EXPLORING THE IMPACT OF SECONDARY EDUCATIONAL CONTEXTS ON COLLEGE STUDENT FORMATION AND DEVELOPMENT

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by

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EXPLORING THE IMPACT OF SECONDARY EDUCATIONAL CONTEXTS ON COLLEGE STUDENT FORMATION AND DEVELOPMENT

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For the glory of God

and to Christian parents everywhere.

TABLE OF CONTENTS

Page

LIST OF TABLES

Table Page

PREFACE

The topic and nature of this undertaking finds its roots in a deep personal conviction from the Lord. I discovered that my love for knowledge extended beyond my own development and manifested itself through our two girls, Madelyn and Anna Kate. As I began doctoral studies, I found myself meditating on how we could raise the girls to love God with all their *minds* and immediately began to pursue this endeavor. My motivation to succeed came from the Lord Jesus and the hopeful fruit of my labors will be seen through the minds of our girls. Thank you Jesus for your guidance, encouragement, and conviction.

Of all people who have helped me along this epistemological endeavor, my wife, Heather, has sacrificed the most. I express my most sincere love and appreciation for all that she has done to help me financially, emotionally, and spiritually. I found comfort in knowing that I had your unconditional support throughout this program. I also thank God for the leadership and fellow ministers at Bellevue Baptist Church, who provided financial, prayer, and daily support. Mrs. Julie, thank you for encouraging me to finish school while "I was young."

I wish to thank my supervisor, Dr. Trentham, and my committee for your support, clear instruction, and encouragement. Each of you saw the potential in me and pushed me to succeed in a myriad of ways. The entire SBTS faculty and staff displayed excellence in everything that they did and truly showed the grace of God to me. Finally,

thank you to the fellow students of the 2015 cohort. Through discussion boards, seminars, group projects, and every other educational endeavor, I had full confidence that we cared for, prayed, helped, and sharpened one another.

Justin Mullins

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CHAPTER 1

INTRODUCTION

Imagine for a moment the life of a Hebrew boy three hundred years before Christ's birth. Though this thirteen-year-old's spoken language is Aramaic, he is now trying to read Hebrew. He sits on the cold ground of a synagogue school and waits patiently for his *rabbi* to enter. His right to an education in the synagogue school is reserved for men only. His curriculum is centered on the interpretation of the Mosaic Law. Attendance is voluntary.[1]

Christian education has evolved significantly since the Exile Era. Biblically and historically, Christian education has been seen to a varying degree in the home, workplace, synagogues, churches, public schools, covenantal schools, charter schools, seminaries, universities, and various other institutions. Regardless of where education takes place, it remains a cornerstone of every society. Education touches every aspect of a person's life. Contemporary education is the result of thousands of years of differing learning environments, teaching methodologies, and curriculum.

Research Problem

Many of the different learning environments have emerged as the result of the

[1]Michael J. Anthony and Warren S. Benson, *Exploring the History & Philosophy of Christian Education* (Eugene, OR: Wipf and Stock Publishers, 2003), 32-36.

religious values of the people in a society. For example, the monastic schools of the twelfth century reflect the influence of Roman Catholicism under the leadership of St. Francis of Assisi in the Roman Empire.[2] Today, public school, private school, and homeschool represent a division among evangelicals regarding their children's school options.

Therein lies the problem. Evangelical parents who desire for their children to develop intellectually can find themselves struggling to discern which schooling option is best for their children. One reason for this difficulty is that there are a plethora of intellectual values among evangelicals.[3] One of the intellectual values of evangelicals that is greatly misunderstood is that the purpose of pre-college education is simply to prepare students for college. Furthermore, the rise of public education in America, dual income families, and the cost of private school tuition has changed the landscape of education in America. A shift in formal education has occurred among evangelicals from the church room to the schoolroom, from the resident-house to the schoolhouse. Often parents view education as a teacher's job, not one entrusted to parents as described in the Bible. Deuteronomy 6 says,

> You shall love the Lord your God with all your heart and with all your soul and with all your might. These words, which I am commanding you today, shall be on your heart. You shall teach them diligently to your sons and shall talk of them when you sit in your house and when you walk by the way and when you lie down and when you rise up.[4]

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[2]James W. Sire, *Habits of the Mind: Intellectual Life as a Christian Calling* (Downers Grove, IL: InterVarsity Press, 2000).

[3]Pew Research Center, accessed January 31, 2016, http://www.pewforum.org/2015/11/03/u-s-public-becoming-less-religious/.

[4]All Scripture references are taken from the New American Standard Bible unless otherwise noted.

A basic definition of education is "directed learning."[5] Correspondingly, one of the dominant educational directives is that primary purpose (and outcome) of education is to earn the highest score on the ACT or SAT. The Department of Education of the United States says their mission is to "promote student achievement and preparation for global competitiveness by fostering education excellence and ensuring equal access."[6] But surely there is more to education than test scores or academic achievement. What about developing the character of individual students? With an absence of a Christian worldview in the majority of (public) education, there remains no motivation for students to be molded into the image of Christ. The primary objective of secular education is to gain knowledge and do good, whatever that means to the student.[7] Obtaining a vast amount of knowledge is not enough make a Christian a Great Commission follower of Christ. C. S. Lewis notes, "Education without values, as useful as it is, seems rather to make man a more clever devil."[8]

The days of cultural Christianity are quickly fading. The Christian landscape in America has changed from being a "moral majority" to a "prophetic minority."[9] With an

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[5]George R. Knight, *Philosophy & Education: An introduction in Christian Perspective* (Berrien Springs, MI: Andrews University Press, 2006), 11.

[6]U.S. Department of Education, accessed February 4, 2016, www.ed.gov.

[7]Timothy Paul Jones, ed., *Perspectives on Your Child's Education: 4 Views* (Nashville: B&H, 2009), 28.

[8]C. S. Lewis, *The Abolition of Man* (New York: HarperOne, 2015).

[9]Russell Moore, *Onward: Engaging the Culture without Losing the Gospel* (Nashville: B&H Publishing Group, 2015), 28-46.

increase in secularization in America,[10] Christian parents are faced with an unprecedented conviction to choose the right schooling option. Biblically, this "prophetic minority" is largely striving to raise up a generation of students who live lives that fulfill the Great Commission, those who love God with all their heart, soul, *mind*, and strength. So what is at stake when choosing how children spend one-third of their waking hours?[11] It is the difference between a generation of students with knowledge and a generation of students who are intellectually virtuous.[12] Christian parents should not quickly dismiss any particular secondary educational context for their children. They should be informed on how each secondary educational environment has its own distinctions and merits and can be used for the glory of God.

The purpose of this study is to explore the impact of secondary educational contexts on college student formation and development. This study sought to discover if a difference of intellectual maturity exists among evangelical undergraduates and the degree of difference based on their education in public school, private school, and/or homeschool.

Benefit of Study

This study benefits several different groups. It informs institutions of higher education in multiple ways. College counselors can understand the differing intellectual

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[10]Moore, *Onward*, 24.

[11]Jones, *Perspectives on Your Child's Education.* The statistic that one-third of a child's waking hours are dedicated to school is based on public education standards that are set at both the federal and state level in the United States. Required hours needed for accreditation through homeschooling and private school vary among states.

[12]Sire, *Habits of the Mind,* 106-25.

maturity among applicants. It also informs institutions of higher education regarding curriculum, teaching methodologies, and course designs. Within the family unit, this study informs parents of small children on the strengths and weaknesses of homeschool, private school, and public school, within a Christian worldview. Finally it informs church leaders on how to equip parents to be the primary disciple-makers in their homes.

This study explored (1) the relationship between the type of pre-college learning environment an undergraduate attended and progression through Perry's positions of intellectual and ethical development, (2) how evangelical undergraduates describe the impact of their secondary educational context upon their academic life and Christian formation, and (3) the relationship between the expressed goals and outcomes of educational leaders and priorities and competencies of students.

Foundations for Topic

In order to understand the impact of secondary educational contexts on college student formation and development, three foundational topics are explored in this section: epistemology, intellectual development of evangelical undergraduates, and foundations of education.

Epistemology. A plethora of studies have explored the realms of epistemology. Broadly defined, epistemology is the study of the nature, sources, and validity of knowledge.[13] Within a Christian worldview, epistemology is not only the

[13]Knight, *Philosophy & Education*, 20.

study of *knowledge*, but also synonymously the study of *truth*.[14] James W. Sire notes, "Religious truth is not only a portion, but a condition of general knowledge."[15] The connection between epistemology and theology is clearly evident through a person's understanding of God,[16] character,[17] morality,[18] obedience,[19] Scripture,[20] and the Logos.[21]

The foundational guiding principle regarding faith and reason is that belief in God is *rational*.[22] Every person bears God's image (Gen 1:27) and has been given the ability to use reason and faith complementarily as a means of intellectual development and identity. Christians are justified in their Christian beliefs by their experience but also by the propositions of the Bible.[23]

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[14]Sire, *Habits of the Mind*, 110-12.

[15]Ibid., 61.

[16]Ibid., 60.

[17]A. G. Sertillanges, *The Intellectual Life: Its Spirit, Conditions, and Methods* (Washington, DC: The Catholic University of America Press, 1987).

[18]Sire, *Habits of the Mind*, 95.

[19]Dietrich Bonhoeffer, *The Cost of Discipleship* (New York: Macmillan, 1959), 54.

[20]Bonhoeffer is well known for his study of the relationship between truly knowing something in relation to doing the learned principle. In the context of this study, the term *obedience* will refer to the commands of Scripture. Bohnhoeffer even states, "Only he who believes is obedient, and only he who is obedient believes." Ibid., 54.

[21]Sire, *Habits of the Mind,* 202.

[22]Alvin Plantinga and Nicholas Wolterstorff, *Faith and Rationality: Reason and Belief in God* (Notre Dame, IN: University of Notre Dame Press, 2012), 135-86.

[23]Ibid., 103.

Jesus is the embodiment of the Christian Intellectual.[24] John 7:15-17 explains, "The Jews then were astonished, saying, 'How has this man become learned, having never been educated?' So Jesus answered them and said, 'My teaching is not Mine, but His who sent Me. If anyone is willing to do His will, he will know of the teaching, whether it is of God or whether I speak from Myself.'" Jesus had a perfect understand of truth and challenged his followers to obey His Word.

Because God is Lord, He is not only knowable but also *known* to all (Rom. 1:21).[25] For Christians, the sanctifying work of the Holy Spirit (Col 3:10) brings forth intellectual maturity. Still, our knowledge of God[26] is limited.[27] Therefore, it is through sanctification that Christians apply their theology into all areas of life.[28]

Intellectual development of evangelical undergraduates. The development of college students has been examined from many different perspectives. In epistemic studies, *Forms of Intellectual and Ethical Development in the College Years: A Scheme* has remained the pioneering study. The Perry Scheme identifies the intellectual growth

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[24]Plantinga and Wolterstorff, *Faith and* Rationality, 204.

[25]John M. Frame, *The Doctrine of the Knowledge of God* (Phillipsburg, NJ: P & R Publishing, 1987), 18.

[26]Thomas Aquinas, *Summa Theologiae*, trans. The Fathers of the Dominican Province (Claremont, CA: Coyote Canyon Press, 2010). Aquinas believes that people (even in our earthly, limited condition) can in fact have knowledge and provides "Five Ways" for proof of God's existence. In a sense, his "Five Ways" are a prime example of his belief of using reason and knowledge of God in our belief of God: (1) Argument from Motion, (2) Argument from Efficient Causes, (3) Argument from Possibility and Necessity (4) Argument from Gradation of Being (5) Argument from Design.

[27]Ibid., 20.

[28]Ibid., 76.

(and sometimes retreat/reversal) in college students by assigning development of students into one of nine stages.

Perry limited his research population to 17 to 22-year-olds. He studied how the students' interactions with curriculum and Authority (primarily professors) developed how students learned and how content affected personal identity. Perry concluded that healthy cognitive growth occurred through a process ending with a convictional commitment to a person's values, ideologies, and presuppositions while also being accepting of contrary beliefs if it was validated by data.[29] Personal convictional commitment only comes through realizing that truth is learned through the context of the learner.[30]

Further studies have used Perry's Scheme to study the intellectual development of *evangelical* pre-ministry college students who approach education from a Christian worldview. John David Trentham studied in his dissertation the variance of epistemological development in pre-ministry undergraduates across different institutional contexts, using the Perry Scheme as a theoretical lens. He found that Perry Scheme was an appropriate tool for measuring intellectual maturity in an evangelical context.[31]

This study uses the Perry Scheme to inform the methodology of the study. Additionally, other resources are used to properly understand the Millennial generation.

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[29]William G. Perry, *Forms of Intellectual and Ethical Development in the College Years: A Scheme* (New York: Holt, Rinehart, and Winston, 1970).

[30]Ibid., 153-76.

[31]John David Trentham, "Epistemological Development in Pre-Ministry Undergraduates: A Cross-Institutional Application of the Perry Scheme" (Ph.D. diss., The Southern Baptist Theological Seminary, 2012), 208.

The ideologies and values of the contemporary college students have changed drastically since the Perry Scheme was introduced. Millennials are generally open-minded,[32] optimistic, confident, diverse, collaborative, visual, and kinesthetic learners.[33]

Foundations of education. Education manifests itself in many different forms. *Formal education* identifies the many different forms of organized, planned, budgeted, staffed, and deliberate teaching and learning. *Informal education* includes a range of situations and relationships that result in learning. *Nonformal education* is a range of deliberate educational services in order to provide functional knowledge needed for contemporary life.[34]

For the purpose of this study, the scope of inquiry focus on formal education within three separate contexts: public school, private school,[35] and homeschool. Specifically, this study will explore how undergraduates develop, based on their precollege learning environments.

Public education. Public education was not founded in America, but around

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[32]Thom S. Rainer and Jess W. Rainer, *The Millennials: Connecting to America's Largest Generation* (Nashville: B & H Publishing, 2011).

[33]Julie Coats, *Generational Learning Styles* (River Falls, WI: LERN Books, 2007), 137.

[34]Michael J. Anthony, *Introducing Christian Education* (Grand Rapids: Baker Books, 2001), 121.

[35]Many organizations exist under that category of "private school." These include covenantal schools (requiring a commitment to a set of values/beliefs), non-covenantal, independent, and charter schools. Within a Christian context and for the purposes of this study, private schools will consist entirely of Christian (covenantal/non-covenantal) schools.

386 B.C. in Athens, Greece, where Plato established The Academy.[36] This early form of state-funded education would form the basis for what North America would later develop in its public school system.[37] Classical Greek educational thought insisted on education to the masses, that is all members of society.[38] In America the first public, tax-supported school opened in 1635. But the Department of Education was not founded until the 1867.[39] Today, public education remains the primary method of education in elementary and secondary students. Of the approximate 60 million pre-college students in America, 89 percent attend public schools,[40] 8 percent attend private schools, and 3 percent are homeschooled.[41] These percentages may not be representative of the evangelical population. While the United States Department of Education has not published data concerning schooling environment variances for evangelicals, two pieces of data may show that private school and homeschool attendance is higher for evangelical students. For private education, the majority of private schools are Christian (as discussed below). For home education, 64 percent of parents list "providing religious instruction" as one of

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[36]Michael J. Anthony and Warren S. Benson, *Exploring the History and Philosophy of Christian Education* (Eugene, OR: Wipf and Stock Publishers, 2003), 55.

[37]Ibid., 57-61.

[38]Ibid., 69.

[39]James D. Anderson et al., *School: The History of American Public Education* (Boston: Beacon Press, 2001).

[40]Institute of Education Sciences: National Center for Education Statistics, accessed February 8, 2016, http://nces.ed.gov/programs/coe/indicator_cga.asp.

[41]Institute of Education Sciences: National Center for Education Statistics, accessed February 8, 2016, http://www2.ed.gov/about/offices/list/oii/nonpublic/statistics.html.

the most important reasons for homeschooling their children.[42]

Private education. Though declining in enrollment in recent history,[43] private school education still represents a major sector of education in the U.S. Within private education, approximately 68 percent of schools are religious, and 32 percent are nonsectarian. The religious nature of many private education institutions affects the epistemological priorities of their respective organizations. Often, private schools provide a higher level of education to students because school leaders have complete control over curriculum, hiring process of educators, and covenantal agreements with families.[44] Private schools also have greater funding than public schools allowing for better facilities and more teachers, lowering the size of the classrooms.[45]

Home education. Homeschooling is the oldest form of education.[46] In Hebrew culture, most boys were trained in the vocation of their fathers at home.[47] Today, home

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[42]U.S. Department of Education, "Statistics about Nonpublic Education in the United States," accessed January 19, 2017, https://www2.ed.gov/about/offices/list/oii/nonpublic/statistics.html.

[43]Stephanie Ewert, "The Decline in Private School Enrollment," U.S. Census Bureau, accessed February 8, 2016, http://www.census.gov/hhes/school/files/ewert_private_school_enrollment.pdf.

[44]Jones, *Perspectives on your Child's Education*, 7-22.

[45]Ibid., 60-79.

[46]Anthony and Benson, *Exploring the History & Philosophy of Christian Education*, 25-27.

[47]Ibid., 26.

education remains a preferred schooling option for over 1.7 million students in the U.S.[48] Homeschool allows parents to have complete control over their child's education while being able to teach more content in less time. Epistemologically it encourages students to be self-motivated in their learning endeavors.[49]

Several studies have studied epistemological development of college students. John David Trentham studied pre-ministry undergraduates through a cross-institutional application of the Perry Scheme.[50] A series of replication studies were conducted exploring epistemological development of college students. Gregory Long studied epistemological development of pre-ministry undergraduates at Bible colleges by using the Perry Scheme.[51] Christopher Lynn Sanchez explored epistemological development in pre-ministry undergraduates attending secular universities.[52] Bruce Richard Cannon studied epistemological develop in pre-ministry undergraduates attending confessional

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[48]Institute of Education Sciences: National Center for Education Statistics. "Homeschooling," accessed July 15, 2017, https://nces.ed.gov/fastfacts/display.asp?id=91.

[49]Elaine K. McEwan, *Schooling Options: Choosing the Best for You & Your Child* (Wheaton, IL: Harold Shaw Publishers, 1991), 102-10.

[50]Trentham, "Epistemological Development in Pre-Ministry Undergraduates," 140-203.

[51]Gregory Brock Long, "Evaluating the Epistemological Development of Pre-Ministry Undergraduates at Bible Colleges according to the Perry Scheme" (Ed.D. thesis, The Southern Baptist Theological Seminary, 2014).

[52]Christopher Lynn Sanchez, "Epistemological Development in Pre-Ministry Undergraduates Attending Secular Universities" (Ed.D. thesis, The Southern Baptist Theological Sminary, 2015).

Christian liberal arts colleges/universities.[53] Jonathan Derek Stuckert assessed epistemological development among evangelical seminarians.[54]

While extensive studies have explored epistemological maturity among college students, there remains little literature regarding how pre-college learning environments affect epistemological maturity, specifically within a Christian context. This study explored that gap in the research.

Purpose Statement

This qualitative study explored the impact of secondary educational contexts on college student formation and development.

Research Questions

The following questions were foundational to guiding all aspects of this research study.

1. What is the relationship, if any, between the type of pre-college learning environment an undergraduate attended and progression through Perry's positions of intellectual and ethical development?

2. How do evangelical undergraduates describe the impact of their secondary educational context upon their academic life and Christian formation?

3. What is the relationship, if any, between the expressed goals and outcomes of educational leaders and priorities and competencies of students?

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[53]Bruce Richard Cannon, "Epistemological Develop in Pre-Ministry Undergraduates Attending Confessional Christian Liberal Arts Colleges or Universities" (Ed.D. thesis, The Southern Baptist Theological Seminary, 2015).

[54]Jonathan Derek Stuckert, "Assessing Epistemological Development among Evangelical Seminarians" (Ed.D. thesis, The Southern Baptist Theological Seminary, 2016).

Delimitations of Research

The following delimitations describe the boundaries that were set for this research study.

1. This research was delimited to a purposive sampling, chosen from specific institutional contexts: community college, liberal arts college, and Bible college/seminary.

2. The scope of population was narrowed to people age 18.

3. This research limited pre-college learning to three learning environments: homeschool, private school, and public school.

4. Participants in the study were limited to entering freshmen in an institution of higher education. While some participants had college credits, this distinction includes students who were interviewed within a month of high school graduation.

5. The research was delimited to include participants whose final four years of precollege learning was from a single environment.

6. This research was delimited through filtering information gathered from the interviews through the views of the researcher. I may have also been given biased responses based on justification of efforts[55] or a response that the interviewee thought the I wanted to hear. These delimitations informed the design of the interview questions and procedures.

7. This research was delimited to accepting the participants' testimony of salvation in Jesus as a declaration of their identification as an evangelical.

Methodological Design

For the first phase of the research, beginning in April 2017, thirty personal interviews were conducted with the sample population. The sample population consisted of thirty undergraduate freshmen who attended various religious and secular higher education institutions. Through stratified purposeful sampling, ten undergraduates were

[55]Research stemming from Justification of Efforts Theory suggests that people attribute a greater value on the outcome of the past than they do on the efforts it took to achieve the outcome. This would cause undergraduates to view their pre-college years more favorably than they actually were.

chosen based on which of each of the three pre-college learning environments they attended: public school, private school, and homeschool.

Open-ended questions were asked to the interviewees to reflect upon their pre-college school environments. Interviews were held by telephone at specific times scheduled by each interviewee and me.

I gained access to the sample population through contact with educational, ecclesiastical, non-profit, and personal networks. The participants were required to be a professed evangelical Christian, age 18, and currently enrolled in an institution of higher education as an entering freshman.

Since the questions were crafted beforehand, the semi-structured, personal interviews allowed for the solicitation of insights and the clarification of any and all factors impacting our understanding and discoveries that could not be obtained through the prepared questioning alone.

Each interview was recorded in digital format and transcribed. Interviewees were informed of the recording and gave consent to proceed. Responses and the identity of interviewees were kept confidential. Once the interviews were finished, the responders were categorized first by the pre-college schooling environment. Then, based on the precedent literature and the responses received from those who were interviewed, a coding was be made with markers for epistemological maturity and any intellectual differences between students from the varying pre-college learning environments (based on the Perry scheme).

Additionally, the adapted Perry Protocol included questions to prompt participants to reflect upon their pre-college learning environment. These questions

explored how students perceived how their pre-college learning impacted their academic achievement and Christian formation by studying how students articulated the value and influence of their pre-college education. The responses were reviewed by the researcher through an independent content analysis procedure to discover how college students perceived the impact of their precollege education.

The second phase of the research consisted of six interviews and included one educational leader/administrator and one teacher from each of the three pre-college learning environments: public education, private education, and home education. These interviews took place by telephone and consisted of open-ended questions, that sought to determine the perceived learning goals and outcomes of their respective institutions of learning. Responses were recorded in digital format and reviewed by me to discover common themes of articulation of goals. The responses of the educational leaders were evaluated alongside the responses from students to discover to what degree the goals were accomplished by the students.[56]

[56]See appendix 3 and appendix 4 for interview protocols for students and educational leaders/teachers.

CHAPTER 2

PRECEDENT LITERATURE

This study explored the impact of secondary educational contexts on college student formation and development. This chapter serves to explore the theological, epistemological, theoretical, and educational foundations pertaining to evangelical undergraduates and the process of intellectual growth and maturation.

The first major groupings of sub-sections explore theological foundations: the doctrine of the knowledge of God, biblical components of epistemology, Jesus, the model thinker, and *imago Dei*. The second section focuses on the epistemological foundations: definitions, knowledge and truth, intellectual virtues, intellectual disciplines, and faith and reason. The third section explores theoretical foundations of epistemology of evangelical undergraduates: Piaget's Theory of Cognitive Development, William G. Perry's *Scheme: Forms of Intellectual and Ethical Development*, integrating theory and theology, and recent studies within a Christian framework. The final section studies educational foundations: dominant contemporary philosophies of education, the contemporary American college student, and distinctions of public, private, and home education.

Theological Foundations

Christians have long held a deep conviction that epistemology and education should be informed through a biblical worldview. Proverbs 1:7 reminds Christians that knowledge of God is paramount and a requisite for understanding the world. Rooted all throughout Scripture, knowledge is regarded as a healthy attribute to a righteous life.

The Doctrine of the Knowledge of God

John M. Frame notes that theologian John Calvin's famous *Institutes* begins not with Scripture authority or the doctrine of God, but with a discussion on the "knowledge of God."[1] Frame notes that the doctrine of the knowledge of God is a foundational concept, a concept by which all other concepts are understood.[2] Understanding this doctrine is crucial to understanding God, man, and the world.

The knowability of God. If God is truly omniscient, can people really know God? How much of God can a person truly know? Wayne Grudem offers three principles to understanding the knowability of God. (1) There is a necessity for God to reveal Himself to us. Personal knowledge of God comes in salvation, through revelation, and the Bible. (2) We can never fully understand God. He is incomprehensible, not fully or exhaustively understood (1 Cor 2:10 – 12), while God's understanding is beyond measure (Psalm 147:5) (3) Yet we can know God truly. All that Scripture tells us about God is

[1]John M. Frame, *The Doctrine of the Knowledge of God* (Phillipsburg, NJ: P & R Publishing, 1987), 1.

[2]Ibid., 1-5.

true.[3] John M. Frame elaborates, "Because God is Lord, He is not only knowable but *known* to all…. But in a more profound sense, only believers know God, only Christians have a knowledge of God that is the essence of eternal life."[4]

The objects of knowledge. In *The Doctrine of the Knowledge of God*, John Frame articulates exactly what a person can know. The primary object of knowledge is God Himself.[5] In seeking to know God, it is important to understand Him as a Covenant Lord. God is the covenant head, exalted above his people, yet also deeply involved with them. He exercises complete control and authority over all things.[6] The result of knowledge of God is ethical, that a Christian's theology ought to affect his or her actions: "The application of God's Word by persons to all areas of life."[7]

A second object of knowledge is God's law. Frame argues, "We cannot know God without knowing Him as law. God's law, then, is God himself."[8] As stated above, it is useful to regard epistemology as a branch of ethics, that one's theory of knowledge directly informs his or her practice of knowledge. John Henry Newman, a prominent Christian thinker and educator whose scholarly works focused on epistemology, constantly argued the importance between theory and praxis. James W. Sire notes, "The

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[3]Wayne Grudem, *Systematic Theology* (Grand Rapids: Inter-Varsity Press, 1994), 149-55.

[4]Frame, *The Doctrine of the Knowledge of God*, 18.

[5]Ibid., 62.

[6]Ibid., 11-18.

[7]Ibid., 76.

[8]Ibid., 63.

close relationship between knowing and doing, believing and obeying, and theory and practice, emerge in a host of ways in his (Newman's) writings throughout his life."[9] We are responsible for understanding and obeying God's law.

Knowing God also involves knowing the world and one's situation in the world. People understand the world through (1) knowing His works of creation providence, and redemption, (2) recognizing that we cannot know anything about God without knowing something about the world at the same time, and (3) God wants His people to apply His Word to their own situations, implying He wants them to understand these situations.[10] All of these objects of knowledge are related to a final object, oneself – one's relationship with God, His law, and the world. This will be discussed in greater detail through a study of the *imago Dei*.

Biblical Components of Epistemology

The Bible contains numerous references to the mind, knowledge, wisdom, discernment, understanding, and other various concepts related to epistemology. These verses inform Christians on intellectual development through disciplines and the Holy Spirit. Understanding the meaning of these words and their contexts in Scripture are critical for studying epistemology.

Knowledge. In the Old Testament, *da'at* is the noun that describes knowledge in all spheres of life and in many spheres of human existence. In the New Testament,

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[9]James W. Sire, *Habits of the Mind: Intellectual Life as a Christian Calling* (Downers Grove, IL: InterVarsity Press, 2000), 37.

[10]Frame, *The Doctrine of the Knowledge of God*, 64.

gnosis and *epignosis* describe knowledge that begins with God and is tied to insight, truth, and saving knowledge.[11] Christians are called to "grow in grace and knowledge" (2 Pet 3:18), to love "in knowledge and insight" (Phil 1:9), and to gain "knowledge of truth" (2 Pet 1:2, 8; 2:20).

Wisdom. In the Old Testament *hokma* has a wide variety of meanings, including both physical skill and intellectual wisdom. The New Testament word *sophia* denotes the capacity to not only understand something (Acts 7:22) but also to act accordingly (Col 1:9; 4:5).[12] Wisdom in the New Testament is applied knowledge.

Discernment. The true word as used in the Bible is the verb discern, *bin* in the Old Testament and *diakrino*/*anakrino* in the New Testament. In Hebrew, to discern refers to technical, detailed, or specific understanding.[13] In Greek, to discern means to judge, distinguish, or evaluate. In 1 Kings 3:11 *bin* refers to Solomon's request to God for the ability to discern between good and evil.[14]

Understanding. In Hebrew, *understanding* is synonymous with *discernment*. In the New Testament there are several words that are translated to *understanding*. (1) *Ginosko*, means to know, understand, or recognize. (2) *Epistamai* referes to general knowledge or understanding of a situation. (3) *Katalambano* means to catch, obtain,

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[11]William D. Mounce, ed., *Mounce's Complete Expository Dictionary of Old and New Testament Words* (Grand Rapids: Zondervan, 2006), 384-86.

[12]Ibid., 793.

[13]Ibid., 183.

[14]Stephen D. Renn, ed., *Expository Dictionary of Bible Words* (Peabody, MA: Hendrickson Publishers, 2005), 285.

seize, or overtake (to grasp/understand). (4) *Noeo* means to reflect on. (5) *Syniemi* means to realize.[15] Understanding does not mean the accumulation of facts, but rather a development of character.[16]

Jesus, the Model Thinker

Jesus is not only the smartest person to ever live, but also the wisest. As the incarnation of the Logos, Jesus was and is and will always be the ultimate, final intelligence of the Godhead.[17] He could be nothing other than the smartest man who ever lived. The intelligence of Jesus is manifested through his cleverness, reasoning skills, storytelling (pedagogy), ethical insight, and other practices.[18]

James W. Sire relates Jesus' intellect with man's intellect: "As the Logos, Jesus Christ is the epistemological foundation for our ability to reason. . . . he is the prime example of how we should think!"[19] The intelligence of Jesus is exemplified in John 7:21 – 23. He develops a *fortiori* argument when teaching the Pharisees that if circumcision is permitted on the Sabbath, how much more should healing a sick person on the Sabbath be allowed. In John 5, Jesus reasons from evidence regarding his divinity. John 7-8 details an immensely complex argument surrounding the identity of Jesus. Sire notes, "Accusation and rejoinder, charge and countercharge all come in a seemingly seamless

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[15]Renn, *Expository Dictionary of Bible Words*, 757-58.

[16]Lawrence O. Richards, *New International Encyclopedia of Bible Words* (Grand Rapids: Zondervan, 1991), 604-06.

[17]Sire, *Habits of the Mind*, 179.

[18]Ibid., 180-82.

[19]Ibid., 184.

web."[20]

Understanding epistemology within a Christian perspective is not limited to theory, but is evident in the actual life and personhood of Jesus. The real example he provides Christians offers insight to a perfect intellectual. Thus Jesus is the foundation for epistemology. Sire culminates understanding Jesus as the model thinker:

> The ultimate foundation for human knowing is not the autonomy of human reason; it is not the autonomy of human experience. The ultimate philosophical and theological foundation for all human knowing is the Logos. The foundation is ontological: God not just as a Being but as Reason or Meaning. And this Logos has an incarnate form–Jesus as "reasoned." [21]

Jesus is the embodiment of intellectual virtues, displaying a mind that is untainted by sin and a moral life that connects learning with doing. All of these qualities give Christians a model for epistemological maturity who is relationally connected to each person, who is created in His image.

Imago Dei

Imago Dei is the biblical use of "image of God." Wayne Grudem's study is straightforward and in some respects, a culmination of many different views on *imago Dei*. He states, "The fact that man is in the image of God means that man is like God and represents him."[22] Scripture refers to the "image of God" only a few times. Often, Scripture refers to people being "like God." Grudem argues one cannot really know what the Bible means referring to people as being like God. Grudem says, "Full understanding

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[20]Sire, *Habits of the Mind*, 193.

[21]Ibid., 201-4.

[22]Grudem, *Systematic Theology*, 442.

of man's likeness to God would require a full understanding of who God is."[23] While one cannot fully understand *imago Dei*, Grudem argues (1) all men bear God's image. (2) God's image is distorted in man because of the Fall. (3) God's image will be completely restored when Jesus returns.[24] These principles provide a foundation for understanding the different views of *imago Dei*.

Millard J. Erickson provides three primary views of *imago Dei*. (1) *The Substantive View–Imago Dei* is shown through the fact that reason is the most significant aspect of human nature. (2) *The Relational View–Imago Dei* is shown through man's relationship with God and fellow man. (3) *The Functional View–Imago Dei* is shown through man's actions, specifically by his exercise of dominion.[25]

In light of Grudem's argument of the ubiquity of the *imago Dei* among people, and informed by Erickson's three views, one can explore two epistemic principles. First, human beings are reasoning beings. The ability to reason separates people from the rest of creation. The primary purpose for reasoning is understanding the Gospel and the ability to repent of sin, trust in Jesus, and receive Him as Lord and Savior.

Second, epistemology is connected to the ethical nature of living, how people actually live their lives based on their sense of epistemic warrant and justifications. One of the greatest examples of the connection between knowing and doing through *imago Dei* is the Great Commandment in Matthew 22:

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[23]Grudem, *Systematic Theology*, 443.

[24]Ibid., 445-50.

[25]Millard J. Erickson, *Christian Theology*, 3rd ed. (Grand Rapids: Baker Academic, 2013), 461-66.

> Hearing that Jesus had silenced the Sadducees, the Pharisees got together. One of them, an expert in the law, tested him with this question: "Teacher, which is the greatest commandment in the Law?"
> Jesus replied: " 'Love the Lord your God with all your heart and with all your soul and with all your mind.' This is the first and greatest commandment. And the second is like it: 'Love your neighbor as yourself.' All the Law and the Prophets hang on these two commandments."

The *imago Dei* is displayed in this text through our relationship to God and other people, and also through how believers are to love others based on the commandments of God in Scripture.

James 4 says,

> What use is it, my brethren, if someone says he has faith but he has no works? Can that faith save him? If a brother or sister is without clothing and in need of daily food, and one of you says to them, "Go in peace, be warmed and be filled," and yet you do not give them what is necessary for their body, what use is that? Even so faith, if it has no works, is dead, being by itself.
> But someone may well say, "You have faith and I have works; show me your faith without the works, and I will show you my faith by my works." You believe that God is one. You do well; the demons also believe, and shudder. But are you willing to recognize, you foolish fellow, that faith without works is useless? Was not Abraham our father justified by works when he offered up Isaac his son on the altar? You see that faith was working with his works, and as a result of the works, faith was perfected; and the Scripture was fulfilled which says, "And Abraham believed God, and it was reckoned to him as righteousness," and he was called the friend of God. You see that a man is justified by works and not by faith alone. In the same way, was not Rahab the harlot also justified by works when she received the messengers and sent them out by another way? For just as the body without the spirit is dead, so also faith without works is dead.

James understood the deep spiritual conviction that what a person knows and believes is directly connected to the ethical nature of living. Biblically, knowledge of God and others determines the ethical decisions a person makes. All knowledge is personal, relies on commitments that motivate our highest achievements (ethical living).[26]

[26]Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago: University of Chicago Press, 1958).

While James is arguing that speaking truth apart from holy living is insufficient for a Christ-honoring life, Michael Polanyi argues that knowledge is tacit and people, "know more than they can tell."[27]

Epistemological Foundations

This section explores the epistemological foundations related to this study. These include: an overview and history of epistemology, sources of knowledge, the structure of intellectual virtues, justification of knowledge, methods of knowledge, intellectual disciplines, and the integration of faith and reason.

Overview and History

In John 18:38, Pontius Pilate asked a question that has been a key component to philosophical thought throughout the ages, "What is truth?" Epistemology is the theory and study of knowledge.[28] Along with metaphysics and axiology, epistemology is one of the three major categories of philosophy.[29] The word "epistemology" is a neologism derived from the Greek *epistéme* [knowledge].[30] But epistemology is more than just knowledge. It is how and why a person knows what he or she knows. This is a more comprehensive view than the dominant Western tradition of knowledge, that knowledge

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[27]Michael Polanyi, *The Tacit Dimension* (Chicago: University of Chicago Press, 1966), 4.

[28]Jay Wood, *Epistemology: Becoming Intellectually Virtuous* (Downers Grove, IL: InterVarsity Press, 1998), 7.

[29]George R. Knight, *Philosophy & Education: An Introduction in Christian Perspective* (Berrien Springs, MI: Andrews University Press, 2006), 15-37.

[30]Wal Suchting, "Epistemology," *Historical Materialism* 14, no. 3 (2006): 331-45.

is merely true and justified statements.[31]

One scholar to question this assumption within a Christian perspective was Michael Polanyi. A chemist and philosopher, he attempted to bridge the gap between fact and value, science and humanity. Polanyi develops the idea that participative knowledge is actually *indwelt* knowledge. Indwelt knowledge is knowledge which we have assimilated in such a way that we do not ordinarily think about it, but with it.[32]

Building off Polanyi's model, Esther Meek proposes knowing as "the responsible human struggle to rely on clues to focus on a coherent pattern and submit to its reality."[33] According to Meek, the old model of knowing was through deductive reasoning, moving from statements that are called premises to a statement called a conclusion. If the premises are true, the conclusions must all be true.[34] This view is demonstrated through Aristotle's *Posterior Analytics*, where he argues that by understanding one grasps firm principles, self-evident truths; from these one infers or deduces further truths.[35] In contrast to this view, Meek argues for integration of clues into a working model. Meek's model informs many of the ideologies regarding epistemology today. L. Susan Stebbing in *Thinking to Some Purpose* agrees with Meek: "A distinguishing characteristic of intelligence is the ability to discern relevant connexions –

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[31]Esther Lightcap Meek, *Longing to Know: The Philosophy of Knowledge for Ordinary People* (Grand Rapids: Baker Publishing Group, 2003), 33.

[32]Polanyi, *Personal Knowledge*, 1958.

[33]Meek, *Longing to Know*, 13.

[34]Ibid., 75.

[35]Alvin Plantinga and Nicholas Wolterstorff, *Faith and Rationality: Reason and Belief in God* (Notre Dame, IN: University of Notre Dame Press, 2012), 42.

to put together what ought to be conjoined and to keep distinct what ought to be separated."[36]

There remain several different perspectives on epistemology, each trying to answer the question, "Is there truth independent of human experience?"[37] Furthermore, what relationship does reason and knowledge have with belief in God? One scholar to address this question was Thomas Aquinas. He argued that a mature believer is one who employed the mind to come to a reasonable and rational faith, a blending of theology and philosophy. Educationally, Scholasticism or "Neo Scholasticism" aimed to systematize belief into a logical system and provide learners with the ability defend their propositions to outside arguments.[38] George R. Knight notes the distinctions of neo-scholasticism: "scholasticism can be seen as the attempt to rationalize theology in order to buttress faith by reason… using human reason and then relying on faith as in that realm beyond the scope of human understanding."[39]

Sources of Knowledge

Sources of knowledge are the means by which people gain knowledge. There are a variety of ways that people experience intellectual growth. As a person grows, means by which he or she grow are different. But for adults, there are five primary sources for a person to obtain knowledge.

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[36]Sire, *Habits of the Mind*, 67.

[37]Knight, *Philosophy & Education*, 21-22.

[38]Michael J. Anthony and Warren S. Benson, *Exploring the History & Philosophy of Christian Education* (Eugene, OR: Wipf and Stock Publishers, 2003), 148.

[39]Knight, *Philosophy & Education*, 55.

The first primary source of knowledge is *rationalism*, the view that reasoning, thought, or logic is the central factor in knowledge.[40] This is often viewed as the dominant source of knowledge. Rationalism claims that the senses alone cannot provide us with valid judgments that are consistent with one another. One must hold to propositions in which to rationalize.[41]

The second primary source of knowledge is *the senses.* This view states that knowledge is obtained through the senses: seeing, hearing, smelling, feeling, and tasting. It is experiential.[42] This source of knowledge is built upon assumptions that must be accepted by faith in the dependability of our sensory mechanisms.

The third primary source of knowledge is *authority***.** Authoritative knowledge is accepted as true because it comes from either experts or a standing tradition.[43] This is most prominently seen in the classroom. William G. Perry's scheme is largely built upon the presupposition that epistemological immaturity is characterized by people who accept truth simply because an authoritative figure deems it so.[44]

The fourth primary source of knowledge is *intuition.* Perhaps the most personal way of knowing, intuition is a direct apprehension of knowledge accompanied by an

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[40]Knight, *Philosophy & Education*, 23.

[41]Plantinga, *Faith and Rationality*, 3.

[42]Knight, *Philosophy & Education*, 22.

[43]Ibid., 23.

[44]William G. Perry, *Forms of Intellectual and Ethical Development in the College Years: A Scheme* (New York: Holt, Rinehart, and Winston, 1970), 59-71.

intense feeling of conviction that one has discovered truth.[45] Intuition is often difficult to quantify and can be dangerous when used apart from other forms of gaining knowledge.

The final primary source of knowledge is *revelation.* Revealed knowledge is particularly important in the field of religion. It differs from all other sources of knowledge by presupposing a transcendent supernatural reality. From a Christian perspective, revelation is not only *a* source of knowledge but is *the* knowledge. It is fundamental to understanding. For Christians, revelation is through two modes. General revelation refers to when "God reveals himself to all people at all times and in all places and through various means."[46] Four primary means of general revelation include created order, God's providential care, human creatures with a sense of right and wrong, and an innate sense of deity.[47] Special revelation is God's communication to particular people at particular times and in particular places.[48]

The Structure of Intellectual Virtues

Understanding the goal of gaining knowledge is critical to properly understanding epistemology. One area that has gained much investigation in the literature base is intellectual virtues. Wood observes,

> Virtues are dispositional properties, along with the concerns and capacities for judgment and action that constitute them. . . . Virtues are deeply embedded parts of character that readily dispose us to feel, to think, and to act in morally appropriate

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[45]Knight, *Philosophy & Education*, 24.

[46]James R. Estep, Michael Anthony, and Gregg R. Allison, *A Theology for Christian Education* (Nashville: B & H Publishing, 2008), 75.

[47]Ibid., 75-77.

[48]Ibid., 79.

ways as our changing circumstances.[49]

Building off of Jay Wood's study of epistemology, James W. Sire developed schemata of intellectual virtues.[50] He structures them into four categories (1) Acquisition Virtues: passion for the truth – inquisitiveness, teachableness, persistence, and humility, (2) Application Virtues: passion for holiness (the will to do what one knows) – love, fortitude, integrity, and humility, (3) Maintenance Virtues: passion for consistency – perseverance, courage, constancy, tenacity, patience, humility, and (4) Communication Virtues: passion for others – clarity of expression, orderliness of presentation, aptness of illustration, and humility.[51] These virtues[52] are organized within a Christian framework.

Justification of Knowledge

What right do we have to believe what we do? Other studies demonstrate that the presuppositions behind epistemic values are hotly debated. The fundamental debate among researchers evolves epistemic justification and Foundationalism. René Descartes, a pioneer in western philosophy, developed the theory that a person's cognitive life is built upon a foundation of justified beliefs.[53] For the Christian, their cognitive life is built upon the beliefs from Scripture. Augustine exemplifies this principle with his famous quote, "*Credo ut Intelligam.*" This quote is translated as "I believe in order to

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[49]Wood, *Epistemology,* 45.

[50]Sire, *Habits of the Mind*, 110.

[51]Ibid., 106-25.

[52]Jay Wood and Robert Campbell Roberts, *Intellectual Virtues: an Essay in Regulative Epistemology* (Oxford: Oxford University Press, 2007).

[53]Ibid., 78-79.

understand."[54] Foundationalism was a direct response to Coherentism, which states that people are justified in believing a claim just so long as it fits in (or coheres) with the rest of what we believe.[55] These two ideologies are the core upon which epistemic virtues are built upon.[56] Frame provides three perspectives on justification of knowledge and argues that they are equally ultimate and equally important. The three primary perspectives on justification of knowledge are (1) Rationalists–justification through sense-experience, feelings, and reason, (2) Empiricists–justification through facts, and (3) Subjectivists–justification through belief.[57] Frame's tri-perspectivilism approach to epistemology states that these three perspectives are equally ultimate and equally important. Each perspective is mutually dependent on the others to form a coherent view of epistemology, which for the Christian is built around the supreme authority of Scripture and how a person understands the Bible in relation to the person and all of creation.[58] Characteristics of these perspectives include: presuppositions, Scripture, coherence, certainty, facts, norms, sensation, nature, and intuition.[59]

Methods of knowledge. While the pragmatic disciplines that foster intellectual development were noted above, Frame explores what the *subject* must do in gaining

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[54]Sire, *Habits of the Mind*, 203.

[55]Ibid., 114.

[56]Ernest Sosa, "The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge," *Midwest Studies in Philosophy* 5 no. 1 (September 1980): 3-26.

[57]Frame, *The Doctrine of the Knowledge of God*, 162-63.

[58]Ibid., 163.

[59]Ibid., 124-62.

knowledge. Frame notes several theological tools/subjects on knowledge: hermeneutics, language, logic, history, science, and philosophy.[60] However, some theological "capacities" are pragmatic methods of knowledge: reason, perception and experience, emotion, imagination, will, habits and skills, and intuition.[61]

Intellectual Disciplines

While no secret formula for guarantees the perfection of the intellect, certain habits and disciplines can foster intellectual development in an individual.[62] While plethora of disciplines foster thinking and develop a person epistemologically, there are five primary disciplines

The first primary intellectual discipline is *solitude*. Thinking cannot bet rushed. In the privacy of our minds, thinking in solitude helps a person protect his or herself against distractions. While thinking can be done through various means, focused contemplation over a period of time is a healthy way to foster intellectual maturity.[63]

The second primary intellectual discipline is *silence.* The greatest partner to solitude is silence. These complementary intellectual disciplines foster thinking. A. G. Sertillanges offers insight to silence: "Do you want to do intellectual work? Begin by creating within you a zone of silence, a habit of recollection, a will to renunciation, and

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[60]Frame, *The Doctrine of the Knowledge of God*, 169-318.

[61]Ibid., 319-46.

[62]Sire, *Habits of the Mind*, 126.

[63]Ibid., 127-28.

detachment which puts you entirely at the disposal of work."[64]

The third primary intellectual discipline is *attention.* This intellectual discipline is characterized by focus. Through focusing attention a person mentally disengages from other thoughts.[65] For the Christian, it is to pay attention first to God in Christ: this is the first task of the Christian thinker.[66]

The fourth primary intellectual discipline is *lateral thinking.* Four features outline lateral thinking: (1) recognition of dominant or polarizing ideas. (2) the search for different ways of looking at things. (3) a relaxing of the rigid control of vertical thinking. (4) the use of chance.[67] Edward De Bono's research suggests that lateral thinking is a beneficial tool in increasing creativity and imagination in the mind.[68]

The fifth primary intellectual discipline is *prayer*. The act of praying encourages solitude, silence, attention, and reflection. It is a requisite for thinking well.[69] By the power of the Holy Spirit, prayer is a channel of dialogue with the incarnate Truth from heaven. James 1:5 says, "But if any of you lacks wisdom, let him ask of God, who gives to all generously and without reproach, and it will be given to him." Prayer involves that submission of a person's mind to the control of the Holy Spirit, who gives

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[64]A. G. Sertillanges, *The Intellectual Life: Its Spirit, Conditions, Methods,* trans. Mary Ryan (Washington, DC: Catholic University of America Press, 1987).

[65]Frame, *The Doctrine of the Knowledge of God*, 130-34.

[66]Ibid., 135.

[67]Ibid., 136.

[68]Edward De Bono, *Lateral Thinking* (London: Penguin, 1991).

[69]Sire, *Habits of the Mind*, 137.

believers the power to taking thoughts captive to the obedience of Christ (2 Cor 10:5). Prayer also encourages the rumination of meditation.[70]

The final primary intellectual discipline is *Lectio Divina***.** James W. Sire uses *Lectio Divina* as a prime example of the manifestation of each of these intellectual disciplines. *Lectio Divina* is an atmosphere that is created to foster intellectual disciplines.[71] It is a preparation for reading the Bible in way that encourages thinking by reading.

Integration of Reason and Faith

The question of integrating faith and reason has been a source of debate among Christian scholars.[72] Reason is limited to understanding through examination of the physical world, logical deduction, or testing over time.[73] Faith on the other hand is belief in God, his Truth,[74] and trusting Him, accepting Him, accepting his purposes, and committing one's life to him and living in his presence.[75] The dialectic between faith and reason has developed into a much larger discussion surrounding integrating theology and

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[70]Sire, *Habits of the Mind*, 158.

[71]Ibid., 153.

[72]"Reason" is often used alongside other secular studies such as social sciences, learning, and education. In literature, reason is often juxtaposed against Christian studies such as biblical authority, revelation, and faith.

[73]Robert A. Harris, *The Integration of Faith and Learning: A Worldview Approach* (Eugene, OR: Cascade Books, 2004), 174.

[74]The Truth of God was manifested through the incarnation of Jesus and through the Holy Scriptures.

[75]Plantinga, *Faith and Rationality*, 18.

human development.[76]

Reason and faith are not mutually exclusive. Robert A. Harris notes, "Even though reason has suffered some loss of power as a result of the fall, and even though it therefore cannot lead us to every truth by itself, reason is still a powerful, useful, and usually reliable tool for understanding our world."[77] Reason, however, must be supplemented by revelation to gain the fullest knowledge about reality. Plantinga argues that it is in fact rational to believe in God.

> Presumably it is rational for a person to believe in God only if it is rational for him to believe various propositions about God – in particular, that there is such a being as God. The rationality of trusting someone presupposes the rationality of believing that that person exists.

John Locke was among the first to articulate the relationship of reason and faith in response to a challenge to theistic belief. He argued that the truthfulness of the Bible can be supported through human reason, that is, whatever God has revealed is certainly true.[78] Eventually Locke published *The Reasonableness of Christianity, As Delivered in the Scriptures*, where he argued that belief in God is rational since a person presupposes the existence of God (and thus His revelation) through adequate evidence.[79] While others would later challenge some of Locke's presuppositions and critique various

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[76]James R. Estep and Jonathan H. Kim, *Christian Formation: Integrating Theology and Human Development* (Nashville: B & H Publishing Group, 2010), 37-62.

[77]Estep and Kim, *Christian Formation*, 175.

[78]Plantinga, *Faith and Rationality*, 137-38.

[79]John Locke, *The Reasonableness of Christianity, As Delivered in the Scriptures,* accessed September 3, 2016, http://oll.libertyfund.org/titles/locke-the-works-vol-6-the-reasonableness-of-christianity.

areas his theories,[80] there remain several correlating studies on faith and reason. William Clifford developed *evidentialism*, which states that belief should be built upon sufficient evidence. He would even argue that belief built upon insufficient evidence is immoral.[81] Reason and faith are both necessary parts of understanding.

Historically in America, integration of faith and learning was the essence of authentic Christian higher education. This is no longer the case.[82] David Dockery argues that ethical living is the outcome of integrating faith and reason in Christian higher education. "Faith and living" is the ethical component of Christian education.[83] Additionally, integrating faith and learning helps a Christian develop a Biblical worldview. While the manifestations of faith and reason are seen in the graduates of Christian higher educational institutions, it begins at an organizational level with faculty, staff, community, learning outcomes, and shared mission and core values.[84]

Theoretical Foundations

As a field of study, intellectual development has evolved greatly since William

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[80]Thomas Paine provides a prime example of a deistic view of epistemology. In *The Age of Reason*, Paine's use of clever (and predominantly irreverent) writing communicated to the masses his views on religion. Published following the French Revolution, his ideas centered around the corruption of established religion (and thus creeds of belief), illegitimacy of the Bible, and the place of revelation and reason centered on individual's right of conscience and skepticism. Thomas Paine, *The Age of Reason* (Dublin: Merchant Books, 2010).

[81]William Clifford, *Ethics of Belief* (Roseville, CA: Dry Bones Press, November 2001).

[82]David Dockery, *Renewing Minds* (Nashville: B & H Academic, 2008), 4.

[83]Ibid., 14.

[84]Ibid., 18-26.

G. Perry's landmark study of cognitive and ethical development in college students. His research concluded that the most intellectually mature college students have a clearly defined worldview that is centered on relativism. Perry defines the position of relativism as a commitment to a particular view that accommodates critical thinking and a possible change in views.[85] But this is in stark contrast to what the Bible teaches, that there is one Absolute truth, God's Word. So are Christians who hold to a biblical worldview intellectually immature? Can Perry's scheme inform a Christian perspective?

While Perry's research has been intensely debated over the last fifty years, there are several insights that Christian educators can glean from his findings. In Perry's scheme, he identifies nine possible "positions" that a college student can reside in, beginning with absolute truths presented by Authorities and moving towards a relativistic responsibility of identity (as defined above). According to Perry the seventh position describes students who make an initial commitment to a personally developed identity. The seventh position is where a student develops his or her own responsibility for existence. For Christians, this is defined by their identity in Christ, being in union with Him, and understanding the world around them.

The field of cognitive development has significantly evolved over the last eighty years. Jean Piaget advanced the field of cognitive development by first studying intelligence in children, then later developing schemas (how to organize knowledge), adaptation processes, and stages of development.[86] Later Piaget expanding his research

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[85]Perry, *Forms of Intellectual and Ethical Development*, 153-75.

[86]Jean Piaget, *The Origin of Intelligence in Children* (New York: International University Press, 1952).

by organizing cognitive development into four stages. The final stage of cognitive develop (age 11 into adulthood), according to Piaget, is the formal operational stage, which includes abstract reasoning and logic in problem solving.[87] This provided a framework for William G. Perry to study a more specific field, intellectual development among college students.

John David Trentham and Jim Estep explored how scholars have expanded on Piaget's work: "Neo-Piagetians rely on certain assumptions, presuppositions, and stage-oriented developmental trajectories that Jean Piaget asserted, but do not necessarily agree with the finer points or conclusions he reached. Also, they do not limit human development to a rigid structuralism, but utilize insights from alternative theories."[88] They further argue that Perry is a prime example of a neo-Piagetian, since his work expands the study of cognitive development into adulthood. Perry's work goes beyond Piaget's formal operational stage and into adulthood where certain epistemological markers are noted. These include: an individual's ability to problem solve, think more critically, make more objective decisions, organize multiple tasks and form strategies to achieve their goals, and assess risks and rewards when setting priorities and plans.[89]

The Perry Scheme

The development of college students has been examined from many different perspectives. In epistemic studies, Perry's *Forms of Intellectual and Ethical Development*

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[87]Jean Piaget, *The Psychology of Intelligence* (Florence, KY: Routledge, 2001).

[88]John David Trentham and Jim Estep, "Early Adult Formation and Disciple-ship at the Intersection of Neurological and Phenomenological Research," *The Journal of Discipleship and Family Ministry* 5 (2016), 20-21.

[89]Ibid., 21.

in the College Years: A Scheme has remained a pioneering study. The Perry Scheme identifies the intellectual growth (and sometimes retreat/reversal) in college students by assigning development of students into one of nine stages.[90]

Perry studied how the students' interactions with curriculum and authority (primarily professors) developed students epistemologically and how content affected personal identity. He concluded that healthy cognitive growth occurred through a process ending with a convictional commitment to a person's values, ideologies, and presuppositions while also being accepting of contrary beliefs, if validated by data.[91] According to Perry, personal convictional commitment only comes through realizing that truth is learned through the context of the learner.[92]

Within the nine stages on Perry's scheme, students begin learning through *dualism*–seeing the world in absolutes (positions 1-2). Then students move towards *multiplicity*–understanding that some areas of knowledge are not absolute (positions 3-4). Students then move towards *relativism*–truth is relative as students (a) either abandon further efforts to find truth, (b) adopt a resigned belief that skills of ungrounded opinion and rhetoric are more beneficial, or (c) proceed on to Perry's upper positions of commitment (positions 5-6).[93] The final way students develop intellectually in the Perry Scheme is through *commitments*–a personal worldview that is reevaluated and integrated

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[90]Perry, *Forms of Intellectual and Ethical Development,* 58.

[91]Ibid., 153-76.

[92]Ibid., 9.

[93]Mark E. Henze, "Re-examining and Refining Perry: Epistemological Development From a Christian Perspective," *Christian Education Journal* 2 (2006): 260-77.

with the other views they have critically chosen to accept (positions 7-9). Students move from one position to another through the development of critical thinking of authority and content.[94]

What Perry calls "intellectual commitment" may be clearly identified as a worldview commitment. James W. Sire uses the same language of *commitment*:

> A worldview is a commitment, a fundamental orientation of the heart, that can be expressed as a story or in a set of presuppositions (assumptions which may be true, partially true or entirely false) which we hold (consciously or subconsciously, consistently or inconsistently) about the basic constitution of reality, and that provides the foundations on which we live and more and have our being. [95]

More succinctly, a worldview is a basic set of assumptions that gives meaning to one's thoughts. According to Perry, a committed worldview is a relativistic worldview. This has been strongly debated among scholars. Cognitive dissonance research suggests that people do not typically hold conflicting beliefs, ideas, and values.[96] Perry also recognizes the tension of conflicting ideologies.

There are several other theories that describe intellectually mature people. Weinstock for example view intellectual maturity as moving from an egocentric worldview to evaluative worldview that elevates reasoned arguments as the final commitment.[97] Others like Graham and Donaldson argue that epistemological maturing is

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[94]Perry, *Forms of Intellectual and Ethical Development,* 9.

[95]James W. Sire, *Naming the Elephant: Worldview as a Concept*, 2nd ed. (Downers Grove, IL: Intervarsity Press, 2015), 17.

[96]Leon Festinger, *A Theory of Cognitive Dissonance* (Stanford, CA: Stanford University Press, 1957).

[97]D. Kuhn and M. Weinstock, "The Development of Epistemological Understanding," *Cognitive Development* 15 (2000): 309-28.

the ability to think and apply intellectual and academic themes including: broadening one's intellectual interests, critical thinking skills, enhancing study skills, career development, and understanding and applying science and technology.[98] These varying definitions of intellectual maturity have a common element that is supported by Perry's scheme, critical thinking.

So how do Christians fare on Perry's Scheme? Two primary studies might offer some insight. First, "Copeland allegedly discovered a significant inverse relationship between Protestant fundamentalism and intellectual development on the Perry scheme. Fundamentalists, according to Copeland, tend to be dualistic in nature and do not progress much further up the scale."[99] Another researcher however found that college students can in fact progress through Perry's positions, but to a different end. John David Trentham juxtaposes Perry's final commitment of relativism to a biblical commitment to Christ through his "principle of inverse consistency." This principle maintains that secular and biblical models of development observe and prescribe similar patterns, but are inversely oriented with regard to *telos* (self-identification versus Christlikeness).[100] Trentham summarizes the Christian commitment as follows:

> Scripture: Commitment involves maintaining one's worldview "with universal intent"–i.e., exercising steadfast, convictional faith, acknowledging that one's commitment is the only means by which to genuinely fulfill one's longing for purposeful identity, through commitments that enable one to "draw near" to God,

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[98]Steve Graham and Joe F. Donaldson, "Adult Students' Academic and Intellectual Development in College," *Adult Education Quarterly* 49, no. 3 (1999): 147.

[99]Henze, "Re-examining and Refining Perry," 272.

[100]John David Trentham, "Epistemological Development in Pre-Ministry Undergraduates: A Cross-Institutional Application of the Perry Scheme" (Ph.D. diss., The Southern Baptist Theological Seminary, 2012), 19.

seek his will, and serve the benefit of his Kingdom (Heb. 11:6). [101]

The secular commitment differs from the Christian commitment in that the secular commitment is rooted in arbitrary, groundless, and personally beneficial truth.[102] His study provides an interpretive paradigm for interacting with Perry's scheme.

Integrating Theory and Theology

Trentham's research is a prime example of how to integrate theory and theology. Research does not necessarily need to be bifurcated between secular and theological.[103] Figure 1 illustrates how Trentham articulated the relationship between intellectual maturity on the Perry Scheme and epistemological priorities within a Christian perspective.[104]

Knowledge for the Christian. While Perry argues for a commitment to relativism, the Bible calls for a commitment to Christ. The Bible is full of truth about knowledge, wisdom, discernment, and understanding. Christians are called by God to "grow in the grace and knowledge of our Lord and Savior Jesus Christ" (2 Pet 3:18). Jesus said, "I am the way and the *truth* and the life. No one comes to the Father except through me (John 14:6). The more a person grows in Jesus, the more he or she grows in truth. Jesus summarizes these two guiding truths when he said, "Love the Lord your God with all your heart and with all your soul and with all your *mind* and with all your

[101]Ibid., 22.

[102]Trentham, "Epistemological Development in Pre-Ministry Undergraduates," 128.

[103]Estep and Kim, *Christian Formation*, 40.

[104]Trentham, "Epistemological Development in Pre-Ministry Undergraduates," 138.

strength" (Mark 12:30). Christians honor God with intellectual development, based on his Word.

<table>
<tr><th>I. Biblically-founded presuppositions for knowledge and development</th><th>II. Metacognition, critical reflection, and contextualistic orientation</th><th>III. Personal responsibility for knowledge acquisition and maintenance–within community</th></tr>
<tr><td rowspan="2">A recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development</td><td>A preference for higher-level forms of thinking according to Bloom's taxonomy</td><td rowspan="2">A pursuit of personal development that results from mutual interdependence and reciprocity in one's relationships with authority figures and peers</td></tr>
<tr><td>A prioritization of wisdom- oriented modes of learning and living</td></tr>
<tr><td rowspan="3">A clear articulation of the relationship between faith and rationality</td><td rowspan="2">A reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values</td><td>A sense of personal responsibility for gaining, maintaining, and progressing in knowledge</td></tr>
<tr><td rowspan="2">A recognition of social-environmental influences on one's learning and maturation</td><td>A preference for active involvement in the teaching and learning process</td></tr>
<tr><td>A convictional commitment to one's own worldview– maintained with critical awareness of personal contexts, ways of thinking, and challenges brought to bear by alternative worldviews–through testing and discernment</td></tr>
</table>

Figure 1. Trentham's Taxonomy: Categorical chart for assessing epistemological priorities and competencies

The traditional evangelical worldview is built upon the inspiration of the Bible, its divine origin and content.[105] First Timothy 3:16 says, "All Scripture is inspired by God and profitable for teaching, for reproof, for correction, for training in righteousness." The Bible is inspired by God, inerrant, infallible, and absolute truth. This does not necessarily mean that Perry categorize Christians who have a biblical worldview as dualistic, which is position 1. Perry calls this position, "epistemological innocence."[106] Rather, Perry's schema addresses forms of thinking, not necessarily the extent to which a person regards a proposition as ultimately fixed.

The Commitment category of Perry's scheme is demonstrated by a student's commitment to a worldview. It is the position that defines the type of person the student is and will be.[107] For the Christian college student, it answers the most common question in their college years, "What is God's will for my life?" College students begin to feel the dialectic between merely adopting a faith that was taught to them and actually basing their life upon that faith.[108] This is further supported by Trentham's research (as well as Perry's), which found most undergraduates were around positions 3 and 4.[109] James Fowler describes this as the "individuative-reflective faith, during which an individual examines and questions his or her beliefs and considers reshaping earlier under-

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[105]Daniel L. Akin, *A Theology for the Church* (Nashville: B & H Publishing, 2014), 111-13.

[106]Perry, *Forms of Intellectual and Ethical Development*, 60.

[107]Ibid., 153.

[108]Ibid., 177.

[109]Trentham, "Epistemological Development in Pre-Ministry Undergraduates," 261.

standings. A personal ownership of one's faith emerges but not without struggles."[110]

Commitment to Christ Is Manifested in Union with Christ

Commitment to Christ is commanded by God in the Bible. It is a call to be united to Christ in sanctification. Jesus said in Luke 14:26-27, "If anyone comes to Me, and does not hate his own father and mother and wife and children and brothers and sisters, yes, and even his own life, he cannot be My disciple. Whoever does not carry his own cross and come after Me cannot be My disciple." A Christian's commitment and love for his or her own families should appear like hate when compared to his or her commitment to Christ. Furthermore, commitment to Christ involves living a life of sacrifice that honors God in every circumstance. Jesus' call for carrying a cross and becoming His disciple (as Jesus is the rabbi) evolves around an element of learning.

Christians find their identity in what the Bible says about mankind. Every person is made in God's image. People have the ability to reason, experience relationships with God and fellow man, and exercise dominion. These qualities describe identity, what it means to be made in God's image.[111] For followers of Jesus, they are defined by their relationship with God. When a person repents of his or her sin, believes in Jesus' atoning work on the cross, and receives Him as Lord and Savior, that person is adopted into God's family as a son or daughter and given a new nature. The act of

[110]Randy Keeler, "Developmental Theory and Ministry to College Youth," *Direction* 31 (Fall 2002): 186-93.

[111]Erickson, *Christian Theology*, 457-74.

adopting displays a Christian's position and inheritance.[112] Being made in the image of God and adopted into His family, the Christian uses his or her free will to have union with Christ.

Though union with God was disrupted by the Fall of Man, the incarnation of Jesus Christ provides people with union with God.[113] Union with Christ means that personal responsibility is living a life filled with the Holy Spirit, sharing in Christ's nature, and living a holy life that honors God.[114] Ultimately, union with Christ will be fulfilled in the future, at Christ's return when Christian image will be completely restored. [115]

Commitment to Christ Yields in Obedience to Christ

A personal commitment to a worldview is a vital part of intellectual maturity. Just as Perry argues that relativism is the means by which someone may reach the point of personal commitment, the Christian worldview is informed through understanding the secular worldview. The more a Christian understands the world (relativistic tendencies as described by Perry), the better he or she understands the biblical mandate to go into the world and make disciples. It is through discerning other viewpoints that Christians acquire knowledge and are equipped to fulfill the Great Commission. A Christian's knowledge of his or her faith and the surrounding culture should be motivation for good

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[112]Grudem, *Systematic Theology*, 736-42.

[113]Robert Letham, *Union with Christ: In Scripture, History, and Theology* (Phillipsburg, NJ: P & R Publishing, 2011), 16-22.

[114]Ibid., 83.

[115]Ibid., 129.

works, “Every prudent man acts with knowledge, but a fool displays folly” (Prov 13:16).

Paul understood the nature of the *mind* and the bifurcation between the biblical worldview and the carnal worldview. “Do not conform to the pattern of this world, but be transformed by the renewing of your *mind*. Then you will be able to test and approve what God's will is--his good, pleasing and perfect will” (Rom 12:2).

Paul further demonstrated how his knowledge of other worldviews (and thus how they actually lived their lives) informed his evangelistic methods.

> Though I am free and belong to no one, I have made myself a slave to everyone, to win as many as possible. To the Jews I became like a Jew, to win the Jews. To those under the law I became like one under the law (though I myself am not under the law), so as to win those under the law. To those not having the law I became like one not having the law (though I am not free from God’s law but am under Christ’s law), so as to win those not having the law. To the weak I became weak, to win the weak. I have become all things to all people so that by all possible means I might save some. I do all this for the sake of the gospel, that I may share in its blessings. (1 Cor 9:19-23)

The Christian process of intellectual growth forces people to view their lives in light of the culture around them. This critical thinking shows that Christians progress through the Perry Scheme through understanding both Biblical identity and other worldviews.

The Christian Intellectual

If Christians are called to love God with their entire mind, to have union with Christ, and live based on their epistemic justifications, what does it mean to be a Christian Intellectual? A Christian intellectual is everything an intellectual proper is but *to the glory of God*.[116] A Christian intellectual understands Proverbs 23:7, “For as he thinks

[116]Sire, *Habits of the Mind*, 88.

within himself, so he is." The Christian intellectual desires to glorify God through intellect, truth and holy living.[117] C. S. Lewis illustrated this truth well: "We can therefore pursue knowledge as such, and beauty, as such, in the sure confidence that by so doing, we are either advancing to the vision of God ourselves or indirectly helping others to do so."[118]

Educational Foundations

The final series of foundations to be explored in this study are the educational foundations. These include: dominant contemporary philosophy of education, the contemporary American college student, distinctions of education environments, public, private, and home educational distinctions, goals, mission, and learning outcomes, and Christian education distinctions.

Dominant Contemporary Philosophy of Education

While several theories of education exist in various forms in the western world today, *essentialism* forms the main stream of popular educational thought in most countries, including the United States.[119] Essentialism condenses education to the basic information needed to thrive in the modern world.[120] George R. Knight notes, "Essentialism is less concerned with the supposedly eternal truths, and is more concerned

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[117]Sire, *Habits of the Mind*, 88-95.

[118]C. S. Lewis, "Learning in War-Time" (sermon, Church of Saint Mary the Virgin, Oxford, Autumn, 1939).

[119]Knight, *Philosophy & Education*, 120.

[120]E. D. Hirsh, *Cultural Literacy: What Every American Needs to Know* (New York: Vintage Books, 1988), 13.

than perennialism with the adjustment of students to their physical and social environment."[121] Curriculum is focused on developing competency in history, mathematics, science, English, literature, and foreign languages.[122] Pedagogical practices include lecture, recitation, and memorization.[123]

One educational application that has challenged essentialism is postmodernism. While difficult to clearly define, postmodernism is described as education that elevates "plurality of various perspectives and the need for people to listen to everybody's story."[124] The aim of the curriculum from a postmodern perspective is the reconstruction of knowledge as a basis for reconstructing the larger culture and its power relationships, which is demonstrated in the postmodern view that there is no revealed absolutes or possibility of revelation.[125]

The Contemporary American College Student

College students today find themselves as the youngest and last of the Millennial generation, those born between 1980 – 2000. There are several ways that Millennials are distinctive from other generations. Compared to their counterparts, Millennials are largely open, diverse, educated, individualistic, technological and non-

[121]Knight, *Philosophy & Education*, 124.

[122]Ibid., 122.

[123]Anthony, *Introducing Christian Education*, 409.

[124]Knight, *Philosophy & Education*, 94.

[125]Ibid., 86-100.

religious.[126] Historically, Millennials are the most educated generation in America with 30 percent having obtained a college degree.[127]

While Millennials are the most educated generation, they are also one of the least religious. In Thom Rainer's study of Millennials, he found that of the top ten most important aspects of life of that generation, education was third (17 percent) while spiritual matters were sixth (13 percent).[128] Rainer's study is congruent with another study of college students that found only 11 percent of evangelicals who attended church regularly in childhood still attended during college.[129] Jeffrey Arnett's study of the "Pillars of Identity" in emerging adults includes religious belief and values. Arnett explored how emerging adults viewed religion as source of meaning in a person's life. While there remains a plethora of religious views among emerging adults, the rise of individualistic thinking in this stage has caused many Mellinnials to be skeptical of religion.[130] During emerging adulthood, people are exposed to a greater variety of worldviews, racial diversity, and authoritative figures while being distanced from the teachings they received during adolescence. These factors contribute to shift in how

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[126]Thom S. Rainer and Jess W. Rainer, *The Millennials: Connecting to America's Largest Generation* (Nashville: B & H Publishing, 2011), 27-50.

[127]Pew Research Center, "The Rising Cost of Not Going to College," accessed January 19, 2017, http://www.pewsocialtrends.org/2014/02/11/the-rising-cost-of-not-going-to-college/.

[128]Ibid., 229.

[129]Ken Ham and Britt Beemer, *Already Gone* (Green Forrest, AR: Master Books, 2010), 31.

[130]Jeffery Arnett, *Emerging Adulthood* (New York: Oxford University Press, 2004), 169.

emerging adults view religion and education from a more organized sense to a "make-your-own relgion."[131] Most evangelical undergraduates and institutions of higher education are not connecting theories of epistemology and worldview to union with Christ. Another contributing factor to the disconnect between education and theology is the varying precollege learning environments.

Distinctions of Educational Environments

One of the challenges of studying students' experiences with pre-college learning environments is that every student has a unique experience. In some states public education is well funded and regulated, yielding in a high quality education for students. In other states poor education, violence, immoral ideologies, and other practices encourage parents to send their children to private schools or homeschool them. Even with a plethora of possible experiences in secondary educational contexts, some generic inferences can be made.

Public education distinctions. Public education is the dominant form of pre-college learning in America. One of the primary reasons for the majority of Americans using public education is that it is funded through taxes and other government funds. For the 2012-2013 school year, the average cost per student to attend a public school was $12,296.[132] These schools are funded approximately 90 percent through state and local

[131]Arnett, *Emerging Adulthood*, 165-79.

[132]National Center for Education Statistics, "Expenditures," accessed September 8, 2016, https://nces.ed.gov/fastfacts/display.asp?id=66.

funds and 10 percent through federal funds.[133]

Public education has experienced major challenges. Public schools have the highest dropout rate (approximately 8 percent in 2014) of the three major pre-college learning environments and hosts larger classroom sizes.[134] Additionally, public school students have lower achievement test scores, academic levels, and college acceptance compared to private and home education.[135] Finally, Michael Anthony explains how American public schools have abandoned biblical principles. Public schools display a, "demise of moral and ethical curriculum and a . . . . deterioration of traditional values and institutions such as marriage, family discerning right from wrong, sanctity of life, and education of children emanating first from parents."[136] While leaders in public education argue that public education is indifferent to theology, A. A. Hodge argued that theological indifference would ultimately culminate to atheism.[137] However in most cases, the effects of the secular revolution in education are less evident in rural areas,[138] with local political

[133]National Center for Education Statistics, "Revenues and Expenditures for Public Elementary and Secondary School Districts: School Year 2011–12," accessed September 8, 2016, http://nces.ed.gov/pubs2014/2014303.pdf.

[134]National Center for Education Statistics, "Dropout Rates," accessed September 8, 2016, http://nces.ed.gov/fastfacts/display.asp?id=16.

[135]Anthony, *Introducing Christian Education*, 277.

[136]Ibid., 277.

[137]A. A. Hodge, "On the Future of Public Education" (lecture, Presbyterian Board of Education, 1886).

[138]James D. Anderson et al., *School: The History of American Public Education* (Boston: Beacon Press, 2001), 184-87.

control more concentrated in the hands of the parents.[139]

For Christians, public education provides families with a unique opportunity to engage the culture instead of running from it.[140] It allows Christian students and parents to be a light in dark place. Public education provides students with an ethnic, religious, and socio-economically diverse student body while also not being a financial burden on the family.[141] These factors (and others) make public education a practical option for Christian families.

Within the literature base, little attention has been given to evangelicals (themselves) in secondary public schooling contexts. Rather, most studies focus on pedagogy, policy, economics, and curriculum. For evangelicals, limited studies have explored how public education interacts evangelical censorship, curriculum, prayer in schools, and holiday programming.[142] One relevant study conducted by Barna revealed that while only 34 percent of parents of school-aged children say public schools are their first choice for their children, more than 80 percent of Christian parents believe that the church should be involved in public education through demonstrating Christian concern for the community and responsibility for helping the poor in needy.[143]

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[139]Jones, *Perspectives on Your Child's Education*, 22-30.

[140]Ibid., 13.

[141]Ibid., 18-21.

[142]Eugene F. Provenzo, *Religious Fundamentalism and American Education: The Battle for Public Schools* (Albany, NY: State University of New York Press, 1990).

[143]Barna Research Group, "Public Schools: Christians are Part of the Solution," accessed January 19, 2017, https://www.barna.com/research/public-schools-christians-are-part-of-the-solution/#.

Private education distinctions. The second most common pre-college learning environment is private education. These privately funded, accredited schools provide families with an education that is more tailored to their respective values, morals, worldviews, and educational goals. Additionally, students that attend private schools have higher academic achievement than public schools.[144]

There are several challenges with private education. The government reports the national average private school tuition cost of $10,940 per student each year.[145] The increase in financial burden on families omits many people from using private education. Furthermore, many families do not have access to a private secondary school near their home. This limits the number of families who attend private schools. Finally, for Christians, private schools can blur the lines between the schoolhouse and the church house.

For Christians, private education offers some wonderful benefits. Private schools partner with parents to bring a holistic Christian perspective on education through hiring Christian educators, curricular content that reflects a biblical foundation of absolute truth, indoctrinating children to transform the culture, and bringing higher standards of students and staff.[146]

As noted above, the majority of private secondary schools are distinctively

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[144]ACT, "The Condition of College & Career Readiness 2016," accessed September 8, 2016, http://www.act.org/content/dam/act/unsecured/documents/CCCR_National_2016.pdf.

[145]National Center for Education Statistics, accessed September 8, 2016, http://nces.ed.gov/programs/digest/d13/tables/dt13_205.50.asp.

[146]Jones, *Perspectives on Your Child's Education*, 55-79.

Christian. While the research is focused less on the students themselves, because the majority of private schools are Christian, a study of the general population of private school students can give insights to the students themselves. Of the over 33,000 private schools in the United States, 65 percent are Christian schools. Correspondingly, 73 percent of all private school students are Christian.[147]

Homeschool education distinctions. Of the three major pre-college learning environments, homeschooling is oldest, yet fastest growing option in the United States. From 2003 to 2013, homeschooling more than doubled.[148] While being the primary mode of education in history, it was not until the 1990's that homeschooling became legal in all fifty states.[149] Michael S. Wilder notes, "Most often homeschool families in the United States are two-parent households (80 percent) with a larger number of children that average (three or more children, 62 percent) . . . . with more than three-fourths of homeschooling parents having attending college or vocational training."[150] Today many families choose homeschool as it provides convenience, specific instruction, higher academic achievement than public education, and complete control for parents over a child's education.

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[147]National Center for Educational Statistics, "Private School Universe Survey," accessed January 19, 2017, https://nces.ed.gov/surveys/pss/tables/table_2013_02.asp.

[148]Marc Snyder, "An Evaluative Study of the Academic Achievement of Home- schooled Students Versus Traditionally Schooled Students Attending a Catholic University," accessed September 8, 2016, http://files.eric.ed.gov/fulltext/EJ1005657.pdf.

[149]Anderson et al., *School*, 199.

[150]Jones, *Perspectives on Your Child's Education*, 96.

However, there are some common critiques of homeschooling. The rise of single parent and dual income homes make homeschooling impossible for some parents. Also, often parents do not have the proper education or training to adequately teach their children the curriculum. For Christians, homeschooling is often criticized for "retreating" from the culture and sheltering children from the "real world."

Many Christian parents, armed with the mandate from Deuteronomy 6 to be the primary disciple makers in their homes, see homeschooling as the best option. Homeschooling parents can provide their children with healthy family relationships, good communication, a nurturing and flexible learning environment, and differentiation of instruction based on the students' needs.[151] The growth and accessibility of homeschooling tools and curriculum have also helped train homeschooling Christian parents and providing materials within a Christian perspective.

Surprisingly though, only 64 percent of parents said that "a desire to provide religious instruction" was an important or the most important reason for homeschooling their children.[152] Generally, empirical analyses of the relationship between religion and homeschooling are lacking. One study indicated that states with higher percentages of evangelical residents are less likely to regulate homeschooling.[153]

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[151]Anthony, *Introducing Christian Education*, 279-81.

[152]U.S. Department of Education, accessed August 2, 2017, https://www.ed.gov.

[153]Andrea Vieux, "The Politics of Homeschools: Religious Conservatives and Regulation Requirements," *The Social Science Journal* 51, no. 4 (2014): 556-63.

Goals, Missions, and Learning Outcomes

The goals, missions, and learning outcomes of public education are as diverse as individual school districts. As a national entity, The Department of Education of the United States says their mission is to "promote student achievement and preparation for global competitiveness by fostering education excellence and ensuring equal access."[154] A survey conducted by the National School Boards Association found that school board members listed "help students fulfill their potential" as the primary goal of public education.[155] The American Society for Curriculum Development found two common values in the mission of public education: "the pursuit of happiness" and "the common good."[156] At the local level, other elements are used to discuss the goals, mission, and learning outcomes of public education: a sense of community, college/career preparedness, advocacy, skills training, and professional goals.

Private schools also have their own goals, missions, and learning outcomes. Primarily, faith-learning integration sets Christian schooling apart from other forms of education (as will be discussed in the section below). But for private education, both religious and nonsectarian, elements of the goals, missions, and learning outcomes include: higher level of excellence, strong programs, collegiate preparedness, high

[154]U.S Department of Education, accessed February 4, 2016, www.ed.gov.

[155]Fredrick Hess and Olivia Meeks, "School Boards Circa 2010: Governance in the Accountability Era," The National School Board Association, 2010, accessed August 2, 2017, http://files.eric.ed.gov/fulltext/ED515849.pdf.

[156]The American Society for Curriculum Development, "Finding Common Ground in an Area of Fragile Support," accessed January 19, 2017, http://www.ascd.org/publications/newsletters/policy- priorities/dec96/num07/toc.aspx.

achievement, and others.[157]

Understanding the goals, mission, and learning outcomes of homeschool education is difficult due to a lack of organizational structure and differentiated experiences for families. Most states have some sort of homeschool organization. Their goals, mission, and learning outcomes include: equipping parents, informing parents, communicate legislation, and creating a homeschool network.[158]

Christian education distinctions. Christian education is a broad category of learning that encompasses formal schooling, home education, discipleship, ecclesiastical learning, and spiritual formation. Christian education finds its roots in Hebrew education and has evolved over the years. In the New Testament education occurred at the Temple, in homes, on roads, in nature, and other areas.

Early church fathers such as Justin Martyr died for their convictions and expressions of the integration of faith and learning.[159] Later Augustine would bring scholarship and a manual of instruction to Christian educators called *Christian Doctrine*.[160] Christian thinking also changed. By the mid-thirteenth century, Thomas

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[157]A prime example of a private school mission statement is Briarcrest Christian School in Tennessee. Their mission is "to challenge and inspire college-bound students to know and honor Jesus Christ, seek God's truth and wisdom in all disciplines, and pursue excellence and integrity in their academic, creative, and athletic endeavors."

[158]A prime example of a home education organization mission statement is articulated by the Texas Home School Coalition, Inc., a 501(c)(3) organization, is the state support organization. Its mission is informing and inspiring families and promoting home schooling and families in Texas.

[159]Bruce Lockerbie, *A Passion for Learning: A History of Christian Thought on Education* (Colorado Springs: Purposeful Design Publications, 2007), 43.

[160]Ibid., 56-59.

Aquinas had developed scholasticism, seeking to build a superstructure by means of logical reasoning to support the church's teachings.[161]

The Protestant Reformation remains the greatest catalyst for theological change in history of the church. Martin Luther, John Calvin, Ulrich Zwingli, and others began seeking change in the Roman Catholic Church by elevating personal salvation and Biblical preaching and teaching.[162] Later the church saw the rise of the Sunday schools and in America, the rise of grammar school and public education.[163]

Today, *Christian education* is a broad term used in many different contexts. Education is distinctively Christian through four main convictions. (1) Education should have a theologically informed and constructive use of social science theories. (2) Education has a theologically informed purpose. (3) Education features theologically informed selection of content. (4) Education evidences a theologically informed design.[164] Consequently the goals of Christian education include: commitment to wisdom, character (sanctification and Christian formation), competence, protection, prosperity, and knowledge of God.[165] These convictions help motivate Christians to develop a personal philosophy of education, elevating God's Word as absolute truth,

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[161]Lockerbie, *A Passion for Learning*, 72.

[162]Gerald L. Sittser, *Water from a Deep Well: Christian Spirituality from Early Martyrs to Modern Missionaries* (Downers Grove, IL: InterVarsity Press, 2007), 210-12.

[163]Lockerbie, *A Passion for Learning,* 157-207.

[164]James R. Estep, Michael Anthony, and Gregg R. Allison, *A Theology for Christian Education* (Nashville: B & H Publishing, 2008), 38.

[165]Ibid., 63-84.

Christian character in ethics, and personal existence for the glory of God.[166]

Literature Review Conclusion

This section explored the theological, epistemological, theoretical, and educational foundations regarding the impact of secondary educational contexts on college student formation and development. This review of the literature informed the methodological design and implementation for this research study.

The review of the related literature provided a framework for the methodology phase of this research study through: asking the pertinent research questions, interpreting the responses from interviews, discerning the impact of secondary educational contexts on college student spiritual formation, distinguishing between faith development and intellectual development, and utilizing Trentham's taxonomy and the Perry Scheme in the various areas of this research study.

[166]Knight, *Philosophy & Education*, 170-98.

CHAPTER 3

METHODOLOGICAL DESIGN

This chapter describes the methods and procedures that were implemented for the research of this study, exploring the impact of secondary educational contexts on college student formation and development. This chapter includes the research questions, design overview, population, samples, delimitations, limitations of generalization, and instrumentation.

Research Questions

The following questions were foundational to guiding all aspects of this research study.

1. What is the relationship, if any, between the type of pre-college learning environment an undergraduate attended and progression through Perry's positions of intellectual and ethical development?

2. How do evangelical undergraduates describe the impact of their secondary educational context upon their academic life and Christian formation?

3. What is the relationship, if any, between the expressed goals and outcomes of educational leaders and epistemological priorities and competencies of students?

Design Overview

This research was a fully qualitative study on comparing epistemological maturity of evangelical undergraduates from varying pre-college learning environments. Beginning in April 2017, thirty personal interviews were conducted with the research

population. The research population consisted of thirty entering undergraduate freshmen who attend various religious and secular higher education institutions. Ten undergraduates were chosen from each of the three pre-college learning environments: public school, private school, and homeschool. Individuals were selected through a non-random, purposeful sampling.[1]

Research Design for Students

For the first phase of the research, beginning in April 2017, thirty personal interviews were conducted with the research population. The research population consisted of thirty entering undergraduate freshmen who attended various religious and secular higher education institutions. Through stratified purposeful sampling, ten undergraduates were chosen based on which of each of the three pre-college learning environments they attended: public school, private school, and homeschool.

The interviewees were asked open-ended questions to reflect upon their pre-college school environments. Interviews were held over the phone. Interviews took place at specific times scheduled by each interviewee and me.

I gained access to the population through contact with educational, ecclesiastical, non-profit, and personal networks. The participants were required to be a professed evangelical Christian, age 18, and currently enrolled in an institution of higher education as an entering freshman.

Since the questions were crafted beforehand, the semi-structured, personal interviews allowed for the solicitation of insights and the clarification of any and all

[1]John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Thousand Oaks, CA: Sage Publications, 2014), 189.

factors impacting our understanding and discoveries that could not be obtained through the prepared questioning alone.

Each interview was recorded in digital format and transcribed. Interviewees were informed of the recording and gave consent to proceed. Responses and the identity of interviewees were kept confidential. Once the interviews were finished, the responders were categorized by the pre-college schooling environment.

Transcripts of the interviews were sent to the CSID for scoring. The CSID's rating system uses statement recognition and assigned the related value according to the respective position on the Perry Scheme.[2]

All positional ratings for this research study were assigned by William S. Moore, director of the CSID. Each transcript was meticulously studied and analyzed by Moore in order to obtain common respondent cues. The rater's procedure for attributing a position rating for each participant included an initial reading of the individual's interview transcription for purposes of general acclimation. A second reading followed, in which the rater identified position- descriptive statements and passages of text that were relevant to the epistemological positioning of the interviewee and assigned an initial scoring relative to each statement. When needed, the transcriptions also contained the my notes on sarcasm, nuance, and other variables so that the transcriptions were interpreted accurately. A final reading evaluated the relationship between individual statement scorings and the overall context of discussion, and general reasoning patterns rendered by each interviewee, according to the discernment of the rater during the initial readings. At

[2]See appendix 5 for the CSID interview scoring procedure and reporting explanation.

the end of the process Moore gave an overall scoring of each interviewee according to the Perry Scheme.

Additionally, based on the precedent literature and the responses received from those being interviewed, a coding was made with markers for epistemological maturity and any intellectual differences between students from the varying pre-college learning environments (based on the Perry Scheme and Trentham's 10 Core Competencies and Priorities).

Finally, the adapted Perry Protocol included questions to prompt participants to reflect upon their pre-college learning environment. These questions explored how students perceived how their pre-college learning impacted their academic achievement and Christian formation by studying how students articulated the value and influence of their pre-college education. I reviewed the responses through an independent content analysis to discover how college students perceived the impact of their precollege education.

Research Design for Educational Leaders

The second phase of the research consisted of six interviews and included one educational leader/administrator and one teacher/educator from each of the three pre-college learning environments, public education, private education, and home education. These interviews took place over the phone and consisted of open-ended questions, which sought to determine the perceived learning goals and outcomes of their respective institutions of learning. Responses were recorded in digital format and I reviewed the recordings to discover common themes of articulation of goals. The responses of the educational leaders were evaluated alongside the responses from students to discover to

what degree the goals are accomplished by the students.

Population

The population for this study consisted of evangelical undergraduates from varying pre-college learning environments. Participants were required to be actively involved in a local church, be an entering freshman in an institution of higher education, and have attended the same precollege learning environment for their final four years. The population was not restricted to a specific race, gender, or social background.

The second sample population for this study consisted of two educational leaders (administrator/leader and teacher respectively) from the varying precollege learning environments.

Samples

Three distinct groups were sampled from the research population based on their precollege learning environments: public school, private school (covenantal and non covenantal), and homeschool. Additionally, three distinct pairs of educational leaders were sampled who work in the three major precollege learning environments.

Delimitations of Research

The following delimitations describe the boundaries set for this research study.

1. This research was delimited to a purposive sampling, chosen from specific institutional contexts: community college, liberal arts college, and bible college/seminary.
2. The scope of population was narrowed to people age 18.
3. This research limited pre-college learning to three learning environments: homeschool, private school, and public school.
4. Participants in the study were limited to entering freshmen in an institution of higher

education. While some participants had college credits, this distinction includes students who were interviewed within a month of high school graduation.

5. The research was delimited to include participants whose final four years of precollege learning was from a single environment.

6. This research was delimited through filtering information gathered from the interviews through the views of the researcher. The researcher may have also been given biased responses based on justification of efforts[3] or a response that the interviewee thinks the interviewer wants to hear. These delimitations informed the design of the interview questions and procedures.

7. This research was delimited to accepting the participants' testimony of salvation in Jesus as a declaration of their identification as an evangelical.

Limits of Generalization

1. While this study provides implications for the larger Christian community, it offers specific insights regarding evangelical Protestantism.

2. Due to the distinctive experiences that people have with education, this study is limited to the individual experiences of the participants.

Instrumentation

Data gathered for this study was collected through semi-structured interviews through selecting sample groups of evangelical undergraduates from varying precollege learning environments in order to answer the first and second research questions. Prior to each interview, participants completed the Thesis Study Participation Form.[4] While based on the methods of William G. Perry's study, the primary instrument that was used in this study was personal interviews that were differentiated to the context of the participants.

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[3]Research stemming from Justification of Efforts Theory suggests that people attribute a greater value on the outcome of the past than they do on the efforts it took to achieve the outcome. This would cause undergraduates to view their pre-college years more favorably than they actually were.

[4]See appendix 1.

Semi-structured interviews were also used in order to answer the third research question.

Thesis Study Participation Form

The purpose of the Thesis Study Participation Form was to provide potential participants the clarification and consent of their the willful participation and qualification as participants in the study. The first section consisted of the "Agreement to Participate" statement, which was read and affirmed by each participant. The second section included prompts and questions regarding pre-college learning environment and church affiliation. The content of the form is included in Appendix 1.

Interview Protocol

The semi-structured interviews were customized from the protocol of William G. Perry. Each interview lasted approximately half an hour and was recorded by the researcher for referencing and transcription. While the research interviews consisted of predetermined questions, I also implemented further non-scripted questions when clarification or probing was needed. The data gathered from the interviews was transcribed and sent to the Center for the Study of Intellectual Development (CSID) for coding.

Procedures

Contact Participants and Obtain Participation Forms

I used personal, ecclesiastical, denominational, and educational connections to contact and recruit potential participants for the study. Upon initial interest by potential participants, I confirmed that they met the requirements for participation in the study.

Once confirmed, I required each participant to complete the Thesis Study Participation Form. Forms were administered and returned in electronic form.

Customize the Perry Interview Protocol

In order to adequately address the research questions, I adapted the Perry Interview Protocol. The methods were implemented under the advisement of John David Trentham (as this study is a replication study in a series of theses) at The Southern Baptist Theological Seminary and through the resources provided by the CSID. These methods provided the adequate tools to both studying intellectual development through the Perry Scheme and having participants to reflect upon their precollege learning experience.

Conduct and Transcribe the Research Interviews

Upon final confirmation of the population sample groupings and receipt of all participation forms, I corresponded with each participant to schedule a specific date and time for the one-on-one interview. Interviews were completed over the phone. Before each interview, I examined the participant's Thesis Study Participation Form and considered the most effective strategy for interacting. Interviews lasted approximately half an hour in length. I transcribed an audio recording of each interview and transcriptions were submitted to the CSID for scoring.

CSID Scoring Process

Each transcription was sent to William S. Moore, director of the CSID, for scoring. His analysis yielded positional ratings through an exploration of the statements

and reasoning patterns obtained through the interviews. The CSID's rating system uses statement recognition and assigned the related value according to the respective position on the Perry Scheme.

Each transcript was meticulously studied and analyzed by Moore in order to obtain common respondent cues. The formalized procedure for attributing a positional rating for each participant involved several readings which included: reading for the purpose of general acclimation, identification of position- descriptive statements, and analyzing notes that were relevant to the epistemological positioning of the interviewee. Throughout the rating process Moore would inquire for clarity on faith-related statements to explore if any epistemological markers could be identified. Once the transcripts were completely analyzed, Moore used the positional statements and explorative notes within the overall contexts of the discussions to assigned an initial scoring relative to each participant based on the respective reasoning patterns. At the end of the process Moore gave an overall scoring of each interviewee according to the Perry Scheme.

Statement Attribution Process

As discussed above, this research used John David Trentham's 10 Epistemological Priorities and Competencies to measure intellectual maturity in correlation to the Perry Scheme. Once the student interviews were completed, I coordinated with John David Trentham to identify statement attributions that described the various competencies. First, I marked all possible competency descriptions. Then each marking was reviewed by John David Trentham to determine if each statement described a "pre-competency" or a developed competency. Once identified, the quality and frequency of the statements were used to score each student.

Enlisting and Engaging with Educational Leaders

For the second phase of the research, this study explored how educational leaders described the goals, learning outcomes, and competencies of students. One educational administrator/leader and one teacher (or parent for homeschool education) was interviewed to hear their perspective as representatives of various institutions. Participants were sampled primarily with relation to the number of students who were also sampled in this study.

Interviews were recording in digital form and consisted of questions pertaining to the unique goals of their respective institutions and their influence on the spiritual development of students. Interviews lasted approximately half an hour. Once completed, each interview was transcribed and studied for dominant themes. These responses were then compared to the responses of the students to discover if both educational leaders and students articulated similar goals, learning outcomes, and competencies.

Implementation of Independent Content Analysis

In addition to the coding, which was completed by the CSID, I also implemented an independent content analysis. I analyzed the responses in order to discover common themes. A second independent content analysis was completed on interviews conducted with educational leaders in order to compare the goals and mission of education with the perception of education from the students' perspectives.

Evaluate Findings and Draw Conclusions

The CSID scored the interview transcriptions (from students) through the established coding process. The results were sent to me and included a score of each interview, which categorized each participant in one of the nine positions in the Perry Scheme. Furthermore, the CSID results provided specific statements and patterns that were identified in association with certain positions on the Perry Scheme.

Additionally, the independent content analyses from the students and educational leaders were evaluated to compare the expressed goals of educators with the learning outcomes and competencies of students.

CHAPTER 4

ANALYSIS OF FINDINGS

This study explored the impact of secondary educational contexts on college student formation and development. The design of this study was fully qualitative, utilizing purposeful sampling and semi-structured interviews to gather data from the population through sample groupings. This chapter includes an analysis of the findings of the research study, the compilation of data presented, and an evaluation of the strengths and weaknesses of the research design.

Compilation Protocol

The data for this study was gathered through personal interviews conducted by the researcher with each member of the population sample. Prior to each interview, each participant completed the Thesis Study Participation Form. Research interviews were conducted according to the customized version of the Perry Interview Protocol. The participation form and adapted interview protocols are included in appendices 1, 3, and 4.

Data was recorded with electronic audio recording software during the phone interviews with students and educational leaders. I transcribed the recordings of the student interviews and delivered the complete set to the CSID. The CSID evaluated and scored the data for the purpose of identifying participants' epistemological positions according the William G. Perry's Scheme of Intellectual and Ethical Development. I formulated the findings of the research study by engaging in an independent content

analysis through the interpretation and analysis of the ratings provided by the CSID, alongside Trentham's 10 Epistemological Priorities and Competencies.

Participation Form Data

The data collected from the Thesis Study Participation Form served to inform the study in three ways. First, completion of the participation form formally confirmed each participant's willingness and agreement to participate in the study. The form also confirmed the participants' qualification for inclusion in the study based on approved criteria. Second, the participation form informed me on the unique features of the sample population in order to inform how the data was interpreted. Finally, the participation form provided the interviewer with basic introduction and understanding of each interviewee. This enabled me to ask contextualized questions, discussions, and probes.

Of the thirty participants in this study, seventeen individuals were female and thirteen were male. While Perry-based studies have not shown significant distinction in epistemological maturity according to gender, the focus of this study is on epistemological maturity based on pre-college learning environments. Table 1 indicates the distribution of gender among participants, according to each pre-college learning environment.

Table 1. Distribution of gender among participants, according to secondary educational context

Institutional Type	*Male*	*Female*
Home School	50%	50%
Private School	50%	50%
Public School	30%	70%

The sample population in this study included students who had graduated high school in the month prior to their respective interviews. The sample population represented twenty-three different secondary schools (or home environments for homeschool students) from seven different states.

Table 2. Institutions represented by context

Private School	*Public School*	*Homeschool*
Evangelical CS., TN (3)	Arlington HS., TN (6)	All unique – TN, CA, TX
1st Assembly CS., TN (2)	Hobbs HS., NM (2)	
Community CS., FL (2)	Collierville HS., TN (1)	
St. Benedict CS., TN (1)	Cedar Cliff HS., OH (1)	
Whitfield Academy, GA (1)		
Rossville CS., TN (1)		

This study focused on determining the impact of secondary educational contexts on college student formation and development. In order to obtain the most accurate data, participants were limited to having recently (within one month of interviews) graduated high school. However, while all participants marked that they were entering freshman, there was a notable variance in completed college coursework among students. College credit was obtained through high school AP classes, dual-enrollment programs, and community college courses. Perry's research notes the importance of the college experience outside of the classroom, which none of the participants had truly experienced. Therefore it was reasonable to assume that while some high school graduates had obtained varying levels of college credit hours, they had not fully experienced college and subsequently marked on the data form that they were "entering freshmen".

Research Question Synopsis

The following questions were foundational to guiding all aspects of this research study.

1. What is the relationship, if any, between the type of pre-college learning environment an undergraduate attended and progression through Perry's positions of intellectual and ethical development?
2. How do evangelical undergraduates describe the impact of their secondary educational context upon their academic life and Christian formation?
3. What is the relationship, if any, between the expressed goals and outcomes of educational leaders and priorities and competencies of students?

Research Question 1

RQ 1 asked, "What is the relationship, if any, between the type of pre-college learning environment an undergraduate attended and progression through Perry's

positions of intellectual and ethical development?" My findings and analysis of RQ 1 were informed by the reported scores provided by the CSID. Generalized findings related to the CSID scoring and a more detailed analysis of participants' epistemological positioning according to secondary educational contexts are reported below.

CSID Ratings and Reporting

The primary objective and means of the CSID's interview scoring procedure was to judge the epistemological positioning of interviewees according to the Perry Scheme. Interviewees were assigned positions based on an analysis of statements and reasoning patterns obtained through the interviews. The CSID's rating system uses statement recognition and assigned the related value according to the respective position on the Perry Scheme.

All positional ratings for this research study were assigned by William S. Moore, director of the CSID. Each transcript was meticulously studied and analyzed by Moore in order to obtain common respondent cues. The rater's procedure for attributing a position rating for each participant included an initial reading of the individual's interview transcription for purposes of general acclimation. A second reading followed, in which the rater identified position- descriptive statements and passages of text that were relevant to the epistemological positioning of the interviewee and assigned an initial scoring relative to each statement. When needed, the transcriptions also contained the my notes on sarcasm, nuance, and other variables so that the transcriptions were interpreted accurately. A final reading evaluated the relationship between individual statement scorings and the overall context of discussion, and general reasoning patterns rendered by each interviewee, according to the discernment of the rater during the initial readings. At

the end of the process Moore gave an overall scoring of each interviewee according to the Perry Scheme.

Individual statements were assigned scores through either a single Perry position (e.g., "3") or in the case of a transition between positions (e.g., "3-4"), two correlating positions. The aggregate of the designated positions within each interview informed the rater's judgment of the participant's overall score according to the Perry Scheme.[5]

Overall position ratings were reported in a manner that indicates if an interviewee is firmly in one position of epistemological maturity or transitioning between positions. Position ratings were represented by a three-digit number to identify a reflective dominant and (when applicable) subdominant rated position. In relation to this research study, one participant received solid position ratings (e.g., "222"), indicating a "stable" position perspective. Twenty-nine participants received both a dominant and subdominant rating. These transitional ratings (e.g., 233) indicate a participant's dominant position (middle number) as well as his or her "trailing" or "opening" position. As an example, a 223 rating represents a position described as "Dominant Position 2 opening to Position 3," while a 233 rating represents a position described as "Dominant Position 3 with trailing Position 2." Positions were thus rated along a continuum that progresses according to one-third position increments, i.e., 222, 223, 233, 333, 334, and so on.

[5] See appendix 5 for CSID interview scoring procedure and reporting explanation.

Generalized Findings

Informed by the CSID's reported scoring and my independent content analysis, the general finding of this research study with regard to RQ1 was that progression through Perry's positions of epistemological development among evangelical undergraduates from varying secondary educational contexts was the private and public education students reported nearly identical positions on the Perry scheme with homeschool students reporting slightly below. With these students being entering freshman in college, the range of ratings were focused on 2-4. The population sample in this study reflected a numerical average of 2.777. Thus most participants received a rating of entering the early stage of Multiplicity.

According to CSID, research has indicated that there is no consistent differentiation according to gender regarding progression through Perry's Scheme. This study confirmed the research with men scoring a mean of 2.694 and women scoring a mean of 2.666. Additionally, since all participants in the sample population were 18 years-old, no analysis was completed in relation to the classification of age.

This research study found that epistemological development across all three secondary educational contexts was generally consistent. However the mean of positions and transitions among secondary educational contexts varied with public (2.867) and private (2.866) schools scoring slightly higher than home schools (2.598).

Homeschool. The sample group of home school students included in this study comprised of five men and five women. As noted above, the mean of positions and transitions for home school participants was between Positions 2 and 3.

The distribution of ratings among students within the home school sample

grouping included six students who received a score that could be characterized as dominant Position 2 opening to Position 3. Two students received a score that could be characterized as dominant Position 3 with trailing Position 2. Finally two students received a score that could be characterized as a dominant Position 3 open to Position 4. Table 3 presents the distribution of position ratings among home school students as given by the CSID, with description of each rating. Names of participants were changed in order to preserve participants' anonymity.

Table 3. Homeschool participants' position ratings with descriptions

Participant	*Position Rating*	*Position Description*
Eli	223	Dominant Position 2 opening to Position 3
Lauren	223	Dominant Position 2 opening to Position 3
Ethan	223	Dominant Position 2 opening to Position 3
Ally	223	Dominant Position 2 opening to Position 3
Austin B.	223	Dominant Position 2 opening to Position 3
Avery	223	Dominant Position 2 opening to Position 3
Ashlyn	233	Dominant Position 3 trailing Position 2
Austin M.	233	Dominant Position 3 trailing Position 2
Abbigail	334	Dominant Position 3 open to Position 4
Katherine	334	Dominant Position 3 open to Position 4

Every homeschool experience is unique. Home education has the flexibility to allow high school students to enroll in community college, take online courses, and dual-

enroll, each to receive college credit. Among the population sampling, all of the homeschoolers had already received college credit these types of courses. All students in the top four of the Perry Scheme ratings had college credits.

Private school. The sample group of private school students included in this study comprised of five men and five women. This sample group also represented six schools from three states. While not explicitly stated in the delimitations of this study, all of the private schools that are represented were evangelical Christian schools. As noted above, the mean of positions and transitions for home school participants was between Positions 2 and 4.

The distribution of ratings among students within the private school sample grouping included four students who received a score that could be characterized as dominant Position 2 opening to Position 3. Two students received a score that could be characterized as dominant Position 3 with trailing Position 2. Two students received a score that could be characterized as a dominant Position 3 open to Position 4. And finally two students received a score that could be characterized as dominant Position 4 trailing Position 3. Table 4 presents the distribution of position ratings among private school students as given by the CSID, with description of each rating. Names of participants were changed in order to preserve participants' anonymity.

Table 4. Private school participants' position ratings with descriptions

Participant	*Position Rating*	*Position Description*
Lyndsey	223	Dominant Position 2 opening to Position 3
Seth	223	Dominant Position 2 opening to Position 3
Esther	223	Dominant Position 2 opening to Position 3
Carter	223	Dominant Position 2 opening to Position 3
Sarah	233	Dominant Position 3 trailing Position 2
Phillip	233	Dominant Position 3 trailing Position 2
Brice	334	Dominant Position 3 open to Position 4
Christina	334	Dominant Position 3 open to Position 4
Trey	344	Dominant Position 4 trailing to Position 3
Natalie	344	Dominant Position 4 trailing to Position 3

Public school. The sample group of public school students included in this study comprised of three men and seven women. As noted above, the mean of positions and transitions for home school participants was between Positions 2 and 3.

The distribution of ratings among students within the public school sample grouping included one student who received a score that could be characterized as stable Position 2. Five students received a score that could be characterized as dominant Position 3 with trailing Position 2. Four students received a score that could be characterized as a dominant Position 3 open to Position 4. Table 5 presents the distribution of position ratings among private school students as given by the CSID, with description of each rating. Names of participants were changed in order to preserve

participants' anonymity.

Table 5. Public school participants' position ratings with descriptions

Participant	*Position Rating*	*Position Description*
Valeria	222	Stable Position 2
Halli	233	Dominant Position 3 trailing Position 2
Jordan	233	Dominant Position 3 trailing Position 2
Noah	233	Dominant Position 3 trailing Position 2
Aletta	233	Dominant Position 3 trailing Position 2
Luke	233	Dominant Position 3 trailing Position 2
Madelyn	334	Dominant Position 3 open to Position 4
Garrett	334	Dominant Position 3 open to Position 4
Savannah	334	Dominant Position 3 open to Position 4
Katelyn	334	Dominant Position 3 open to Position 4

Research Question 2

RQ 2 asked, "How do evangelical undergraduates describe the impact of their secondary educational context upon their academic life and Christian formation?" The findings from RQ 2 were drawn from the second half of the interviews where students answered the primary question, "What role did your pre-college learning environment play in developing you as a Christian?" Probes were also asked to reflect on the positive and negative impacts that were unique to the students' secondary educational context. Several general themes emerged from each category of student from the sampling

population.

Homeschool. Three prevalent themes emerged from home school students as they reflected upon their Christian formation during high school. The first and most common theme was that homeschool students reported their education as being taught with a Christian emphasis. Responses generally centered on a Christian worldview, environment, curriculum, and language. Eli, a homeschool student who received an average positional rating, expressed it this way: "Some of my classes were Christian and helped me have a Christian perspective on subjects I was studying. My teachers would put a heavy emphasis on the Bible and teaching within the context of Scripture. I would also be asked how material is related to the Bible."

A second prominent theme was what the home school students often referred to as being in a Christian "bubble". Half of the home school students in this research study reported that they rarely encountered culture, people, or content that was non-Christian. Generally home school students were very aware that they were mostly surrounded by like-minded people who shared their similar beliefs and values. Most home school students saw the Christian "bubble" as having a negative impact on their Christian formation and looked forward to experiencing more diversity of relationships and ideas when they go to college. Ally, a homeschooled student articulated the Christian "bubble". "I loved being homeschooled but I think about how I have not been exposed to a lot of things, like diversity… I wish I was exposed to a little more diversity, especially with beliefs. I wish I could have built relationships with people who were not like me. Sometimes I feel I missed out on that a little bit because everyone I am really close to is a lot like me . . . . But there's good and bad to it. It's good that I've been sheltered a little

bit. Because I've been able to stand firm in what I believe without being heavily influenced by outside people."

The final theme that emerged as having an impact on homeschool students' Christian formation was the prevalence of Christian courses that they took. Not only did 70% of the sampled homeschoolers report being taught within a Christian worldview, 30% noted that entire courses were built around theology, evangelism, apologetics, and other Christian courses. These courses were viewed favorably in shaping their understanding of Christian doctrine and practice. Katherine, a student who scored the highest of the homeschooling group described the importance of Christian curriculum in her Christian formation. "A lot of our curriculum was based off of Scripture. When I wrote papers, I had to write them about parts of the Bible or things of the Bible. Bible courses helped me to own my faith for myself."

Private school. All private school students from the sample population attended Christian private schools. Generally, private school students viewed their secondary educational context as beneficial to their Christian formation. Time spent between school, home, and church meant a heavy Christian emphasis throughout their lives. Three primary themes emerged from private school students regarding how their private school education impacted their Christian formation. The first, similar to home school students, was that private school students reported being taught within a Christian perspective, which was viewed as having a positive influence on their Christian formation. Half of the ten private school students who were interviewed reported the Christian environment, curriculum, and worldview as having a positive impact on their Christian formation. Several students noted how their leaders challenged individual

students to develop a personal Christian worldview before they went to college. Christina, who scored high among private school students on the Perry Scheme, noted how attending a private Christian school impacted her spiritual development. “Everything was taught in a Christian perspective. Whether it was Bible or drama, it was taught from a Christian worldview. We would read existentialist novels as say, ‘OK how can we find the Gospel in this?’ We would do math problems and see how math can reflect a Creator. So it really helped give you this perspective about how every single thing in our lives tie into the Gospel, who God is. Giving me that perspective was a great thing that school gave me.”

While half of private school students reported their education being taught within a Christian worldview as having a positive impact on Christian formation, half of private school students also reported the schools encouragement and accountability that each student have a personal commitment to Christ. This was described by these students in two ways. First, their school leaders encouraged every student repent of sin, believe in Jesus, and receive Him as Lord and Savior. Second, their school leaders encouraged them to grow in Christ while in high school and be committed to Him in college. Natalie, a private school student who scored above average on the Perry Scheme among private school students notes,

> My school taught me how to be a Christian. I’ve attended there since I was five years old. I actually became a Christian on campus after chapel when I was in Kindergarten. I remember being so moved by God’s love for us and seeing how evident it was in my community. A lot of the time I didn’t see that in my peers but I would from my teachers and coaches and the parents of the families at our school. I think being a part of a community that values Christ and His Kingdom along with an education is really the reason why I’m going to a Christian college, continuing to pursue that faith and education.

The final theme that private school students noted as having an impact on their

Christian formation was their schools' emphasis on apologetics. Forty percent of private school students from the sample population noted that they were challenged to know their faith, be able to articulate their beliefs well, understand opposing worldviews, and be able to defend their faith. Brice reported, "My apologetics class really taught me not just blindly say, 'This is true.' But it also taught me to be able to defend it and properly evaluate it. To actually say, 'Wow this is true and actually makes sense and I know that I can defend my beliefs.'"

Public school. Two major themes emerged from public school students in regard to how their secondary educational context influenced their Christian formation. The first centered around the secular environment of public education. The secular environment was viewed in a positive way in that students saw their school as a mission field. Christian public school students were surrounded by friends who were not Christian, which presented Christian students with opportunities to share the Gospel of Jesus Christ. Aletta noted, "There weren't a ton of Christians in my grade. So I took the leadership positions in student ministry. Being in the minority helped me grow. In class a lot of the time I would be reading my Bible and a lot of people would question me on that and it would give me a chance to explain to them and teach them the Gospel, which was great." Christian students also viewed the secular environment in a negative way in that they encountered sinful language, ideas, and behaviors from others. Noah commented, "If anything, being in a public school has hurt my Christian life. There's just a lot of negativity. The school said they were neutral and shied away from any controversy but it was very secular and you would be around a lot of sinful stuff and ideas."

The second theme that emerged from public school students was how obvious

it was that a student is a Christian. Four students from the sample population noted that a student could not be "on the fence" about being a Christian. Students responded that hypocrisy was easily detected from other people so each student had to decide if they were going to live a Christian example or not. Madelyn notes, "At our school you knew… You knew who was a Christian and who was not. It was so obvious if they were following Christ or not." Valeria agrees, "At my school it was black or white. You were either a follower of Jesus and seek to be more like him or you are the other way around. You can't really be in the middle because people will see right through you. Being in a public school has strengthened me in sharing the Gospel by being in that community. There are so many sharing opportunities."

Research Question 3

RQ 3 asked, "What is the relationship, if any, between the expressed goals and outcomes of educational leaders and priorities and competencies of students?" There are two components to understanding the expressed goals and outcomes of educational leaders and priorities and competencies of students. The first component focuses on the research of John David Trentham and how his list of competencies is related to the Perry Scheme. The second component of this research is related to the expressed outcomes of high school teachers and administrators and the understanding of the goals by students.

Trentham discovered ten epistemological priorities and competencies that emerged from the responses of students while answering the protocol questions related to the Perry Scheme. Trentham's 10 Epistemological Priorities and Competencies include, (1) a recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development; (2) a clear

articulation of the relationship between faith and rationality; (3) a preference for higher-level forms of thinking according to Bloom's Taxonomy; (4) a prioritization of wisdom-oriented modes of learning and living; (5) a reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values; (6) a recognition of social-environmental influences on one's learning and maturation; (7) a pursuit of personal development that results from mutual interdependence and reciprocity in one's relationships with authority figures and peers; (8) a sense of personal responsibility for gaining, maintaining, and progressing in knowledge; (9) a preference for active involvement in the teaching and learning process; and (10) a convictional commitment to one's own worldview–maintained with critical awareness of personal contexts, ways of thinking, and challenges brought to bear by alternative worldviews–through testing and discernment.[6] Trentham studied the transcripts from recent college graduates to identify common themes from their responses. Subsequent studies have used his ten competencies to study the correlation between progression through the Perry Scheme positions and the number of competencies associated with the respective positions.

For the purposes of this research study, I used the same methodology to identify the presence of Trentham's competencies. However, since this research was focused on entering college freshman, I identified "pre-competencies" which are identified with a minus symbol. Regular competencies were noted as a numerical character with no symbol. Pre-competencies are defined as those which the students merely mentioned or had an introductory or elementary understanding. Overall, due to

[6] John David Trentham, "Epistemological Development in Pre-Ministry Undergraduates: A Cross-Institutional Application of the Perry Scheme" (Ph.D. diss., The Southern Baptist Theological Seminary, 2012), 150.

the age and maturity of students, participants were not readily able to engage and articulate some of the competencies, especially the more complex ideas, such as a clear articulation of the relationship between faith and rationality. However, many students articulated some very profound competencies. For example, Christina articulated competency 2C, a reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values:

> First I go to the scriptures and try and find the absolutes, those principles that God has shown us and revealed to us to be absolute truths. The afterwards I look at credible sources who share my same point of view. Then I look at Christian philosophers and strong Christian leaders in the community and in the world to think, 'OK where do they line up with everything?' The last place I go so that I can get the other perspective is the opposite end of the scale.

Another example is found in Lyndsey's statement that articulates competency 1A, A recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development:

> Knowledge is a gift from God to us. And it's Him sharing part of Himself, since He is omniscient. It is Him sharing part of Himself so that we can get to know Him more. The more knowledge you can know about the world, the more essentially you know about Him. Truth actually *is* God. God says, 'I am the way, the *truth*, and the life.' So it is Him. But He shares that with us in the way of knowledge.

Table 6 illustrates the competencies scoring for the sample population alongside the Perry Scheme positional scoring by the CSID.

The second component of this research is related to the expressed outcomes of high school teachers and administrators and the understanding of the goals by students. Part of the interview protocol for students included a series of questions that sought to understand students' perspectives on the educational goals of their secondary educational context, qualities their high school leaders hope to see in their graduates, and the role of teachers and administrators in their education. Subsequent interviews were then

conducted with teachers and educational leaders/administrators from home, private, and public secondary educational contexts to understand how their goals for students inform educational practices. While public school educational leaders and students reported different goals and competencies, homeschool and private school students and educational leaders reported similar goals and competencies with their respective secondary educational contexts.

Home education. Three prominent goals/competencies were articulated by home school students: preparation for college, self-directed learning, and being a Christian who is firm in their faith. These factors were reported from the sample population in which not a single student had an exclusively home-centered education. Every student reported as participating some sort of non-home educational environment at some point during their secondary educational years: classes with other homeschool students, shared classes through an organization or homeschool community, community college courses, etc.

With secondary education being first and foremost an epistemological endeavor, it is no surprise that homeschool students noted the goal of secondary education is college preparation. For homeschoolers in the sample population, this included being in a safe environment, developing leadership skills, and being committed to Christ. Ashlyn, a lifelong homeschooler reported, "The goal of my schooling was to be equipped for college and ready to go. When I go off to college they want me to be prepared but also being homeschooled, my parents wanted me to be firm in my foundations in my faith. . . . a faith that was my own, that I lived by."

Table 6. Participants' occurrences of Trentham's epistemological priorities and respective Perry Scheme scoring

Home School	**Categories Address**	**Perry Position Rating**
Eli	2B-, 3C-	223
Lauren	1A-, 3A-	223
Ethan	None	223
Ally	2D-	223
Austin B.	1A	223
Avery	2D	223
Ashlyn	1A	233
Austin M.	1A, 3B	233
Abbigail	2D, 3A, 3B-, 3C-	334
Katherine	1A, 2A, 2B-, 3B	334
Private School	**Occurrences**	**Perry Position Rating**
Lyndsey	1A, 3B	223
Seth	1A-, 2B-	223
Esther	None	223
Carter	1A	223
Sarah	1A, 3D	233
Phillip	3A-	233
Brice	1B-, 2A, 3A, 3B-	334
Christina	1A, 2C, 3C	334 (2/4 split)
Trey	2A, 3A, 3D	344
Natalie	2B-, 2D, 3A	344
Public School	**Occurrences**	**Perry Position Rating**
Valeria	2D-	222
Halli	3B-	233
Jordan	2A-, 3C-	233
Noah	3C	233
Aletta	None	233
Luke	None	233 (2/4 split)
Madelyn	2C, 3C-	334 (2/4 split)
Garrett	2D, 3B-	334 (2/4 split)
Savannah	1A, 2A-, 2D, 3B-	334
Katelyn	1A, 2B, 3A-	334

And with each of the homeschool students from the sampling having already taken college classes, generally they felt prepared. Avery, a high school graduate who had already taken four college courses noted, "I feel ready for college, at least like with courses and stuff since I've already taken a few. I know what to expect and how I will talk with my teachers. So yes, I'm ready for that part of college."

The second reported goal of homeschool education was that leaders desired students to be self-directed and self-motivated learners. When asked about parental and teacher involvement, students reported that generally as home school students aged, the parental and teacher involvement decreased. Austin, a homeschooler who started his home education in the 9th grade noted, "As I got older I kind of started to do school on my own. My parents and teachers were available if I needed help, but I mostly taught myself. I was lazy earlier on and would get behind but then I learned to motivate myself to get my work done. I took some classes on hard subjects and my teachers were really helpful in those."

The final reported goal of homeschool education was that students leave for college being a growing and committed follower of Christ. Ethan described his thoughts on how he perceived how his homeschool leaders would describe a great high school graduate: "A good Christ-like example who goes into the world. . . . an educated Christ-like example. You go to college, get your education, so that you can provide for your family and work hard. But you know, God should be number one in your life and you should make sure everyone else sees that." Lauren had a similar response: "My parents wanted me to be firm in what I believe and to be a follower of Christ. They wanted me to be like the Bible says, 'an arrow' to be shot into the world. So in college to grow

spiritually and to follow after what God wants us to do. That would be the main goal. Each of us has our own calling that God wants us to do."

Home school leaders agreed with these responses. Most home school groups operate as either non-profit organizations or informal guilds. One leader from the Memphis Home Education Association stated that their goal was to be a membership-based, Christian organization dedicated to serving home educators and students by providing support, encouragement, and activities. While there are some religious implications to their organization, the focus of many home school organizations is help parents by providing families with opportunities to network, share resources, and create community. This supports the homeschool model, which emphasizes complete parental control over a child's education. Cindi, a homeschool parent of a recent high school graduate described her goals as a parent.

> My goal was mainly to provide my children with an education that points them towards the Lord. Yes I want them to be successful in the world but I also want them to honor God. Academic success is important like scoring well on the ACT. But serving others, you know, volunteering in and out of the church is also really important. Homeschooling let my children do that. You can get so much schoolwork done in a little amount of time that there's more time for church activities and trying to do what God has called your child to do. Ultimately, I want my graduate to be independent, responsible, able to lead themselves when they leave the house… Both myself and my husband discussed these goals each year and communicated them to our kids.

Private education. Students described two major goals of private school education. Surprisingly, being prepared for college was not one of the described goals of private school education students. The two prominent goals of private school education were (Christian) faith development and character development.

All private school students from the sample population had attended private

Christian schools for their secondary education. While these students represented six different schools, the common expressed goals by the students was that they have a firm intellectual and ethical foundation in their Christian faith. This foundation includes: a personal commitment to Christ, a developed Christian worldview, a basic understanding of Christian apologetics, and an belief in God's Word as Absolute Truth. The manifestation of these goals was demonstrated through prayer in the classroom, Christian curriculum, theology/Bible courses, Christian clubs, and communication from all levels of academic leadership. Brice described the importance of faith development goals in his high school.

> I can almost quote the mission statement for you. 'Provide the Christian family with a Biblically-directed, Christ-centered education.' The leaders at my school wanted me to be salt and light in the world. While in high school they wanted to plant those seeds of faith in me so that I would go out and be salt and light. Also, to be scholars. My school is also proud of training students to go into the world and coherently argue and defend the faith.

Apart from faith development, character development was another expressed goal of private school leaders, as articulated by students. Students perceived that private school leaders desired to see graduates who were men and women of character. Smaller classroom sizes give private school educators the opportunity to be more personal with students and understand their strength and weaknesses, and challenge the students to reach their full potential. Private school students articulated character development to include: leadership, godliness, hard work ethic, compassion, love, honesty, and others. Trey, a private school student who scored the highest on the Perry Scheme reported,

> My teachers really loved to teach. It wasn't just a paycheck to them. They loved the students and wanted to see us be godly men and women. That's the main quality they are looking for in us. Because any school can produce smart people. But my school leaders want us to stand out as men and women of character. Not only do they want us to be prepared for the world, but they also want to see us change the

world for good, through the love of Christ and serving others.

Generally, private school leaders agreed with how students articulated the goals of private educational leaders. Susan, a private Christian school teacher of 17 years discussed how her school's goals were communicated and implemented to the students.

> Spiritual development is the core of everything we do. It touches everything. So everything we teach is done through a Biblical worldview, through the lens of the Bible. We actually have a mandatory Biblical worldview class for all new teachers so that they are trained in that. For students, we want that Biblical perspective to be lived out through excellence in our students. We will push them to honor God through working hard and developing their character. We strive to push our students to excellence in everything that they do and hopefully in their ministry to others.

One head of school that was interviewed agreed on the character development and articulated a more holistic approach to education.

> Our goal is not to exclusively teach students how to be a great Christian or person. Our job is to come alongside parents and to help our students be men and women of character. The parents are the ones who really know how to develop a child's character. This is true not just for administrators, but also for teachers, coaches, pastors, and other adults at our school. We want to see our students genuinely walk with Jesus. To be a Christian ethically and do good in the world. . . . to be successful leaders.

Public education. Responses from public school students varied greatly. Generally, both students and educational leaders did not report any spiritual goals in public education. While major themes were not as prominent as homeschool and private school students, public school students perceived three primary goals of public education.

Public school students reported a positive image of their respective school as an important goal of their institution. "Making the school look good" was a common response from public school students when expressing the goal of their school. The idea of the reputation of the school being a primary goal from public education leaders was also articulated by students as "their (educational leaders') school" and not "our" school.

Jordan explained during her interview: “The principal wanted us to make the school look good. They wanted to prepare us to do good after we graduated so we would come back and make the school look good so that more students would want to come to the school and they can get more funding.”

The second theme that emerged from public school students discussing how they perceived the educational goals of their schools was the importance of standardized testing. Students reported that a significant amount of their time was either preparing for standardized tests or taking standardized tests. Savannah, one of the highest scoring public school students on the Perry Scheme notes, “The goal of our school was testing. It was, ‘How high can we score? How high can we win? How many academic awards can our class win?’ In my opinion that’s not just my school. That’s all publicly funded schools… If we have better scores we can get more money and better teachers and coaches. So they are going to try and make you score the highest.”

Students perceived college acceptance and attendance as a final goal of public education leaders. Generally, students described the public school teachers as focusing on mandatory course material and less of an emphasis on college type courses, curriculum, and pedagogy. Administrators on the other hand were perceived as communicating college readiness through academic achievement and the general sense of “success” after secondary schooling. Garret, a public school student in New Mexico described how he perceived the goals of his high school: “To get your diploma by all means. That was the first part of their goal. The second part is they want you to be educated so you can go on to college and get your degree.”

While students described the reputation of the school, standardized testing, and

college education as the goals of their schools, school leaders described quite different goals for their schools. The first described goal from public school leaders was a strong work ethic. Teachers and administrators in public education want to push students to being the best they can be through doing more work and better quality coursework. One public school principal described this goal: “We strive to see every student put their talents to good use. We want them to reach their potential. Even though every student is different, we really push our students to put their ‘all’ in, whatever that means for each student.”

The second goal that was described by educational leaders in public education was their desire to see graduates live as “good citizens”. Since public schools are funded through local, state, and federal tax funds, it seems appropriate that a goal is emphasized in the governmental domain. Being a law-abiding citizen who is productive in society was reiterated several times throughout the interviews with public educational leaders. One public high school teacher said, “We want our students to be model citizens. We hope they graduate to be a productive citizens who are role models, weigh decisions, care for other people, contribute to their community, and have life experiences.”

The final educational goal as described by educational leaders in public education was to prepare students for post-secondary life. This was not limited to college. Educational leaders sought to prepare students for post-secondary life through trade school training, certifications, seminars by professionals, and college preparation. One principal boasted the programs that his school offers to prepare students for life after high school: “Not all of our students will go to college. Some cannot afford it and others want to go straight into the workforce. Whatever a student wants to do after high school, we

want them to be prepared. We offer welding programs, trade job certifications, business and computer classes, and other courses that enable students to work right after school. At the same time we offer AP classes and dual-enrollment courses for students who want a jumpstart on college."

An analysis of the evaluation of the expressed goals of secondary educational contexts by students and educational leaders shows a possible correlation to higher education. Home school students and leaders articulated similar goals as Bible colleges. Private school students and leaders articulated similar goals to liberal arts colleges. Public school students and educational leaders articulated similar goals to secular universities.

Evaluation of Research Design

This study employed a fully qualitative design by which the research explored the impact of secondary educational contexts on college student formation and development. Data was collected primarily through semi-structured interviews, according to a customized adaptation of the Perry Interview Protocol, facilitated by the researcher. Data collected from educational leaders was gathered through separate interviews, according to the respective interview protocol. The qualitative research design was most appropriate for the research purpose, to explore the impact of secondary educational contexts on college student formation and development, using the Perry Scheme and Trentham's Epistemological Competencies and Priorities as a theoretical lens.

Several strengths of the research design are related to the methodology that was implemented in the field research. Personal interviews provided the researcher with a depth of understanding to each participant's views on knowledge and spiritual formation. The ability to use follow-up questions and gain clarity to comments was advantageous to

collecting a significant level of depth in each interview. Also, having access to the information on the Thesis Participation form, coupled with the personal nature of the interviews, allowed the researcher to create a rapport with each participant in order to ask contextualized questions, interpret data, and create an environment of honesty and openness in the interviews.

Other strengths emerged from the preliminary delimitations and selective purposeful sampling that was employed. In order to obtain the most accurate results from the Perry Interview Protocol, the researcher only selected students who had just recently graduated high school. This provided several benefits. First, the closeness to graduation allowed students to reflect upon the goals that were communicated to them by their academic leaders at graduation. Second, it allowed the researcher to interview participants before they had experienced college life.

A final strength of the research design was that the sample population represented twenty-three different secondary schools (or home environments for homeschool students) from seven different states. This gave a diversity of perspectives on secondary education contexts.

Two weaknesses of the research design became apparent with regard to the sample population inclusion criteria and the interview protocols. First, while participants were sampled from students who had just graduated college, the researcher did not have any criteria regarding college credits or coursework from the high school students. Approximately half of participants had already received some form of college credit, which may have influenced epistemological maturity. Thus, an added criteria for this study, that each participant have under a preset number of college credit hours, may have

been helpful. Second, while there were varying degrees of articulation of faith development among students, many participants struggled to clearly distinguish between their views on spiritual matters and epistemological matters. It would have been helpful to have added a few clarifying questions in the interview protocol to help students articulate the differences between faith development and intellectual development.

The procedures of the content analysis that were employed for this study were appropriate with regard to the research purpose and the nature of the data collected throughout the interview processes. Following the transcriptions, the CSID's systematized positional rating process was conducted. Simultaneously, the researcher conducted interviews with educational leaders and performed an independent content analysis on all interviews. This included coding the students' interviews for Trentham's Core Competencies and Priorities, and identification of relevant themes as related to the research questions. The content analysis procedures were carried out independently. This integrated method of evaluating the research design gave diversity to the analysis of findings.

Overall, the qualitative design employed in this study was most appropriate considering the research purpose. Having gained rich data from both students and educational leaders, the data provided the researcher with a holistic perspective on the impact of secondary educational contexts on college student formation and development.

CHAPTER 5

CONCLUSIONS

This study explored the impact of secondary educational contexts on college student formation and development. As such, this study represented the inclusion of a previously unexamined population with regard to the study of entering college freshmen intellectual and ethical development. All participants in this study were interviewed within one month of high school graduation and were 18 years old. The close proximity to high school graduation provided participants with a fresh perspective on reflecting on their high school years while also no having yet experienced college life. Prior to conducting the study, the researcher thoroughly reviewed the precedent literature relevant to the topic, including theological foundations, epistemological foundations, theoretical foundation, and educational foundations.

Research Purpose and Questions

The intent of this study was to explore how secondary educational contexts develop students differently. This purpose was engaged on the basis of three guiding research questions. They were as follows:

1. What is the relationship, if any, between the type of pre-college learning environment an undergraduate attended and progression through Perry's positions of intellectual and ethical development?
2. How do evangelical undergraduates describe the impact of their secondary educational context upon their academic life and Christian formation?

3. What is the relationship, if any, between the expressed goals and outcomes of educational leaders and priorities and competencies of students?

Research Implications

This section discusses the findings and implications of this research in relation to the three research questions addressed in this study. The following list is a summary of the implications derived from my evaluation of the analysis of findings:

1. Epistemological positioning and maturation, according to the Perry Scheme, is generally consistent among entering freshman from varying secondary educational contexts –reflecting a range of positions within the late Dualism stage to the mid stage of Multiplicity.

2. Home school graduates reflect an earlier epistemological position that their counterparts from private schools or public schools.

3. Homeschooled students had greater opportunities to complete college coursework before graduating high school.

4. There appears to be no relationship between the number of college credit hours an "entering freshmen" has and positional scoring along the Perry Scheme.

5. Homeschool and private school graduates often defined their pre-college learning environment as a "bubble".

6. Public school students interacted with peers who had opposing views on a much greater level that homeschool or private school students.

7. Homeschool and private school students displayed a greater ability to articulate faith development than public school students.

8. Homeschool students struggled to distinguish their thoughts between faith development and intellectual development.

9. There likely exists a trend with homeschooling, which displays a move away from education within a family environment and towards small learning communities, like homeschool cooperatives.

10. While homeschool and private school graduates articulated a positive image of their secondary educational context, public school graduates viewed their secondary educational institutions in a negative way.

11. One of the most common epistemological priorities possessed by homeschool and private school students was a recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development.

12. Christian private schools often elevate apologetics and worldviews as the core of their theological emphases.

13. While public schools encouraged good morals as a goal for their students, they struggled to clearly define morality.

Research Question 1 Implications

Epistemological positioning and maturation, according to the Perry Scheme, is generally consistent among entering freshman from varying secondary educational contexts –reflecting a range of positions within the late Dualism stage to the mid stage of Multiplicity. According to the CSID's scoring for participants included in this study, one lone participant was rated as likely reflecting a post-Position 2 (or "Dualism") perspective. The generalized findings of this research indicated that while some discernible differences regarding positioning were apparent across sample groupings, the average rating for each grouping reflected a point along the Perry continuum around Position 3. The calculated averages of scores among the entire sample was 2777. The calculated average scores of sample groupings of students who attended homeschool, private schools, and public schools were 2.598, 2.867, and 2.866 respectively. Each grouping, therefore, collectively reflected the positional stages of late-Dualism to early-Multiplicity.

Homeschool graduates reflect an earlier epistemological position than their counterparts from private schools or public schools. While findings regarding epistemological development across all three secondary educational contexts were

generally consistent, the mean of positions and transitions among the homeschool sample grouping was distinguishably lower than the respective positional means of the other two groupings.

Homeschooled students had greater opportunities to complete college coursework before graduating high school. Every homeschool student that participated in this research had obtained college credit, prior to college enrollment as an "entering freshman". The range of the hours was between six and thirty six hours. Many homeschool students noted that their secondary educational context gave them more time and efficiency to enroll in college courses. Correspondingly, many homeschool graduates who sought to participate in this research study did not meet the delimitations because they were enrolled in college (and already completed college courses) while being under age 18. Furthermore, Abbagail and Katherine, the two high scoring homeschool students on the Perry Scheme also reported as displaying the competency, "a personal responsibility for gaining, maintaining, and progressing in knowledge."

There appears to be no relationship between the number of college credit hours an "entering freshmen" has and positional scoring along the Perry Scheme. While all homeschool participants in this research study had earned college credit, homeschoolers were rated at a lower positional scoring among the Perry Scheme than their counterparts. Within the homeschool sample grouping, there also appears to be no correlation between the number of college credit hours a student earned and their positional scoring on the Perry Scheme.

Research Question 2 Implications

Homeschool students struggled to distinguish their thoughts between faith

development and intellectual development. When posed with an intellectual question, most homeschool students immediately went to their spiritual beliefs as their justification for their knowledge. Specifically, homeschool students struggled to answer questions regarding epistemology without using the Bible. When pushed to answer without using the Bible, most homeschool students could not articulate an answer. These responses were also backed up by their positional scoring on the Perry Scheme where most homeschool students viewed everything as black and white or right and wrong (position 2), using the Bible as their source of authority.

Homeschool and private school graduates often defined their pre-college learning environment as a "bubble". Generally, homeschool and private school graduates had an awareness of the social and environmental influences on their academic and spiritual formation. These students often described a "bubble" as how their secondary educational context shielded them from outside worldviews, opposing views, and secularization. Inversely, homeschool and private schools defined the "bubble" as being surround by authority figures and peers who shared likeminded beliefs and values. This finding is generally consistent with other studies which have shown Christian students in private collegiate contexts use similar language to describe their self-awareness "bubble". Many Christian private college students realize something isn't quite equalized with their learning and desire to step out of that environment.

Public school students interacted with peers who had opposing views on a much greater level that homeschool or private school students. The sampling of public school students reported that evangelical Christian students in public schools were a minority, easily identifiable, a contrast to the secular students, and were daily interacting

with authority figures and peers who did not share similar beliefs and values. Generally, public school students found more value in understanding opposing views than their counterparts of this research study. Oftentimes being a minority in their school, Christian public school students were surrounded by more people who had opposing views than they did people who shared similar views. Most evangelical public school students reported being around non-Christians as having a positive impact on their developments as it gave students an opportunity to share the Gospel of Jesus Christ. However some students reported that being around sinful behavior had a negative impact on their academic and spiritual formation.

Homeschool and private school students displayed a greater ability to articulate faith development than public school students. Students who attended homeschool and private schools displayed a greater competency to describing how their faith informed how they lived their lives than public school students. Public school students struggled to clearly articulate a biblical worldview. While all public school students reported being evangelical Christians, many did not have a clear system for evaluating their personal worldview in light of biblical authority. Homeschool and private school students articulated faith development in a way that was more systematized and used clearer language than public school graduates.

Research Question 3 Implications

There likely exists a trend with homeschooling, which displays a move away from education within a family environment and towards small learning communities. None of the sampled homeschool students graduated from a "typical" homeschool environment, one that was limited to the home with the parents being the primary

educators. The range of homeschool environments included pre-enrollment at community colleges, local associational groups, church groups, non-profit organizations, and employment of teachers and tutors by parents. Homeschool students described these communities as “classes”, “fellowships”, and “groups.” Very few homeschool graduates described their parents as the primary educators during the final years of their secondary education.

While homeschool and private school graduates articulated a positive image of their secondary educational context, public school graduates generally viewed their secondary educational institutions in a negative way. While most students across all three learning environments felt prepared for college, homeschool and private school students viewed their secondary educational institutions favorably. Generally, they felt that their teachers truly cared, were highly interactive in the students’ lives, and wanted them to succeed. Public school students generally reported unfavorable views of their secondary educational institutions. Many public school students reported low care and interaction from teachers, poor motivational reasons for the success of their schools by educational leaders, and pedagogical inefficiency.

One of the most common epistemological priorities possessed by homeschool and private school students was a recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development. Half of all homeschool and private school graduates reported this competency. In comparison, only 20 percent of public school students displayed this competency.

Christian private schools often elevate apologetics and worldviews as the core

of their theological emphases. One of the most common goals and competencies that was expressed by the private school sampling was their schools' desires for graduates to defend their faith after high school. While Christian schools emphasized to their students a theoretical understanding of opposing worldviews, they usually did not push an interactive understanding of opposing worldviews. Most students reported how they were exposed to worldviews but being in a Christian "bubble" they had little opportunities to actually have their worldview challenged. Generally, private school leaders were trained to view all curriculum through a Christian worldview and challenge students to study and interpret information within that Christian worldview.

While public school leaders encouraged good morals as a goal for their students, they struggled to clearly define morality. Public school leaders communicated a desire to see students live as model citizens who make good choices and live moral lives. However, when questioned about how they define morality, public school leaders could not clearly define morality. Generally, the U.S. government and its laws were the standard for morality. But when pressed about how the school should enforce moral choices, educational leaders responded as it being a parental decision.

Research Applications

This study explored the impact of secondary educational contexts on college student formation and development. In the course of applying the research design, findings were yielded that addressed the epistemological positioning of participants within their respective sample groupings. In addition, findings revealed numerous observations pertaining to the influence of secondary educational contexts on spiritual formation and expressed goals and competencies from educational leaders.

This research directly applies to institutions of higher education. First, this research informs college counselors with an understanding of the different levels epistemological maturity among applicants. It also informs institutions of higher education regarding curriculum, teaching methodologies, and course designs, specifically for incoming freshmen, based on the makeup of the incoming class. For seminaries and Bible colleges, this research provides a better understanding of the spiritual backgrounds of students based on their secondary educational contexts. This understanding could also inform how the school communicates to prospective students.

Also, this research applies to pastors and other ministry leaders. This research informs these individuals with an understanding of how secondary educational contexts develop students intellectually, ethically, and spiritually. For pastors and other church leaders, this research informs them on how to equip parents for making the best decision for the child's education while also providing an understanding of parental discipleship. Finally this research can be helpful for pastors to understand the different levels of intellectual maturity of the students in their church, and how to best utilize pedagogy and content to develop students intellectually and spiritually.

This research can also provide Christian parents with clear criteria used for evaluating different secondary educational institutions based on Christian convictions. This criteria includes the strengths and weaknesses, expressed goals, and outcomes of each context.

Research Limitations

In addition to the limits of generalization addressed in chapter 3, the findings and conclusions presented in this research study should be considered in light of the

followed limitations:

1. This study provides evidence of numerous developmental trends students from different secondary educational contexts The sample population included in this study only provides a reflection of the particular students and respective institutions that were included in this research. This study does not, therefore, reflect all evangelical undergraduates, especially considering this study's small sample size and localized geographical representation of included institutions and participants, especially non-Christian private schools.

2. While this study did not explore the impact of ecclesiastical influences on college student formation and development, it should be noted that 56 percent of all participants attended the same church, Bellevue Baptist Church.

3. The sampling for this research study defined "entering freshmen" as those having just graduated from high school and would be starting college in the Fall, not based on credit hours received.

4. The conclusions revealed in this research study were warranted primarily on the basis of the content analysis procedures performed by William S. Moore and the researcher. The subjectivity of Moore and (to a greater extent) the researcher may have influenced the reported findings of this study. Additional research could expose the nature and extent of this influence, if it existed.

Further Research

This study represents the first known major research endeavor that addressed epistemological maturity of evangelical undergraduates from varying secondary educational contexts. In light of the findings, conclusions, and limitations associated with this research, numerous recommendations for further enquiry into the area of undergraduate development based on secondary educational contexts are apparent. These include opportunities for major research studies, as well as minor supplemental research inquiries. The following list includes possible avenues of research that may serve to deepen, extend, or augment this research study.

1. Using a similar design and method as exemplified in this research, three separate studies may be undertaken to explore the variance of epistemological development among pre-ministry undergraduates at multiple institutions *within* the institutional

types addressed in this research, homeschool, private school, and homeschool.

2. Using a similar design and method as exemplified in this research, a study may be undertaken to explore the comparative differentiations regarding college student formation and development from evangelical students who attended Christian private schools and non-sectarian private schools.

3. Using a similar design and method as exemplified in this research, a study may be undertaken to explore the comparative differentiations regarding college student formation and development from evangelical students who utilized "traditional" homeschooling methods and those who used modified homeschooling methods.

4. Using a similar design and method as exemplified in this research, a study may be undertaken to explore the comparative differentiations regarding incoming freshmen who have earned college credit hours and those who are entering college with none.

5. A study may be designed to assess the impact of ecclesiastical influences on high school students' formation and development.

6. A study may be designed to assess the impact of teachers and administrators' interaction and influences on high school students' formation and development.

7. A study may be designed to assess the impact students having multiple secondary educational contexts on college student formation and development.

8. A study may be designed to assess the impact of Christian and non-Christian secondary educational leaders on college student formation and development.

9. A study may be designed to assess the impact of teacher involvement in secondary educational contexts on college student formation and development.

10. A study may be designed to assess the similarities of goals and competencies of secondary educational contexts and higher educational contexts.

11. Extending from the procedures and findings of this research study, a study could be undertaken to refine and test the standardized interview protocol for either students or educational leaders.

12. Extending from the procedures and findings of this research study, a study could be undertaken to explore the intellectual disciplines of individuals in relation to their positional scoring on the Perry Scheme and Trentham's Core Competencies and Priorities.

13. Extending from the procedures and findings of this research study, a study could be undertaken to explore the spiritual disciplines of individuals in relation to their positional scoring on the Perry Scheme and Trentham's Core Competencies and

Priorities.

APPENDIX 1

THESIS STUDY PARTICPATION FORM

Agreement to Participate

The research in which you are about to participate is designed to explore the impact of secondary educational contexts for college student formation and development. This research is being conducted by Justin Robert Mullins for purposes of thesis research. In this research you will complete the form below and participate in a personal interview by telephone. Any information you provide will be held *strictly confidential*, and at no time will your name be reported, or your name identified with your responses. *Participation in this study is totally voluntary and you are free to withdraw from the study at any time*.

By your completion of this form and the subsequent personal interview, and by checking the appropriate box below and entering the requested information, you are giving informed consent for the use of your responses in this research.

___ I agree to participate ___ I do not agree to participate

Name: _____

E-mail: _____

Date: _____

Preferred name: _____

Year of birth: _____

Gender: _____

Name and location of the college you attend

_____

What year college student are you? _____

What pre-college learning environment did you attend for the final four years of high school?

Public: _____

Private: _____

Home: _____

At which church do you maintain active membership (name and location)?

_____

APPENDIX 2

STANDARDIZED PERRY INTERVIEW PROTOCOL

1. What is your view of an ideal college education? How, if at all, should a student change as a result of that educational experience?

2. Have you encountered any significant differences in beliefs and values in your peers in college or other people you've met in your experiences here? What is your reaction to this diversity; how do you account for these differences? How do you go about evaluating the conflicting views or beliefs you encounter? How, if at all, do you interact with people who have views different from your own?

   [Note: The focus here is on the process of evaluating and/or interacting, not on specific beliefs or reactions per se]

3. Facing an uncertain situation in which you don't have as much information as you'd like and/or the information is not clearcut, how do you go about making a decision about what you believe? Is your decision in that situation the right decision? Why or why not? If so, how do you know.

   [Note: Try to get the student to describe the process of coming to a judgment in that kind of situation, which in many cases will involve generating a concrete example of some personal relevance but not too emotionally-charged–preferably an academic-related context, related if possible to their major field.]

4. How would you define "knowledge"? How is knowledge related to what we discussed earlier in terms of a college education? What is the relationship between knowledge and your idea of truth? What are the standards you use for evaluating the truth of your beliefs or values? Do your personal beliefs/values apply to other people–in other words, are you willing to apply your standards to their behavior? Why or why not?

Possible follow-up probes in each area:
1. How have you arrived at this particular view of these issues? Can you remember a time when you didn't think this way and recall how your view changed over time?
2. To what extent do you think the view you have expressed is a logical and coherent perspective you've defined for yourself? What, if any, alternative perspectives have you considered?
3. How likely is it that your view will change in the future? If you think it's likely to change, what kind of experiences or situations might produce such change?

APPENDIX 3

MULLINS' INTERVIEW PROTOCOL FOR STUDENTS

Questions regarding overall intellectual and ethical development in college (RQ 1)

What is your view of an ideal college education? How, if at all, should a student change as a result of that educational experience?

Have you encountered any significant differences in beliefs and values in your peers in college or other people you've met in your experiences here? What is your reaction to this diversity; how do you account for these differences? How do you go about evaluating the conflicting views or beliefs you encounter? How, if at all, do you interact with people who have views different from your own?

Facing an uncertain situation in which you don't have as much information as you'd like and/or the information is not clearcut, how do you go about making a decision about what you believe? Is your decision in that situation the right decision? Why or why not? If so, how do you know.

How would you define "knowledge"? How is knowledge related to what we discussed earlier in terms of a college education? What is the relationship between knowledge and your idea of truth? What are the standards you use for evaluating the truth of your beliefs or values? Do your personal beliefs/values apply to other people–in other words, are you willing to apply your standards to their behavior? Why or why not?

Questions regarding the impact of secondary education contexts on academic life and Christian formation (RQs 2, 3)

What about your pre-college learning experience has influenced you the most? – What stands out in your mind that has really made an impression on you academically and with your personal Christian experience? What overall experience do you make of your pre-college educational experience? What was your most meaningful high school experience?

Academic Probes (request examples, tie together threads of narrative, relate to earlier experiences)

> What were the educational goals of your pre-college learning institution?
> What role do administrators/teachers have in your education?
> What would the perfect high school graduate look like? (personally, skills, knowledge, etc).

Christian Formation Probes

What role does your pre-college learning environment play in developing you as a Christian?

How did your time in high school affect how you lived as a Christian?

APPENDIX 4

MULLINS' INTERVIEW PROTOCOL FOR
EDUCATIONAL LEADERS

Questions regarding the expressed goals and outcomes of educational leaders and priorities and competencies of students (RQ 3)

What is the goal of education? What core qualities, characteristics, or competencies does your school desire to see from its graduates?

Describe the perfect high school graduate.

Expressed Goals Probes

- What is the mission statement of this school district?
- How does an educators' philosophy of teaching differ from class to class?
- Describe your institutions educational goals for students.
- What role does spiritual development play in your educational context?

Expressed Competencies of Students

- What behaviors do you strive to see in your students?
- What skills/abilities do you strive to see in your students?
- What academic achievements do you strive to see in your students?

APPENDIX 5

CSID INTERVIEW SCORING PROCEDURE AND
REPORTING EXPLANATION

Interpreting MID Ratings

The **MID** is scored by raters who have trained extensively in the general Perry scheme and the specific rating process developed over the years by Knefelkamp (1978) and CSID (Knefelkamp et al, 1982). Because the instrument is designed to assess the part of the Perry scheme that we believe to be primarily cognitive/intellectual in focus, **MID** ratings range along a theoretical continuum from position one through position five. In practice, position one perspectives are not found (it was a hypothetical and conceptual extension of the model even in the original study), and thus the actual **MID** ratings will range from positions two through five.

The Rating System

Individual ratings on the **MID** are represented by a 3-digit number which reflects the dominant and (if necessary) the subdominant position/s rated in the essay. This system extends the Perry scheme continuum from 4 steps--that is, positions 2, 3, 4, and 5--to 10 steps: 222, 223, 233, 333, 334, 344, 444, 445, 455, & 555. Solid ratings (like 333) reflect a "stable position" perspective; the two steps between each stable position indicate transitional essays. As examples, 223 represents "dominant position 2 opening to position 3," while 233 indicates "dominant position 3 with trailing position 2." The ratings thus reflect an assessment of the cognitive complexity displayed by the essay with respect to classroom learning along a linear, simple stage model continuum (see Rest, 1979, Judging Moral Issues, for a thorough discussion of simple vs. complex cognitive stage model assumptions).

Data Reporting

For reporting purposes, the MID ratings can be treated in either (or both) of two ways, as categorical data or as continuous data. Some statistical purists--often found on doctoral

dissertation committees--insist that a measurement scale like the MID can only be treated as categorical data. Other experts, however, including respected psychometricians like Jum Nunnally (Psychometric Theory, McGraw-Hill, 1967), argue that such a strict interpretation is too rigid and not meaningful in practical terms for psychological scales. (For a more in-depth discussion of this topic, see the MID instrument manual.) Depending on the purpose and the audience of the research, the scores can be effectively used either way, and often are reported both ways for comparison purposes.

1) Grouping categories:
222 & 222(3) = Position 2
223 & 233 = Transition 2/3
333 & 333(4) = Position 3
334 & 344 = Transition 3/4

Report the frequencies and percentages of students in each of the categories. These figures can then be converted to a histogram if desired, and in a longitudinal project, "profile shifts" to the right on this kind of chart indicates upward movement. For a good example of this kind of analysis, see Kirk Thompson's 1990 paper, available from the Perry Network, on Evergreen State College data.

2) Continuous data:
Convert the rating scores to numbers as follows:
222 & 222(3) = 2.0
223 = 2.33 233 = 2.67
333 & 333(4) = 3.0
334 = 3.33
344 = 3.67

Once the ratings are converted to these numerical scores, they can then be manipulated statistically however you choose (mean, standard deviation, etc.)

*"Glimpse" ratings (e.g., 333(4); see the rating notes on the following page for more details) can be treated numerically as a separate sub-stage. In the case of 333(4), for instance, it could be scored as a "3.17" (half of 1/3 a position, in effect). Conceptually, I would argue that these essays are different from 333 essays and the latter approach is preferable; practically, unless your sample has a lot of these ratings, it probably doesn't make much difference.

*In general, traditionally-aged students enter college in the position 2-position 3 transition and exit college 4 (or so!) years later in the position 3-position 4 transition.

There is a modest but statistically significant effect by classification and by age, with the former seeming to be a stronger factor (with a great deal depending on the nature of the curricular interventions and learning experiences occurring in those intervening years). There seems to be no consistent difference by gender. Demographic data on ethnicity has been collected inconsistently over the years, and has become increasingly problematic in terms of data quality and interpretation, so at the present no comparative data are provided for that dimension.

Rating Summary Sheet Notes

Below is a general overview of the kinds of "rater shorthand" notes and comments you might see on the summary sheet of your data.

* **BP**: "Ball Park" rating; there is insufficient data, or insufficiently clear data, for us to provide a full research rating with confidence--but enough for us to approximate, or "ballpark," a rating. People use such ratings in different ways; with formal research (and an adequate sample!), you might want to exclude them from the analysis. For most informal research purposes, however, it is reasonable to include BP ratings. In converting these ratings to continuous data, treat them as a half-stage; a "BP 2/3," for example, would convert to a "2.5" score.

* **Glimpse**: rater's notation that accompanies ratings like 333(4). Such a rating indicates that while the essay is seen as reflecting stable position 3, there is a hint, or "glimpse," of the next position (in this example, position 4) that is noted but not given sufficient weight to warrant a +1/3 position increment. We believe these essays are distinct from 334 or 333 essays, but you may prefer to simply consider them as 333 essays. You may also see 222(3) or 444(5), but these are less common.

* **Unr**: Unrateable; we do not think the data sample is adequate to provide any kind of rating. The reasons vary; sometimes students don't write the essay, sometimes they are simply too brief, and sometimes they either don't take the task seriously or they tangent in ways which make rating impossible. The percentage of Unrateables in samples is usually only 1-5% at most.

* **Flooded**: there seems to be a strong emotional tone taken in the essay--usually in glowing positive terms (a professor, most often, who obviously had a powerful personal influence on the person), but sometimes harsh and negative as well. Such emotional "flooding" tends to obscure the cognitive rating, so we note its occurrence as a possible caution in reviewing the rating. Flooding does not make the data automatically unrateable, but it can make the essay rate as less complex than it might otherwise be.

* **Early**: essentially the same notion as "Glimpse," but on the "other side" of the position; that is, a 333 (Early) means that the essay is seen as borderline between a 233 rating and a full 333 rating. As with the “glimpse” notation, this reference is mainly useful for our rating and criteria research, and we do believe this is a distinct set of essays—but it’s probably preferable to include them as 333 essays rather than a separate category.

* **2/4** or **3/5** : indicates that one or both of the raters noted this essay is an example of a rating split problem--a problematic essay that can be interpreted, for example, in the case of a **"2/4"** split, as being on either the position 2 or position 4 side of position 3. Conceptually, these splits result from the fact that there are close parallels between positions 2 and 4 and between positions 3 and 5 in the Perry scheme; practically, they give raters headaches! These essays are noted to allow us to go back to do closer analyses on these essays to help refine our rating criteria and decisions.

* **Q** : simply means that we think the essay in question is quotable, unusual, or for some other reason worth noting. You can use these signs to pull out the best essays for writing a section on the richness of the essay data or for presenting quotes to faculty; we use them primarily for rater training efforts and our ongoing rating criteria refinements.

* **+** or **-** : found beside individual ratings (as opposed to the final reconciled ratings), these signs are simply a rater's indication that s/he sees an argument for more than one rating: the one noted and the next 1/3 position step above (+) or below (-) it. These notes help facilitate the reconciliation process, but should be ignored when computing inter-rater agreement percentages.

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ABSTRACT

EXPLORING THE IMPACT OF SECONDARY EDUCATIONAL CONTEXTS ON COLLEGE STUDENT FORMATION AND DEVELOPMENT

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The intent of this study was to explore the impact of secondary educational contexts on college student formation and development. Semi-structured interviews were employed in order to elicit information from participants that revealed their personal perspectives regarding their approaches to acquiring, maintaining, and implementing knowledge. Students from three secondary educational contexts were included in this study: homeschool, private school, and public school. William G. Perry's Scheme of Intellectual and Ethical Development and John David Trentham's 10 Epistemological Priorities and Competencies were used as a theoretical lens. Additionally, semi-structured interviews were also employed in order to elicit information from parents, teachers, and administrators from each of the secondary educational contexts. A review of the precedent literature for this research presented theological, epistemological, theoretical, and educational foundations that defined the context of this research study.

Overall, this research observed that epistemological positioning was generally consistent among evangelical undergraduates from differing pre-college learning environments, with homeschooler trailing slightly behind public and private school students, which reflected a range of positions within the Dualism stage to the mid stage of

Multiplicity from the Perry Scheme. Additionally, this research observed that most entering freshmen have "emerging" epistemological competencies and priorities according to Trentham's taxonomy. In addition, numerous prominent themes emerged from analysis of interviewees' articulations that were identified as bearing relevance to how participants describe the impact of secondary educational contexts on students' epistemological maturation and Christian formation.

KEYWORDS: homeschool, private school, public school, college student, biblical wisdom, biblical worldview, knowledge of God, imago Dei, intellectual virtues, intellectual disciplines, sources of knowledge, Center for the Study of Intellectual Development (CSID), Christian formation, cognitive development, college student development, critical thinking, educational philosophy, dualism, epistemological development, epistemological maturity, faith and rationality, faith and reason, pre-college learning environment, secondary education, intellectual development, inverse consistency, multiplicity, Perry Scheme, Perry Scheme of Intellectual and Ethical Development, evangelical undergraduates, William G. Perry, Jr., John David Trentham

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