditions, such as the Ethiopian Orthodox's innovative poetry teaching techniques or the Russian Orthodox approach of weaving theology teaching with the development of secular skills (Komashinskaia & Tsurkan, 2019).

By the time we reached LS 3, there was a notable shift in Peter's Tk. He sought to use Tk to bridge the gap between ritualistic procedures in Orthodox worship and their underlying symbolism, particularly their representation of love for others.

Peter commented,

> "So, I can connect abstract spiritual ideas (about love) from the rituals to their experience and ask them to try doing so themselves and also use analogies. I

> think more concrete analogies based on experiences are needed. For example, when I first met them, they, liked to fight and also “troll” (tease) others. I think a great teaching strategy is always to use their experience.”

Such a strategy underscored Peter’s evolving Tk. This is not merely about imparting knowledge or encouraging rote memorization from canonical sources. Instead, it now emphasized prompting students to interweave their personal, "concrete" experiences with theological teachings. This mirrors the enriched Tk characteristic of Orthodox pedagogies, exemplified by the Ethiopian tradition of encouraging students to craft theological hymns and poems. These compositions not only resonate with theological wisdom but also engage with pressing societal issues (Lee, 2022). While Peter’s pedagogical choices might not encapsulate the intricate Ethiopian methods of interlinking theological insights with socio-cultural observations, his methods intertwine core theological principles, church rituals, and introspective reflections on personal experiences. This enriched integration, with a focus on reflection, testified to his transition from a prescriptive Tk to a more immersive and interactive approach.

Moreover, Peter's inclination toward using concrete analogies signified a notable progression in his Transformation Knowledge (Tk). His reference to analogies, especially with an underpinning theoretical rationale, marked a first. This approach faintly echoes the 2nd Temple Jewish tradition where sages cultivated their own interpretative techniques (Ueberschaer, 2017). Although Peter is not positing a unique

method per se, his framing reveals a deeper, more theoretical knowledge on using analogies within his theology teaching.

In our concluding LS, Peter's evolving Tk was further evident. While devising a lesson on prayers for travelers in an Orthodox morning service, Peter leaned into more dynamic Orthodox pedagogical techniques as he proposed a role-play activity:

Peter said,

> “For the lesson on prayers for travelers, the students can re-enact the service with the senior students acting as the priest and the others will be deacons. This way, they can remember the meaning.”

This approach marks a divergence from Peter's earlier reliance on lectures or reflective discussions. Here, he nudges students to physically engage, enacting the care for others and intentions underscored in the prayers and associated rituals. This mirrors the Ethiopian Orthodox method that emphasizes spoken discourse and the active enactment of rituals to understand their meaning (Lee, 2022). This shift from passive "telling" to active "doing" also echoes Chrysostom’s ascetic-scholar RE methodology (Arko, 2022), wherein theological comprehension is deepened through participatory liturgical celebrations.

Our subsequent post-interview fortified our observations on Peter's maturing Tk:

Peter articulated,

> "Because of their young age, it needs to be interactive, which can include role-playing, with us, as their guide. Especially, they should see that I'm not a hypocrite and I change and improve how I treat others. It is ugly if they see me teaching and yelling at them. It is like I am not applying my own lessons."

What is striking here is not just Peter's advocacy for interactive pedagogy - a stance he held even during our pre-interview phase - but his increased cognizance that his interpersonal conduct is an integral facet of theological instruction. This merger of interactive teaching and genuine spiritual embodiment, absent in our earlier discussions, is a hallmark of a more experienced Orthodox theology instructors (Arko, 2022). Thus, Peter's evolving perspective denotes a more traditionally Orthodox orientation in his Tk.

4.2.1.C Developments in CTk

Peter's growth in CTk was more gradual than in other areas. At the outset, during our pre-interview session where we studied the Knowledge Quartet, Peter was candid about his CTk needing the most improvement. This was apparent, especially in our early LSs, where I largely directed the course of our lesson sequences. To illustrate, in most of our planning sessions—barring the last one—I typically took the lead in determining the

sequence of activities. However, Peter confidently steered this process by the final lesson, displaying a newfound autonomy. Nonetheless, when tasked by our church school's director to design a more structured curriculum by LS 4, I, the teacher-educator, again assumed the primary role. This observation aligns with scholarly literature which suggests that more advanced CTk, particularly when extended to tasks such as curriculum design, is more commonly associated with seasoned teachers (Rowland et al., 2005). This puts Peter's journey as a novice theology teacher into perspective.

Yet, it is essential to acknowledge Peter's evident strides in CTk. In our post-interview, he expressed how our mentorship had been instrumental in helping him formulate an activity sequencing methodology. This framework, he noted, proved beneficial not only for his theology teaching endeavors.

Peter elucidated:

> "What I do for my methodology now is to share knowledge, explain it, and end with interactive engagement. My approach remains consistent: Teach, interact, and apply."

Therefore, the data provides evidence for moderate growth in Peter's pedagogical CTk. He now showcases a deliberate intention in sequencing his lesson activities, a nuance that was absent during our earlier LS cycles. Nevertheless, Peter's candid admission

that he has yet to cultivate a comprehensive curriculum-design methodology underscores that his CTk development is ongoing, with ample room for further improvement.

4.2.1.D Developments in CYk

Peter's CYk demonstrated only modest development. Initially, Peter's reaction to spontaneous student behavior or deviations from the lesson plan predominantly took a more serious tone.

In LS 1's planning phase, Peter remarked,

> "I showed a picture of St. Justin Martyr and one student said it looked like Nostradamus, making the other students laugh. I don't laugh because I want them to take the lesson seriously. I won't laugh because they'll become less serious."

This indicates that Peter's Contk might benefit from further development. Such spontaneous student comments should not always be viewed merely as misbehavior or irreverence towards sacred knowledge. Instead, they might serve as valuable insights, or opportunities that a teacher could harness. For instance, Peter could have seized this moment to compare and contrast religious or theological knowledge symbolized by St. Justin with the political predictions associated with Nostradamus. Furthermore,

recognizing the innocence and wit in a student's comment could also have been a valuable approach to foster teacher-student rapport, allowing students to feel valued and understood in their observations.

However, potential growth in Peter’s methods for developing CYk was evident in our post-interview:

Peter shared,

> “When I first imparted theological teachings to the children without fasting and prayer, I felt lost when I taught; my thoughts and words were scattered. But with fasting, I felt more centered.”

This report hints at Peter’s discovery of a personal method to remain grounded while teaching—a tactic that might help him become more receptive to CYk opportunities when faced with unforeseen student behaviors. While this self-awareness is commendable, it is still imperative to apply it in a classroom setting. My lesson observations highlighted that this strategy's actual implementation could be broadened. There were instances from as far as LS 7, where Peter still overlooked pertinent questions or insights from students. I occasionally had to interject during his lectures to either inform him of a student's input or to let the student share their perspective. Such moments underscore the potential for further development in his CYk, mirroring

literature findings which emphasize that CYk is often more richly displayed by seasoned teachers (Berliner, 2004).

4.2.1.E Developments in Rk

The data also presented significant development in Peter's Rk. As previously reported, Peter mentioned in LS 1's reflection that he did not like to engage with student humor during classes as he desired to maintain a serious environment.

Peter shared,

> "I don't laugh because I want them to take the lesson seriously. I won't laugh because they'll become less serious."

While his intention to uphold the sanctity and gravity of the class is commendable, Rk represents the knowledge to deeply connect others and God by developing one's spiritual life. Thus, in the realm of theology, knowledge is conveyed not just through lectures but also, or even more so, through a warm and authentic interpersonal bond (Hand, 2003). Moreover, a more experienced Orthodox theology teacher is one who increasingly understands others' inner world (Arko, 2022). Therefore, Peter's focus on maintaining a serious class environment can be detrimental to his Rk, as it may inhibit natural student and teacher bonds from forming. Indeed, evidence of this came in LS 4's reflection with one of our collaborators, the church school's director (Tassouni),

mentioned that Peter's teaching needed to be more interactive as the students, in her observation, seemed disengaged. This lack of liveliness can be argued to stem from Peter's lack of connection with his students.

By LS 5, however, Peter reported changes in his Rk,

> "For me, my teaching also feels more effective than before because before I get angry if they don't listen to me, but now I just feel happy for them and for myself also because they're improving."

Here, there is increased openness to their spontaneous behavior, specifically a joyfulness, as he can recognize his students' progress even amidst what he may have merely considered misbehavior (not listening) previously.

This development was further articulated in our post-interview where he disclosed,

> "In growth, I think I adapted the behavior of how I should teach kids each time from our program. I really internalized how I should behave while teaching kids. I've become more patient and accepting. I often tell myself that I've carried this into my work and that I don't easily get annoyed with the children. I was able to control myself. I improved my patience because of the session we had on behavior and spirituality, yes. I really noticed that every time we have a session, I've become more self-disciplined. Sharing about spirituality or crises, I realized

> that when I'm fasting, I should also pray. Unlike before when I was a Protestant, whatever came to my mind, I would just speak it. Whether or not I prayed, I would speak. But now, I'm more cautious. It's like I have more respect for our practices, compared to when I was a Protestant. Every time someone asked a question, I would answer just to provide an answer. In our sessions now, I try not to answer right away but to touch upon their spirituality. I focus on their need for God."

Here, Peter mentions having increased openness and patience towards students and self-control of frustration towards their misbehavior, allowing him to better connect with them, thereby exercising more Rk. He also focuses on his students' needs, on his concern for them and their spiritual needs, rather than merely keeping a serious tone for the class. This highlights another improvement in Rk, as he has become less focused on class procedure and more concerned about his students' inner world (Arko 2022).

A final theme in Peter's Rk is his increased personal spiritual formation. From LS 7, he shared,

> "I also join them in prayer. It's best if they see me praying with them, and it's more appropriate whenever there are questions if we pray together. Every time they prayed with me, perhaps that's the best part. They see that someone prayed with them, an older person guided them. There's someone to guide them every time they have a question."

Here, Peter exhibits growth in his Rk as he reports his own experience with cultivating shared spiritual experiences with his students and observing the positive reaction his students have to it and its helpful effects in helping explore their questions. There is some evidence for this as students were self-reported by Peter and church school directors to have asked on some occasions if his class would continue. This could have been evidence that Peter's students had responded well to his interactions with them and thereby formed a degree of attachment to him. Such influence was further articulated in his post-interview where he explained that,

> "When I teach, I share. I feel what the term 'feeling the Holy Spirit' means as I often said as a Protestant. I felt it more when I fasted as our Orthodox tradition requires, compared to before when I didn't fast according to our tradition. No, even if I said I was fasting, I just didn't eat, that's it. But I couldn't feel it because I think Protestant practice tends to focus mostly on emotions. But today when we had our session, I really adopted the Orthodox practices. I felt that the Holy Spirit is truly with me. I was just walking to work while praying and chanting hymns quietly. I felt that I had a companion. And I apply this widely, even in my secular job. It's the same as our class, I show them that I'm not just their teacher, but also their confidant whom they can share things with. I think this is the best I can do for them, not just to serve as a lecturer. Instead, I can help them understand things and explain it to them. Compared to how I was as a teacher before we started, I was a 'terror' to my students before."

To contextualize, Orthodox Christian tradition requires that fasting is not merely about abstaining from eating certain foods, but acquiring mental clarity through a simplified diet and increased prayer to engage in a period of thorough self-reflection on matters of the heart - issues concerning one's emotions, shortcomings, relationships to cultivate a deeper connection with God ultimately (Ware, 1991; Arko, 2022; Mulualem et al., 2022).

In conclusion, the data underscored a notable progression in Peter's Rk. Initially, Peter prioritized a stern classroom demeanor, believing it would command seriousness and respect. However, this approach seemed to stifle the potential for deeper, authentic connections between him and his students. As the sessions advanced, Peter evidenced a shift in his Rk. His newfound patience, increased self-control, and heightened attunement to the spiritual needs of his students were evident. These changes not only facilitated a richer classroom experience but also seem to have fostered learner teacher bonds. Furthermore, Peter's increased practice of Orthodox Christian traditions, especially fasting and prayer, revealed an enriched personal spiritual formation foundational for Rk (Hay, 2017). This perceived deepening connection with God paralleled his transformation from feeling that he was a daunting figure to his students to feeling that he has become their confidant and guide. This resonate to a degree with the bond between the confessor and their spiritual children whom they also act as confindants to (Amaximoaie, 2021). In essence, analysis of the data revealed some evidence for a relationship between personal spiritual growth and the cultivation of

deeper, more meaningful relationships with Peter and his students, underscoring the significance of Rk for an Orthodox RE teacher's knowledge base.

4.2.2 Second Sub-Question: Program's Impact on Peter's Developments in Knowledge

Section 4.2.1 has delineated the progress of Peter's knowledge base, employing the KQ framework as an analytical lens. This detailed exploration also highlighted the growth in Peter's relation knowledge. Transitioning from the analysis of these developments, this section delves into the underlying mechanisms from our intervention. Specifically, it seeks to uncover the influence and efficacy of its mentoring program via an adapted Lesson Study Like on Peter's theology and theology teaching knowledge throughout the intervention period.

4.2.2.A Fk Development

Peter's Fk demonstrated significant growth in specific areas such as deeper spiritual understanding and a broadened perspective on Orthodox theology. In examining the data, three main mentoring strategies seemed instrumental in shaping this growth in Peter's Fk: engaging and interpreting theological materials, teacher educator modeling (Loughran & Berry, 2005) the gleaning of spiritual knowledge from traditional resources, and collaboration with experienced Orthodox clergy for increasing theology knowledge.

Peter was consistently exposed to traditional Orthodox theological material, such as the Bible, early church writings, and liturgical texts rooted in the traditions of Ethiopian, Coptic, Romanian, and Russian churches (Suriel, 2014; Lee, 2022; Amaximoaie, 2021; Komashinskaia & Tsurkan, 2019). I did not merely introduce him to these materials. Instead, I consistently asked Peter to interpret their significance both personally and for his students. This interpretative approach seemed to enhance Peter's capability to view these theological materials through multiple lenses, integrating them into both his personal spiritual formation and his pedagogical approaches.

During our sessions, there were moments when Peter's feedback was minimal. In such situations, I took the lead, modeling how one might derive spiritual interpretations from traditional texts. For instance, a notable example from a planning session emphasized the spiritual knowledge from the rite of communion where I shared,

> “Eating bread and drinking wine (from communion) shows we are brought to God through our bodies and souls achieving intimacy with God in every moment and aspect of our lives. Salvation is not just an abstract spiritual ideal but one that we must also undergo in our concrete, physical experience as human beings. We find God in our minds and hearts, but also in the physical world around us.”

Regular occurrences of such modelling throughout our sessions appeared to contribute to Peter’s enhanced ability to extract spiritually-oriented content, moving beyond mere literal to more moral or spiritual interpretation.

Towards the end of our program, Peter had opportunities to collaborate with Coptic Orthodox clergy, individuals with deep-rooted subject knowledge, especially concerning Coptic rituals. These collaborations, steeped in deep dives into the intricacies of Orthodox liturgical rituals, can be viewed as overt displays of subject knowledge and collaborative study of teaching. An example from our sessions was a 40-minute discourse by a priest on prayers for the sick, a discussion that wove together historical, moral, and spiritual knowledge. While the direct impact of these sessions on Peter's Fk might be less overt, given his reticence during the post-interview to mention them, my observations pointed to a shift in his overt display of knowledge, which seemed more spiritually inclined following these collaborations.

In conclusion, the data hints at the possibility that the program’s combination of reflective questioning, active modelling of knowledge acquisition, and collaboration with experienced Orthodox clergy could have been pivotal in enhancing Peter's Fk in Orthodox theology, especially its spiritual aspects.

4.2.2.B Tk Development

During the course of our program, Peter's transformation knowledge (Tk) also experienced significant development. This growth in Peter's Tk was primarily cultivated through the techniques of teacher educator modeling and direct feedback. As a starting point, it's essential to underscore two key areas of Peter's progress in Tk:

Peter not only became more adept at (a) extracting explanations based on spiritual knowledge from traditional materials but (b) also transitioned from a predominantly didactic teaching method to an interactive, student-centered approach. This latter method encouraged deeper reflection and resonated more with the learners.

To foster this evolution in Peter's teaching methodology, two strategies were employed. First, the strategy of teacher educator modeling (Loughran & Berry, 2005) was frequently utilized. I routinely demonstrated the process of drawing spiritual insights from traditional theological content. For example, in LS3, I modeled explaining the more spiritual knowledge gained from the rituals of the liturgy by saying,

> "In the liturgy, our priest is ultimately not himself anymore. Instead, we need to see Christ. It’s Christ praying with and for us and chanting hymns with us. It’s Christ performing all of the rituals on the altar. The individual identity of the priest is subsumed by the greater presence of Christ."

I attempted to model an explanation that did not focus on the historical knowledge about the roots of our liturgical rituals or the potential moral knowledge about forgiveness, for instance, that a rite such as communion might call us to. Instead, I emphasized the spiritual knowledge, drawing upon key concepts concerning analogy like those found in Origen et al. (1893), that God is before us in the liturgy and it is ultimately himself officiating its rites.

The second strategy was the provision of direct feedback. During our reflection sessions, I would sometimes offer feedback that occasionally meant correcting or refining Peter's teaching choices. For example, in response to Peter's concerns about maintaining classroom discipline during LS 1's reflection, I told im that,

> “I think it’s natural for them to be a bit playfully energetic. You know, they have this bubbliness as children. Actually, that's not bad, because even in traditional Ethiopian teaching, they always engage in liturgical dancing, so they incorporate movement. So, it's natural, as children are full of energy.”

The point was to introduce him to the perspective that students' energetic behavior might be a sign of their need for more engaging, interactive, yet traditionally anchored teaching methods. I then gave him an example from the Ethiopian tradition to suggest to him how he can adjust his activities to respond to potential student needs for more physically engaging activities. Therefore, repeated use of explicit feedback could have been a major factor in growing Peter’s knowledge base of more interactive theological teaching methods.

In conclusion, the data suggests that the combination of teacher educator modelling and direct feedback during the intervention’s and reflection phases seemingly supported Peter in refining his Tk, making it more interactive and varied by drawing from traditional Orthodox knowledge of theology teaching.

4.2.2.C CTk Development

In our program, Peter demonstrated modest advancements in his CTk. Driving his development were two primary methods: teacher modeling (Loughran & Berry, 2005). and, to a lesser extent, collaborative planning (Takahashi and Yoshida, 2004).

During the early planning sessions, I predominantly set the sequence of activities, topics, and concept interrelations. Contrastingly, Peter occasionally took the initiative to modify the sequence of activities during actual lessons. Although I observed these modifications, a deeper inquiry into his motivations remained absent. Furthermore, I did not probe his choice of lecture, interaction, and application sequence, as highlighted in his post-interview. Reflecting upon this, I chose to laud him, interpreting these decisions as independent CTk judgments. This perspective is supported by literature suggesting that beginner teachers often hone in on foundational areas, while the crafting of a curriculum is a skill often reserved for those with more teaching experience (Berliner, 2004).

Transitioning to collaborative planning, the potential for comprehensive curriculum guidance was evident but not fully tapped. In a noteworthy instance from LS 4's planning phase, the church school's director proposed a curriculum change, integrating one-hour of theological teaching with an additional hour of ESL instruction. In response, Peter expressed concerns predominantly revolved around the feasibility of such an

undertaking that was able to anticipate complexity and therefore display rudimentary CTk but fell short of providing evidence for more developed CTk as he did not further develop thoughts on how to redesign the curriculum. He articulated:

> “The acolytes already have one hour of classes before ours. Why add two more hours of liturgical and ESL teaching? They'll be overwhelmed. English teaching, with its challenges, should be best left to a linguistics specialist. In fact, we should just keep our curriculum simple as is because they already find it challenging.”

Peter's reservations were valid, especially considering his science background devoid of ESL teaching expertise. Taking a middle ground, I proposed a minimalist approach to ESL — focusing on pronunciation — which Peter embraced. Thus, Peter exhibited foundational CTk by anticipating the curriculum's inherent challenges. However, our collaborative endeavors fell short in advancing his understanding and skills in a more holistic curriculum design.

In wrapping up, Peter's limited CTk growth suggests our program's strategies might benefit from a more rigorous and comprehensive approach. Missed opportunities for in-depth reflection, consistent feedback, and structured instruction seem to have left a void in his pedagogical knowledge spectrum.

4.2.2.D CYk Development

Analysis of mentoring sessions paired with lesson observations highlighted that modeling stood out as the predominant approach in nurturing Peter's contingency knowledge. In particular, modeling (Loughran & Berry, 2005) responding to student ideas (Rowland et al., 2005) during class was a repeatedly utilized strategy during the data collection phase.

For example, I actively modeled how to address student feedback as I found during classroom observations that Peter often overlooked questions and comments from younger students or those who appeared less serious. Therefore, I occasionally interrupted Peter's lectures to engage with students directly, inviting them to elaborate on their points or playfully reciprocate their humor. In other instances, I also interjected to signal Peter when a student seemed eager to contribute, subtly prompting him to acknowledge and integrate their input. The purpose of these strategies was to provide modeling that would bolster his knowledge of making spontaneous, real-time response to diverse student interactions.

However, as the program concluded, it was evident that Peter occasionally persisted in overlooking the same student inputs, despite the recurrent modeling and discussions. It is essential to clarify that it is unlikely Peter intentionally dismissed student feedback. Instead, as he is a beginning teacher (Berliner, 2004), it is more plausible his focus was largely consumed by Fk and Tk challenges.

In conclusion, while there were concerted efforts to refine Peter's CYk inherent challenges typical of novice teachers faced by him presented impediments in his CYk development.

4.2.2.E Rk Development

For Rk development, engaging shared spiritual practices (Hand, 2003) and orienting activities towards a connection with God (Fraser-Pearce, 2022) were primary strategies. Data highlights the considerable growth stemming from these approaches.
Following each LS cycle shared meals served as avenues for spiritual connection and conversation. Such meals echoed the culmination of the liturgy: a shared sacred meal through the rite of communion, leading to the agape feast - a communal lunch or dinner fostering bonds amongst fellow Christians (Ware, 1991). This underscored my belief that theological knowledge extends beyond verbal instruction, finding its roots in shared spiritual experiences, most notably through the liturgy's two-fold meal offerings: the sacred and the communal.

The transformation in Peter's Rk seems to be evident when, in our post-interview, he expressed his newfound role as a confidant for his students whereas he reported feeling that he had previously terrified his students as their teacher. This sentiment, possibly arising from our intentional engagements over shared meals and conversations, underscores the potentially transformative power of shared spiritual experiences.

Secondly, the mentoring program commenced and concluded planning phases with shared spiritual practice of prayer. This underscores a perspective that Orthodox theology is not primarily disseminated through classroom teaching, but rather through spiritual practices fostering personal spiritual growth and interconnectedness with God and others. (Mulualem et al., 2022; Arko, 2022; Origent et al., 1893). For example, I often started our planning phases with prayers from the saints. In LS 1, specifically I used that of St. John Chrysostom in LS 1's which goes as:

> “Shine within our hearts, loving Master, the pure light of Your divine knowledge and open the eyes of our minds that we may comprehend the message of Your Gospel. Instill in us, also, reverence for Your blessed commandments, so that having conquered sinful desires, we may pursue a spiritual life, thinking and doing all those things that are pleasing to You. For You, Christ our God, are the light of our souls and bodies, and to You we give glory together with Your Father who is without beginning and Your all holy, good, and life giving Spirit, now and forever and to the ages of ages. Amen.” (*The Divine Liturgy of Saint John Chrysostom - Greek Orthodox Archdiocese of America*, n.d.)

These prayers, repleat with phrases such as “instill in us” and “pursue a spiritual life”, were chosen to anchor our focus on God and therefore fulfill the third layer of Rk (Hand, 2003).

Consequently, I often asked Peter, to say the closing prayers of our sessions and he, on the other hand, would sometimes formulate prayers with his own words without use of our traditional prayers. And here, he would also orient his teaching and his thoughts about his students and the whole learning community towards connecting with God and others potentially giving evidence that our shared prayers had impacted his own Rk development. For example, his concluding prayer for LS 1's planning phase went as,

> "Thank you Lord that we can discuss how to give something to flourish the lives of not just the youth or the deacons but for us teachers too. Reveal yourself to us and how can we commune with you in the truly. Always accompany us, purify our thoughts and heart, and forgive us our sins. Our Father, show us how to serve you properly, and to live as one."

Peter's concluding prayer, while echoing sentiments from St. John Chrysostom's prayer introduced at the planning phase's outset, includes its own unique nuances. For instance, Peter's appeal to "reveal yourself to us" aligns with the inaugural prayer's request for God to "shine within our hearts...the pure light of Your divine knowledge". Similarly, where St. John Chrysostom speaks of "having conquered sinful desires", Peter seeks to "purify our thoughts and heart". Yet, in his aspiration to "give something to flourish the lives" of all involved, Peter distinctly articulates his Rk, wishing for the broader learning community, beyond just the teachers, to deeply connect with God's presence.

In summary, the data suggests that the strategies of shared spiritual experiences and orienting teaching activity towards divine connection likely played a significant role in shaping Peter's Rk. This was particularly evident in his growing knowledge of connecting with his students and his growth in his knowledge of orienting the learning community to God through his practice of prayer.

4.2.2.F Conclusion: Impact of Adapted Lesson Study Mentoring Strategy on Peter's Theological Knowledge Base

This section will now conclude this project by summarizing the answers for the research questions presented above from analysis of data. This will be followed by implications for my practice as a Orthodox Christian theology teacher educator, and end with implications for research in the context of Orthodox theology teacher educator.

5.1 Summary

5.1.2 Question 1: What forms of teacher knowledge did the learner-teacher develop in this program.

Peter has demonstrated marked growth across various knowledge dimensions. In Fk, he showed significant development as he transitioned from perceiving Orthodox theology as primarily argumentative to increasing his emphasis of its moral and spiritual

knowledge, particularly highlighting values like altruism and divine love, resonating with the more traditional Orthodox spiritual knowledge found in Origen et al., (1893). In Tk, Peter also displayed significant growth as he came to adapt a more active and engaging interactive pedagogy that further matured by recognizing the crucial role of interpersonal conduct in theological instruction, merging genuine spiritual embodiment with pedagogical techniques—traits characteristic of more creative theology instructors like thos from 2nd Temple Jewish tradition (Ueberschaer, 2017). With respect to CTk, Peter showed intent in structuring his lesson activities, although he acknowledges the need for a more comprehensive curriculum-design approach, signaling ongoing support opportunities for him. In terms of CYk, Peter's newfound personal grounding methods are promising; however, in practice, he occasionally misses student cues, suggesting room for refinement, consistent with literature that posits deeper CYk among seasoned educators (Berliner, 2004). In the realm of Rk, the data reveals a notable shift in Peter's demeanor: from initially being stern to showing patience, self-control, and a sharp awareness of students' spiritual needs. This change is significantly influenced by his deeper engagement with Orthodox Christian traditions. This transformation highlights the intertwined nature of personal spiritual growth and the ability to cultivate meaningful connections with students. It is a bond akin to the deep love a spiritual father has for his spiritual children, nurtured through the practice of regular confession (Amaximoaie, 2021).

5.1.3 Question 2: In what ways did the mentoring program contribute to such developments?

The program's strategies were instrumental in shaping Peter's various knowledge dimensions. For Fk, the combination of collaborative planning, explicit modelling of knowledge acquisition, and collaboration with experienced Orthodox clergy seemed vital in growing Peter's theology knowledge, particularly emphasizing the spiritual knowledge of Orthodox theology. In the realm of Tk, the blend of teacher educator explicit modelling and direct feedback during planning and reflection stages were decisive. This approach aided Peter in refining his Tk, leading to a more interactive, varied approach, and resonant with traditional RE teaching methods specifically those of 2nd Temple RE teacher modeling (Ueberschaer, 2017). However, for CTk, the data indicates that there might be room for enhancement in the program. The potential gaps in consistent feedback, in-depth reflection, and structured instruction might have hindered Peter's full CTk growth. Concerning CYk, despite concerted efforts to enhance this area, Peter faced challenges typical of novice educators, exacerbated by our learning community's theology teaching's unique demands, indicating the need for specific strategies catering to these nuances. Lastly, the program's emphasis on shared spiritual experiences, aligning teaching with connecting with God and learning through a shared liturgical practices of prayer like that found in St. John Chrysostom's learning communitities (Arko, 2022) played a significant role in Peter's Rk development, providing some evidence for improved knowledge for connecting with students and orienting himself, his class, and the broader learning community to God through prayer.

5.2 Implications for my Orthodox Teacher Training Practice

Findings indicate that Orthodox RE teacher theology knowledge development is enriched through engagement with traditional theological resources like scriptures, teachings, rituals, spiritual practices, and communal experiences oriented around the liturgy. This aligns with literature exploring religious education methods, spanning second temple Judaism to various Orthodox traditions (Ueberschaer, 2017; Arko, 2022). Therefore, my approach will continue working with these resources for future work with novice Orthodox educators.

However, developing areas like CTk and CYk need further exploration. One untapped avenue is regular confession or spiritual consultations, as highlighted in Amaximoaie (2021), deemed reflective and transformative by some Orthodox practitioners and even being a precursor for modern therapy (Richardson & Stewart, 2009). Although overlooked in Peter's training, this introspective practice of receiving counseling from a trusted and insightful spiritual guide might aid in managing student challenges that arise during critical teaching moments, given its emphasis on virtues inherent in Orthodox CYk. It can also be a source of modeling as an experienced priest, would by nature be an experienced Orthodox RE teacher themself. Therefore, future programs can include observing priests teach their own RE classes or inviting them to model teaching a lesson for our class.

Incorporating the spiritual guidance of clergy during collaborative curriculum and lesson planning can also be valuable. Their profound theological knowledge can offer nuanced insights into curriculum structuring, potentially enhancing CTk.

5.3 Implications for the Field

This project highlights the impact of our mentoring approach. Rooted in traditional knowledge demonstration and reflective questioning, it led to significant developments in Fk, Tk, and Rk. The program's traditional structure, fostered developlments in subject knowledge that was more spiritual in its knowledge, theology teaching strategies that were more student-centered and interactive, and learner teacher attitude towards students that were more caring and immersed in their social context. This could serve as a response to critiques about the limitations of traditional mentoring pedagogies (Pennanen et al., 2015). This progress consequently supports the value of further exploring potential 2nd Temple Jewish, Early Christian, and Orthodox Christian RE methodologies. However, the project's limitations become evident when we consider the uneven effectiveness across knowledge areas: while there were notable advances in Fk, Tk, and Rk, the growth in CTk and CYk was moderate. Therefore, while a traditional master-disciple format may be ideal for Orthodox training, understanding its limitations is crucial, urging educators to continue improving their teaching methodologies and exploring the possibilities within their theology reservoirs. Additionally, future research could delve into the nature of subject knowledge by examining the unique

characteristics of theological knowledge and why it may be more suited for traditional pedagogies.

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Appendix 1

Lesson Study Cycle (LS)	**Lesson Topic**
LS 1	Understanding and Taking Seriously the Love and Sacrifice of Christ in the Rite of Holy Communion
LS 3	How the Eucharist nourishes us spiritually: Exemplified by St. Tarcisius the Youth-Martyr
LS 4	The meaning, structure, and variations of the of the Coptic Orthodox liturgy. At the request of a collaborator, the church school's director, Tassouni (see section **3.5**), we shifted our focus to a systematic explanation of specific liturgy sections for the deacons. During this period, we also incorporated a textbook on the liturgy which emphasized the connection between the liturgy and the concept of loving others
LS 5	Morning Prayers: This session delved into the initial part of the matins, the service preceding the main Sunday liturgy. Specifically, we focused on the Thanksgiving prayers, linking them to a philosophical exploration of the problem of evil.
LS 6	Litanies (Petitionary Prayers) of the Matins: The lesson addressed the variety of prayers designed for different situations and individuals,

	including the sick, the poor, the church community, saints, and political leaders. We aimed to guide students on how to direct their focus and intentions towards these subjects. Notably, we ceased using the liturgy textbook during this period, following feedback from a deacon (another collaborator) that it did not align with the church's liturgy format, despite its Coptic origin.
LS 7	Litany Prayers for Travelers: Here, the learner-teacher expanded the concept of "traveling" beyond the physical realm, encompassing emotional experiences like agony and existential or spiritual journeys of self-discovery.

Appendix 2

Stage	Questions
Pre-Intervention Interview	Can you tell me about your education context, about your classroom? Can you tell me you see in your students' communities and their personal lives? In terms of the relevance of theology, have there been ways you've shown its relevance? What resources do you find helpful for teaching? What parts of your school community or church community do you think we can improve or help address? When it comes to your teaching practice or knowledge, what do you think you would like to develop or you would like to expand in terms of knowledge, skills, experience or anything you can think of?
Post-Intervention Interview	It's been two months since we finished this program, what lessons or growth has stayed with you since the end of the program? Are you able to use the skills your learned from this program in your secular job? When it comes to touching the students' sense of spirituality, what do you think are the best ways to do this? What differences do you see when you pray with them or fast and pray before classes? How did you discover the importance of these since I did not expect you were going to enjoy these? What do you think are the best ways to teach theology? When you teach theology, what are you sharing with your students? Do you feel like you learned anything about connection knowledge such as designing a curriculum or connecting your lessons? Are there any improvements you would suggest for this course?