Liberty University School of Divinity

Fostering Self-efficacy for Biblical Learning and Doctrinal Awareness with Micro-teaching

in a Brief Course on Bible Study

A Thesis Project Submitted to

the Faculty of Liberty University School of Divinity

in Candidacy for the Degree of

Doctor of Ministry

by

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January 2020

Liberty University School of Divinity

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DOCTOR OF MINISTRY THESIS PROJECT ABSTRACT
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Self-efficacy for biblical learning was explored in the context of a small group experience focused on how to study the Bible. After first developing a new instrument to measure self-efficacy for biblical learning in a pilot study, ten church attendees participated in a seven-week course designed around the hermeneutical principles of understanding a Scripture passage in textual and historical context, placing the passage in the grand story of God, and relating it to relevant doctrine. The small group process employed micro-teaching as a mechanism to facilitate challenge and mastery experience in learning. Micro-teaching places the student in the role of teacher for very short segments of the class. It was hypothesized that this elevation of the student role would facilitate stronger self-efficacy beliefs for biblical learning and increase doctrinal awareness. Results demonstrated considerable improvement in both self-efficacy and doctrinal awareness across multi-methods. Positive change in teaching confidence and accuracy ratings was also observed for participants' micro-teaching, which points to the process as a mastery experience. Because self-efficacy beliefs are excellent predictors of future behavior, increased efficacy for biblical learning could lead to increased engagement with the Bible. Implications for future research and practical ministry are discussed, including elevated involvement of congregants in Bible study classes and increased focus on hermeneutical skills.

Thesis project abstract length: 211 words.

Without the support of the leadership of Midway Church, this thesis would have never risen above the ground. Thank you, Pastors John, Todd, Adam, and Chris. And, to our Sunday school class, whose members showed patience and encouragement. Lastly, thank you to the church leaders involved with the pilot study for the privilege of connecting with their local expressions of the body of Christ.

All examples of grace.

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Chapter 1: Introduction

In the introduction of his letter to the church at Colossae, the apostle Paul commends the Christians for their commitment to the truth of God while simultaneously speaking to the foundational role of this truth in the world. Paul wrote: "Of this you have heard before in the word of the truth, the gospel, which has come to you, as indeed in the whole world it is bearing fruit and increasing—as it also does among you, since the day you heard it and understood the grace of God in truth . . ." (Col 1:5b-6).[1] This truth, and the grace it displays in the gospel message, was the foundation of the church to which Paul was writing, and the same truth continues to be the foundation of modern manifestations of the body of Christ.

The contemporary evangelical church has opportunity to know about this truth as a result of the God-inspired eyewitness and close associate accounts found in Scripture. As such, the Bible represents the authority God intended to guide humanity and point people to him by his grace. The Bible communicates the "word of the truth" that is intended to bear Godly fruit in Christians' lives. Of course, this makes knowledge and application of Scripture a matter of extreme importance in the life of a believer.

Within the local church, much of ministry is rightly designed to facilitate church attendees' awareness and application of Scripture as a means of worship, encouragement, correction, and guidance for all aspects of life. Sermons are preached. Lessons are taught. Programs are developed that foster Christian education through traditional and innovative methods. The goals of these efforts are myriad, but key among them is increased engagement

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[1] Unless otherwise noted, all biblical passages referenced are in the *English Standard Version* (Wheaton, IL: Crossway, 2008).

with the Bible because Scripture is transformative in people's lives as it represents God's word to humanity.

In spite of these efforts, the church is confronted regularly with challenges to biblical engagement and relevance, both culturally and individually. When describing his view of evangelical drift from orthodoxy, David Wells noted that "We now have less biblical fidelity, less interest in the truth, less seriousness, less depth, and less capacity to speak the Word of God to our own generation in a way that offers an alternative to what it already thinks."[2] Although Wells's claim is broad, it highlights the challenge of relevancy in a postmodern world which in turn results in biblical illiteracy as people fail to engage Scripture in a meaningful way.

It is beyond the scope of the current thesis to attempt an explication of the many influences on decreased biblical engagement. However, one logical factor is the degree that an individual believes he or she can engage with Scripture in a personal way that leads to understanding and application for one's life. P. Adam McClendon described the authority of Scripture as well as the need to evaluate it for rule of life:

> Access to the Bible is an enormous privilege, and yet, it seems, as access to the Bible abounds professing Christians increasingly struggle to live out a biblically-grounded faith relying ever more on religious tradition, cultural influences, and personal preference. These three aspects of modern life are all too often the plumb line by which truth is determined and acted upon. Tradition, culture, and personal preference should be placed in subjection to, rather than, on par with the Bible. The Bible is to serve as the filter through which these perspectives are brought in order to determine the proper basis for Christian belief and living. To whatever extent possible, each Christian should strive to lay aside the lenses of denominational traditions, cultural biases, and personal preferences, and evaluate all spiritual belief and living in light of the contextual truths of God's word.[3]

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[2] David Wells, *No Place for Truth: Or Whatever Happened to Evangelical Theology?* (Grand Rapids, MI: Eerdmans, 1993), 12.

[3] P. Adam McClendon, *Paul's Spirituality in Galatians: A Critique of Contemporary Christian Spiritualities* (Eugene, OR: Wipf & Stock, 2015), xiii.

In light of these concerns, biblical literacy takes on an important place in the health and functioning of the church in general, and every believer in particular. A Christian cannot be transformed and instructed by the Bible unless it is engaged and studied regarding what it has to say as part of his or her spiritual formation.

As noted above, the reasons for disengagement are many, but unless people are confident in their ability to study and learn from Scripture in a meaningful way, they are unlikely to engage the process. The modern church does much to facilitate study of Scripture, but seldom are the psychological factors that may mediate engagement and promote learning considered in the process. In fact, much of church structure institutionalizes the idea that the Bible is a complex document that is in need of interpretation. It needs to be preached, taught, or communicated via some other form of enlightenment from a more-informed other. Of course, this is unlikely the intent of most evangelical churches, but the question remains as to whether the average church-goer would even attempt biblical engagement on a meaningful level if there is little belief in one's ability to understand the correctly apply Scripture. The current thesis will address this issue of self-belief regarding biblical learning as a means to promote biblical literacy.

Ministry Context

The current research will be conducted in the context of Midway Church and its small group, spiritual formation program. Midway Church is a mostly rural congregation, with some suburban influence, in a Baptist tradition. The church is an independent congregation but is affiliated with the Baptist Bible Fellowship headquartered in Springfield, Missouri. Although the congregation is historically Baptist and maintains a decidedly Baptist statement of faith, the

church leadership has described the congregation as "baptist" with a small "b" to reflect a caution away from denominational entrenchment.

Midway Church gains its name from its location halfway between two small towns approximately fifty miles north of the Dallas-Fort Worth metropolitan area in Texas. At the time of its founding in 1976 as a church plant from a congregation in a larger town nearby, these towns were quite rural. More recently, one of the towns is experiencing noticeable growth as a function of being on the edge of a growing, suburban population north of Dallas. This town would not yet be considered a suburb of the metropolitan area, but the population is moving in its direction and there are currently about 3,700 residents within the city limits. The broader population in surrounding areas and towns is considerably larger, however. The other, even more rural, town has approximately 4,500 residents. The outlying population would add to this number, but the gain is far less than that applicable to the previously noted town. Although these local population numbers are modest for a congregation the size of Midway Church, the church also draws from the growing areas outside of the town limits.

Midway Church has grown steadily across the years. There have been four primary building projects. Services were initially held in the original, small sanctuary. A larger sanctuary was built to accommodate growth. This was followed by an even larger gym where services were held, along with some Christian education rooms. Finally, the most recent sanctuary, which can seat about 800 people, and additional Christian education space was completed approximately twelve years ago with a $3.5 million loan. Just recently, the church has been able to pay off this loan after a push to free up money committed to dept retirement for additional ministry, including a strong emphasis on missions. Overall, the church is in a strong financial position for ministry, which has strengthened further with the recent debt retirement.

The average attendance across both Sunday morning worship services is approximately 850. Regular attendees number around 1,100. The average total weekly attendance (measured from Sunday to Saturday) in any church activity is around 1,500 persons, which includes multiple counts of some people that attend other events, such as a small group, during the week. The church body is predominately Caucasian and relatively evenly divided based on gender. Although the church does not keep statistics explicitly regarding gender breakdown, the congregation has a relatively strong male presence as compared to many churches which often lean toward more female congregants. The average age of church attendees is also unknown, but observation would suggest an average around middle-age with good balance in other age brackets. Church attendees range widely in socio-economic status backgrounds.

Midway Church employs a range of strategies to promote spiritual formation among congregants. There is a traditional Sunday school program, multiple elective classes that are held at different periods, and Wednesday evening class programs. At present and focusing here only on adult ministries, there are nine Sunday school classes, nineteen life groups that meet in homes, and about ten other groups of a specialized nature (e.g., men and women's groups). There are also four care-groups (e.g.., divorce recovery), and three elective groups (e.g., managing finances). Collectively, attendance in these various groups is approximately 625.

In the past couple of years, the church has placed more focus on development of small group fellowships in homes throughout the community and initiated purposeful efforts to develop leaders for these groups. This effort was highlighted with the hiring of a new pastor for discipleship and small groups in early 2018. This pastor has worked to organize the small groups ministry, elevate the importance of discipleship, and initiate a focused effort on training new leaders for potential growth. This training takes an organized form across multiple meetings and

demonstrations of small group dynamics. It is in this ministry context that the current problem was addressed. Specifically, the intervention discussed below was implemented in a small group environment within the larger spiritual formation program of the church during two Sunday morning group meetings.

Problem Presented

The problem is that pursuit of biblical literacy and spiritual formation through Scripture by church attendees is likely influenced in part by their self-efficacy beliefs for biblical learning. Based on social cognitive theory, negative or absent self-efficacy for biblical learning would theoretically limit Bible study because of its impact on one's self-agency to engage and persist with the process.

An important element of discipleship and spiritual maturity is knowledge and application of the Bible in one's life. However, some have argued that biblical literacy is on the decline, which of course is a complex phenomenon likely impacted by many factors.[4] Regardless of the sources of biblical illiteracy, an obvious solution is increased Bible study and application, and churches employ different models to help facilitate such study with varied results.

It can be argued from social cognitive theory that people may avoid Bible study because of low self-efficacy for the process or deficits in self-perceived ability to comprehend biblical or doctrinal concepts. Accordingly, processes that can influence self-efficacy for biblical learning

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[4] Ed Stetzer, "The Epidemic of Bible Illiteracy in our Churches," *Christianity Today*, July 6, 2015, https://www.christianitytoday.com/edstetzer/2015/july/epidemic-of-bible-illiteracy-in-our-churches.html. Stetzer reviews survey data on the levels of Bible reading and awareness of biblical content. See also the national survey from the Barna Group on Bible engagement: "State of the Bible 2019: Trends in Engagement," Barna Group, accessed April 26, 2019, https://www.barna.com/research/state-of-the-bible-2019/.

may be beneficial in facilitating increased engagement with Scripture in sustainable ways. Because positive self-efficacy beliefs have been shown to be strong predictors of future behavior in a wide range of applications, strategies that facilitate individual self-efficacy for biblical learning, especially in social contexts, may result in more consistent Bible study.

Purpose Statement

As a means to potentially foster self-efficacy for biblical learning, the purpose of the current study was to implement a small group experience designed to capitalize on sources of self-efficacy growth while leading participants through a process of learning how to study Scripture. Key sources of efficacy building information include enactive mastery experiences, social persuasion, vicarious learning, and affective arousal.

The small group experience was purposefully structured to positively invoke each of these sources of efficacy around the goal of learning how to study and learn from the Bible. Chief among these sources is enactive mastery experience. The current study utilized a micro-teaching model as a mechanism to actively engage participants in the learning-teaching process to elevate the motivation for mastery of a passage of Scripture and a doctrinal concept to which it relates. Micro-teaching is the term used here to refer to participants teaching very brief (e.g., five minutes) lessons as part of a strongly scaffolded experience in the small group. Additional structures were used to promote efficacy building, but micro-teaching has unique individual and social features (e.g., motivation, accountability, feedback loops) that are well-suited to help create an enactive mastery experience for participants.

In sum, the study evaluated whether the small group experience, with particular focus on micro-teaching as an enactive element, fostered self-efficacy for biblical understanding as well

as improvement in doctrinal awareness. Prior research has demonstrated that positive self-efficacy beliefs are consistent predictors of future behavior across a range of domains,[5] although no known research has explored the issue of self-efficacy for biblical learning.

Definitions

The following section provides working definitions for some key terms that are used in the current research. These definitions are intended to serve as general orientations to the terms, and, in some cases, more detailed descriptions are provided later in the review of the literature.

Human Agency

In Albert Bandura's social cognitive theory, human agency speaks to the idea that "people can exercise influence over what they do."[6] It is recognized that human agency cannot account for all influences on behavior, such as the autonomic nervous system's role in activity or external limitations on what outcomes might be possible. However, "agency refers to acts done intentionally,"[7] such as the study of the Bible for the purposes of learning and spiritual transformation.

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[5] Albert Bandura, *Self-efficacy: The Exercise of Control* (New York: W. H. Freeman and Company, 1997), 3. For examples of application in education see Ellen L. Usher and Frank Pajares, "Sources of Self-efficacy in School: Critical Review of the Literature and Future Directions," *Review of Educational Research* 78, no. 4 (December 2008): 751-52. For examples of application in organizational research see Marilyn E. Gist and Terence R Mitchell, "Self-efficacy: A Theoretical Analysis of Its Determinants and Malleability," *Academy of Management Review* 17, no. 2 (April 1992): 183.

[6] Bandura, *Self-efficacy*, 3.

[7] Bandura, *Self-efficacy*, 3.

Self-efficacy Beliefs

Self-efficacy beliefs stem from and support people's drive for human agency. This mechanism is fully described in Bandura's social cognitive theory and is discussed in more detail in the review of literature. However, a key point here is that people's behavior is notably influenced by self-oriented beliefs in their ability to experience success or gratification in the behavior. Specifically, Bandura noted that "self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments."[8]

Self-efficacy for Biblical Learning

Self-efficacy beliefs are not general concepts that apply to all aspects of a person's life and functioning. The construct is a specific one, wherein a person's belief in his or her ability to succeed in one area may be very different from his or her belief to succeed in another. Self-efficacy is domain specific. For the purposes of the current study, the domain focus of interest is defined as self-efficacy for biblical learning. Using Bandura's formal definition above, self-efficacy for biblical learning refers to a person's belief in his or her ability to execute the courses of action necessary to effectively study and learn Scripture. This may include specific elements such as remembering Scripture, understanding how broader context informs a passage, or comprehending how a passage informs a doctrinal position.

Sources of Self-efficacy Beliefs

Self-efficacy beliefs do not develop in a vacuum, but originate from complex processes that involve behavior, internal personal factors (such as cognitive, affective, and biological

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[8] Bandura, *Self-efficacy*, 3.

factors), and external environmental influences. Bandura calls this dynamic interplay triadic reciprocal causation. Within this model, self-efficacy beliefs are theorized to be influenced by four areas, which are collectively called sources of self-efficacy beliefs. Each area is described in more detail in the review of literature, but they are summarized here to help guide the discussion.

The most influential source of efficacy-building information is mastery experiences. These are events in people's lives during which they exercise human agency with the outcomes being perceived as successful and valued. It is logical that positive outcomes, especially when cognitively perceived as challenging and highly valued, would lead to stronger self-beliefs in a person's ability to succeed in the future. The current study intends to target this source of efficacy-building information by facilitating mastery experiences in biblical learning.

The other sources of self-efficacy include vicarious learning, verbal persuasion, and physiological and affective states. Social cognitive theory assumes that people can learn, and thus later act, based on observations of the successes or failures of others. For the purposes of self-efficacy building information, focus would be on positive outcomes or success. People can also experience bolstered efficacy beliefs from the verbal persuasion and encouragement of others. Finally, people's physiological and affective states and influence the degree their self-beliefs are influenced. For example, a Bible student might do a nice job giving a presentation, but if his or her anxiety is sufficiently elevated, then the impact on self-efficacy could be nil or even negative. All of these sources were kept in view in the current study.

Biblical Literacy

Biblical literacy is often spoken of and yet rarely specifically defined in discussions of people's understanding of Scripture (whether followers of Christ or not). What exactly people

are supposed to know about the Bible to be considered literate varies by perspective and can range from specific facts, to general concepts, to application of biblical principles in life.[9] The literature is largely devoid of a consistent definition,[10] but instead points to a consensus that people (in the church and outside of it) know increasingly less about the Bible as compared to former generations.

Biblical literacy is used here with emphasis on literacy as understanding and making meaning rather than on just facts and knowledge. Biblical literacy describes the degree a person understands the overarching message of the Bible and how various major elements (either topically, historical events, or books/letters) fit together to form this message. It is also assumed that biblical literacy includes the ability to articulate this message in either written or oral form. More specific definitions are possible, such as itemizing the level of detail needed in various passages or sundry topics to be considered literate, but this level of focus is not necessary for the current study. It should be noted that biblical literacy may come with stronger awareness of doctrinal positions, but it is not assumed that this would necessarily be the case.

Doctrinal Awareness

Doctrinal awareness is defined as a person's knowledge of a particular doctrine and the ability to articulate the core message of the doctrine in written or oral form. The term is used broadly and would be captured by a person's ability to discuss the doctrine in general terms, as

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[9] See, for example, Collin Hansen, "Why Johnny Can't Read the Bible," *Christianity Today*, May 2010, 38-41. Hansen reviews several perspectives and church actions on the issue.

[10] For an example of diversity of definition even within a single study of middle and high school students, see William H. Jeynes, "The Relationship between Biblical Literacy, Academic Achievement, and School Behavior among Christian- and Public-school Students," *Journal of Research on Christian Education* 18, no. 1 (January 2009): 42. Jeynes operationalized biblical literacy with a 10-time fact quiz, a self-assessment of one's ability to name the 66 books of the Bible in order, and a self-report of how one compares in biblical knowledge compared to peers.

opposed to specific terms with exact theological phraseology. Emphasis here is on awareness as opposed to doctrinal exposition with full Scriptural support.

Micro-teaching

Expert learners can be marked by their ability to process information deeply and then reflect on how the information could be taught to others. The necessity of teaching a concept to others is a highly impactful, educative process that can serve as a mechanism to promote deep thinking, focused study, and motivation for learning.

For the current study, teaching was used as a tool to promote mastery experiences in learning about the Bible, and thus, potentially impact one's self-efficacy for biblical learning. Note that the focus here is on the teacher and the impact of the process on him or her, not on what is learned by others in the group. In order to make the teaching task manageable, reduce the possible influences of anxiety, increase the chances of success, and manage time, a micro-teaching model was employed. Micro-teaching refers to a brief, scaffolded teaching experience that lasts only about five minutes. This limited teaching role helps increase the chances of making the experience a successful one for the teacher, and thus impact his or her self-efficacy beliefs. Participants in the study were involved in several micro-teaching experiences.

Spiritual Formation

Spiritual formation is a wide-ranging term that includes approaches to learning, activities, spiritual disciplines, engagement with the church body, and other factors largely designed to promote discipleship and being conformed to the image of Christ. Paul Pettit summarized two key principles that are used in the current study: "First, *spiritual formation is the holistic work of*

God in a believer's life whereby systematic change renders the individual continually closer to the image and actions of Jesus Christ. And second, *the change or transformation that occurs in the believer's life happens best in the context of authentic, Christian community and is oriented as service toward God and others.*"[11]

It is impossible to address all possible influences on the spiritual formation of believers. As such, the current study focused on the role of the Bible, and more specifically on people's self-efficacy beliefs for biblical learning to promote increased study and time with Scripture.

Limitations

The current study contained a number of limitations. First, the study was limited by the self-selection nature of the participants. Volunteers were solicited, which likely resulted in stronger motivation for engagement in the intervention than the average person who participates in a small group in this ministry context. Because the intervention was designed to promote self-efficacy beliefs, there exists an inherent confound between the nature of the intervention and the motivation of a participant volunteer. The role of the participants was elevated and highly engaged (e.g., micro-teaching) which should help mitigate the confound beyond typical small group activities, but there is no way to determine the potential influence of self-selection in the current design.

Second, the ability to make casual inferences regarding the impact of the intervention on people's self-efficacy beliefs was limited by the lack of a comparison or control group. Without such a counterfactual, causal inferences are tenuous from an empirical standpoint, although they

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[11] Paul Pettit, "Introduction," in *Foundations of Spiritual Formation: A Community Approach to Becoming Like Christ*, edited by Paul Pettit (Grand Rapids, MI: Kregel, 2008), 19. Emphasis in original.

are theoretically assumed and grounded in a strong causal rationale as part of motivation for the study.

Finally, although a curriculum was used to guide the intervention, the process was inherently allowed to be somewhat fluid to allow flexibility in developing individuals' mastery experiences in learning to study the Bible. This flexibility was useful in targeting unique and positive self-efficacy belief among participants, but it may result in a diversity of experiences that is difficult to replicate.

Delimitations

Perhaps the most pertinent delimitation is the use of a short-term intervention to promote self-efficacy beliefs for biblical learning. The small group experience ran for seven weekly meetings. This time frame was selected to help maximize participation, retention, and completion in the project. The study was therefore purposefully limited to a brief course in how to study the Bible.

Second, the intervention was conducted within a specific ministry context, as discussed above, and with a particular group of individuals that chose to participate. Both factors limit potential generalizability of any findings to other churches or people. The contextual factors may influence the feasibility of the intervention in future situations. The particular backgrounds of those involved should result in caution when attempting to make assumptions regarding future individuals.

Third, focus was on the Bible as a primary mechanism of spiritual formation. Consistent with Pettit's spiritual formation principles above, the intervention occurred within the context of Christian community, although the community was somewhat contrived for the purposes of this

study and short-term in duration. There are many other elements to spiritual formation that were not addressed because focus was on increased self-efficacy beliefs for biblical learning and doctrinal awareness as impacts on longer-term biblical literacy.

Fourth, the content of the course was designed to facilitate mastery experiences in the midst of studying and understanding specific passages of Scripture. The passages were pre-selected and the procedures designed to promote challenge but with eventual success. Collectively, this made the course a specific approach to learning how to study the Bible. There are many methods for Bible study, but the current study was procedurally delimited to strategies that promote mastery experiences in the context of micro-teaching.

Finally, the brief course was framed around three hermeneutical issues regarding Bible study and interpretation. These are explained below, but there are other factors that could impact one's ability to understand the Bible in a mastery experience, such as application of biblical languages. However, the main issue for the current study was on accessibility and impacting success in a brief period, not explicitly on mastery of hermeneutics.

Assumptions

This thesis and the research study that it describes are grounded in several basic assumptions of evangelical theology. The full range of evangelical presuppositions are not addressed here. Instead, focus is on the issues most central to the nature and content of this study. Two of these assumptions are doctrinal, and one is hermeneutical.

<center>The Doctrine of God</center>

It is assumed that one, true God exists in Trinitarian expression. While this assumption might seem basic for the current thesis, the existence of God presupposes any theological relevance of Scripture which is at the core of the intervention. In his own discussion of evangelical assumptions, Graeme Goldsworthy observed: "We would not be interested in the theology of the Bible if we did not have some previously formed notion that the Bible can deliver a theology."[12] For the evangelical believer, this notion leads to the existence of God as Creator of all things as reflected in Scripture.

<center>The Doctrine of the Word of God</center>

As an expression of himself, God's word resulted in creation of both the physical world and humanity. His word is also reflected in Scripture, which represents the written word of God as inspired by the Holy Spirit and is inerrant in its communication about God's nature, the nature of humankind, and God's relationship with his creation. David Clark described the evangelical perspective on God's word found in the Bible as:

> the unique, written revelation of God, a permanent, meaningful, and authoritative self-expression by God of his nature and will. The Holy Spirit's act of superintendence – inspiration – was decisive in the writing of Scripture and is the reason the Bible possesses unique status as revelation. Through inspiration, the Holy Spirit aided those who wrote the Bible. The Spirit then guided the church in identifying inspired works and collecting them as canon. This supervision renders Scripture uniquely authoritative for Christian believers.[13]

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[12] Graeme Goldsworthy, *Christ-Centered Biblical Theology: Hermeneutical Foundations and Principles* (Downers Grove, IL: InterVarsity, 2012), 42.

[13] David K. Clark, *To Know and Love God: Method of Theology,* Foundations of Evangelical Theology, Edited by John S. Feinburg (Wheaton, IL: Crossway, 2003), 61.

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Importantly for the current study, the word of God is also considered transformational because it is an expression of God. It discerns our hearts and helps us conform to the image of Christ as we read and apply it.

The Unified and Redemptive History of Scripture

The Bible reflects an inherent unity to its message and reflects both the progressive work of God in history and his progressive self-revelation in that history. As such, the entire canon, across both Old and New Testaments, reflects God's work and expression with humanity to reflect his redemptive nature, which reaches a salvation crescendo in Jesus Christ and looks forward to an ultimate redemption manifested in a new heaven and new earth. Sidney Greidanus emphasized the unified nature of God' redemptive history: "Progression in redemptive history takes place within the continuity of a single redemptive history."[14]

For the present study, this assumption (which is borne out in an evangelical hermeneutic) regarding God's unified plan in history informs the study and interpretation of Scripture. Thus, the current intervention encouraged participants to situate the passage they studied within the larger redemptive history milieu as part of the learning process.

Thesis Statement

By way of summary for the above discussion, the thesis of the current investigation is as follows: A scaffolded, small group experience which utilizes micro-teaching of a biblical passage as a model of participation will positively relate to self-efficacy for biblical learning and doctrinal awareness.

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[14] Sidney Greidanus, *Preaching Christ from the Old Testament: A Contemporary Hermeneutical Method* (Grand Rapids, MI: Eerdmans, 1999), 48.

Chapter 2: Conceptual Framework

The following represents a review of the literature and theory applicable to the current thesis. The role of the Bible in spiritual formation is briefly discussed. This is followed by the possible role of self-efficacy in biblical learning as a factor that might partially explain lack of biblical engagement and as a mechanism to promote increased learning. Social cognitive theory was used as a framework to discuss sources of self-efficacy building information to support positive personal efficacy for biblical learning in possible interventions. The role of the believer (or, student) in such interventions is reviewed with emphasis on the importance of high engagement, reflective practice, and student ownership of the learning process to facilitate mastery experiences. The theological foundations for the study are discussed with focus on the role of Scripture in spiritual formation, transformation, and self-identification. Finally, theoretical foundations are reviewed with focus on common church practices used to promote biblical engagement along with their relative potential to impact self-efficacy beliefs.

Biblical Literacy and Spiritual Formation

The process of spiritual formation or discipleship is necessarily impacted heavily by the role of Scripture, at least for those adopting an evangelical perspective on the authority and transformative power of the Bible. Some discussion in this arena centers on what seems to be declining levels of biblical literacy in the American population as well as among those that claim to be Christian.[15] Based on their annual survey on the status of the Bible in American's lives, the Barna Group and the American Bible Society characterized five groups based on level of

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[15] Stetzer, "The Epidemic of Bible Illiteracy in our Churches."

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engagement with the Bible, ranging from Bible Centered to Bible Disengaged. Their 2019 results indicated that only 5% of respondents were Bible Centered (interact with the Bible frequently and it is transforming their relationships and shaping their choices). On the other end of their continuum, fully 48% were categorized as Bible Disengaged (interact with the Bible infrequently, if at all, and it has minimal impact on their lives).[16]

These trends point to challenges in the spiritual formation of American Christians.[17] The role of Scripture in the process is certainly multifaceted, but there are two important ways to consider this role. First, the Bible represents God's revelation to humankind and therefore is the authoritative source for theology and rule of life. The current thesis assumes an evangelical perspective[18] on the authority of Scripture, which can be summarized by stating that the Bible "alone is the unique, written revelation of God, a permanent, meaningful, and authoritative self-expression by God of his nature and will."[19] Although the authority of the Bible is challenged by cultural postmodernism, the Bible is the final source of authority in an evangelical worldview. This role of Scripture can be conceptualized as *informational* in the process of spiritual formation.

Second, study of the Bible can also be conceptualized as *transformational*. Jonathan Morrow described this transformational nature of Scripture:

> Spiritual formation is divinely enabled by God through three essential resources. . . . The first essential resource is exposure to God's Word. By its truth our thinking is renewed and we are able to break free from the anti-Christian mold the world seeks to press us

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[16] "State of the Bible 2019: Trends in Engagement," Barna Group.

[17] Henceforth, all references to Christians, believers, church attendees, and the like refer to the American expression of the church, unless otherwise specified.

[18] References to evangelicalism assume, broadly, an orthodox, conservative position on God and the Bible. This separates current references from other trends or movements that might label themselves as evangelical, but which depart from orthodox positions.

[19] Clark, *To Know and Love God*, 61.

into (Rom. 12:1-2). . . . Exposure to God's Word provides many benefits to our journey of spiritual formation, such as stability (Eph. 4:12-15), insight/guidance (Ps. 119:9-10; Prov. 3:5-6), and spiritual maturity (1 Peter 2:2-3; cf. 1 Cor. 3:1-3; Heb. 5:14).[20]

In other words, the very act of engaging Scripture, especially when open and sensitive to the message it contains, can change people in their formation into the image of Christ.

If the Bible is considered informationally authoritative and transformationally impactful, it is perhaps somewhat anticlimactic to declare that studying Scripture is foundational to the Christian experience of discipleship or spiritual formation. Nevertheless, the question remains as to why believers do not more frequently substantially engage and learn from Scripture. A full treatment of the possibilities is beyond the scope of this work, but one issue explored here lies with individuals' beliefs in their capacity to study the Bible in a meaningful way.

Review of the Literature

Among the many possible reasons for limited Bible engagement, the role of a person's beliefs in his or her ability to study the Bible in a way that is comprehensible and useful is an area that has seen very little attention in the literature. This factor is intra-individual, although these beliefs are affected by interpersonal, social, and cultural influences. Self-beliefs can be strong predictors of behavior, and they serve as key contributors to a motivational process of engagement in various behaviors.

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[20] Jonathan Morrow, "Introducing Spiritual Formation," In *Foundations of Spiritual Formation: A Community Approach to Becoming Like Christ*, edited by Paul Pettit, 31-50 (Grand Rapids, MI: Kregel, 2008), 45.

Social Cognitive Theory and Human Agency

The idea that self-beliefs in one's capacity are important influences on behavior is grounded in Albert Bandura's social cognitive theory. Bandura proposed an integrated theory of human functioning and behavioral change and argued that behavior was influenced not only by external stimuli but also by personal factors within an individual as well as social or environmental influences.[21] The theory assumes that people's behavior and choices are the result of *triadic reciprocal causation*, in which behavior, personal factors (such as cognition, affect, and biology), and environmental influences all exert influence on each other to result in eventual outcomes.

From this dynamic interplay, humans are then capable of making choices that affect their direction and lives, and these choices and their consequences in turn influence the triadic causation that impacts even later outcomes. This human agency is central to Bandura's theory, and it indicates that people can actively shape their lives and affect their own motivation.

Within this framework, the most fundamental influence on behavior, by which agency is realized, is people's beliefs in their capacity to influence outcomes. These self-referent concepts are called *self-efficacy beliefs* in social cognitive theory. More specifically, "…self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments."[22] As Bandura noted:

> People make causal contributions to their own psychosocial functioning through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than beliefs of personal efficacy. Unless people believe they can produce

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[21] For a comprehensive discussion of social cognitive theory, see Albert Bandura, *Social Foundations of Thought and Action: A Social Cognitive Theory* (Englewood Cliffs, NJ: Prentice-Hall, 1986).

[22] Bandura, *Self-efficacy*, 3.

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desired effects by their actions, they have little incentive to act. Efficacy belief, therefore, is a major basis of action.[23]

Angela Byars-Winston and colleagues further observed that "Articulating the mechanisms that underlie individuals' capacity (i.e., personal agency) for self-regulation, self-directed learning, motivation, and goal setting is a central focus of the psychological study of human behavior."[24]

In sum, an individual's self-efficacy beliefs regarding his or her ability to be successful at a particular task can be a powerful influence on whether or not he or she will exercise human agency and engage in the task. Regarding biblical learning and according to this theoretical frame, unless a person believes he or she can study Scripture in a way that results in understanding or an otherwise successful outcome, it is unlikely the person will engage the process in a meaningful way.

Self-efficacy as a Predictor of Behavior

Self-efficacy beliefs can vary for different tasks, but they all theoretically result from the interplay between personal factors, behavior, and environmental influences within the triadic reciprocal causation model. Importantly, self-efficacy beliefs are not evaluations of past or present success, although past or present outcomes would almost certainly be contributing pieces to the formation of self-efficacy beliefs. As described by Henson, "The environment, behavior, and personal factors work together to help an individual make an efficacious judgment about whether he or she will be able to carry out a certain action in the future. Since self-efficacy is a

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[23] Bandura, *Self-efficacy*, 2-3.

[24] Angela Byars-Winston, Jacob Diestelmann, Julia N. Savoy, and William T. Hoyt, "Unique Effects and Moderators of Effects of Sources on Self-efficacy: A Model-based Meta-analysis," *Journal of Counseling Psychology* 64, no. 6 (November 2017): 645.

self-referent judgment concerning future functioning, it is an excellent predictor of behavior . .

."[25]

Indeed, the literature base concerning the ability of self-efficacy beliefs to predict future

behavior is robust. Ellen Usher summarized this support:

> Empirical evidence has amassed in support of Bandura's (1997) contention that self-efficacy beliefs tap nearly every aspect of people's lives—how individuals think; how well they motivate themselves, persevere in the face of obstacles, and monitor their own actions; individuals' susceptibility to psychological illness; and the life paths people choose.[26]

The wide array of application areas for this self-efficacy concept lends strong support for

its potential relevance in the domain of biblical learning, and in turn for biblical literacy and

spiritual formation. Generalizing from Bandura's definition above, self-efficacy for biblical

learning would consist of beliefs in one's capabilities to organize and execute the courses of

action required to understand Scripture and apply it in one's life. These beliefs would

theoretically influence the degree that an individual chooses to engage Bible study as an action

of personal agency, as opposed to avoidance of engagement, limiting engagement to other

typical church activities, or relegating the role of engagement to ministers and teachers of the

Bible. To date, no known studies have empirically examined the assessment or application of

self-efficacy for biblical learning.

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[25] Robin K. Henson, "The Effects of Participation in Teacher Research on Teacher Efficacy and Empowerment" (PhD diss., Texas A&M University, College Station, 1999), 36, ProQuest Dissertations & Theses Global.

[26] Ellen L. Usher, "Tracing the Origins of Confidence: A Mixed Methods Exploration of the Sources of Self-Efficacy Beliefs in Mathematics" (PhD diss., Emory University, Atlanta, GA, 2007), 1, ProQuest Dissertations & Theses Global.

Sources of Efficacy Information

Because self-efficacy beliefs result from the dynamic interplay of personal factors, behavior, and the environment, it should be clear that these beliefs can be influenced, or shaped, by a range of issues, including prior successes and experiences. Indeed, Bandura proposed four sources of efficacy-shaping information. Each is discussed in turn here, with emphasis on how they might apply to the concept of self-efficacy for biblical learning.

Mastery Experiences

The most powerful source of self-efficacy information is mastery experiences. Bandura stated that "People act on their efficacy beliefs and assess the adequacy of their self-appraisal from the performances they manage to achieve. Performance successes generally raise beliefs of personal efficacy . . ."[27] It is somewhat intuitive that past success would influence one's future beliefs in success, but how success or mastery is cognitively processed can vary extensively. For example, the "self-diagnostic value of successes and failures for judging personal efficacy will depend on the perceived difficulty of a task."[28] Success on a difficult task may influence one's beliefs much more than success on an easy task because the latter does not yield any new efficacy-building information.

Research has supported mastery experiences as the "most powerful" contributor to influencing self-efficacy.[29] In a meta-analysis of academic self-efficacy, Byers-Winston and colleagues found that "[performance achievement] was the dominant influence on self-efficacy .

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[27] Bandura, *Self-efficacy*, 81.

[28] Bandura, *Self-efficacy*, 82.

[29] Ellen L. Usher and Frank Pajares, "Sources of Self-efficacy in School: Critical Review of the Literature and Future Directions," *Review of Educational Research* 78, no. 4 (December 2008): 752, 780-81.

. ."[30] Similar results have been found across multiple domains, such as teacher performance in

schools[31] and underachieving college students.[32]

Regarding self-efficacy for biblical learning, it follows that experiences which allow

Christians to study the Bible in a way that promotes their eventual understanding of the content

in ways previously unattained has the potential to bolster efficacy beliefs. This understanding

could manifest in many ways, such as a deeper awareness of doctrine, a more specific sense of

personal application, a broader ability to use various sources for study, and so forth. The key

issue here, though, is invoking an experience in how to study the Bible that engages participants

to process the Scriptural content in challenging, but necessarily successful ways.

Vicarious Learning

Given its emphasis on social influences on learning, it seems apparent that social

cognitive theory would suggest that self-efficacy beliefs could also be influenced through

vicarious experiences. Indeed, Bandura argued that "Efficacy appraisals are partly influenced by

vicarious experiences mediated through modeled attainments. So modeling serves as another

effective tool for promoting a sense of personal efficacy."[33] Vicariously observing others'

success can bolster personal efficacy beliefs similar to the colloquialism of "if they can do it, so

can I."

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[30] Byers-Winston, "Unique Effects and Moderators," 654.

[31] David B. Morris, Ellen L. Usher, and Jason A. Chen, "Reconceptualizing the Sources of Teaching Self-efficacy: A Critical Review of Emerging Literature," *Educational Psychology Review* 29, no. 4 (December 2017): 811-12.

[32] Carlton J. Fong and Jaimie M. Krause, "Lost Confidence and Potential: A Mixed Methods Study of Underachiveing College Students' Sources of Self-efficacy," *Social Psychology of Education: An International Journal* 17, no. 2 (June 2014): 261.

[33] Bandura, *Self-efficacy*, 86.

Research has found connections between vicarious experiences and increased self-efficacy, although the influence tends to not be as strong as with mastery experiences. For example, Lyjan Song observed increased efficacy for technology integration after observing such integration by other classroom teachers.[34] Vicarious learning predicted self-efficacy in a meta-analysis of self-efficacy sources for individuals in science, technology, engineering, and mathematics domains.[35] In an interesting combination of concepts, Doug Oman and colleagues developed an assessment to measure one's self-efficacy to be influenced by spiritual models, and observed that "psychosocial interventions can enhance" spiritual modeling self-efficacy.[36] Although it may seem that self-efficacy for biblical learning would be a relatively individualistic process, it is reasonable to expect that social influences can occur in a small group focused on methods for Bible study. Specifically, opportunities to observe others demonstrate their process for understanding Scripture have potential to be sources of efficacy-building information.

Verbal Persuasion

Personal efficacy can also be impacted by direct and indirect verbal persuasion. Positive feedback on performances or even feedback outside of a particular experience can be efficacy-building if perceived as relevant and appropriate. Verbal persuasion is likely less impactful than the sources considered above, at least regarding its ability to impact lasting changes to belief systems, but positive feedback in the midst of challenges is more likely to promote efficacy than

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[34] Lyjan Song, "Improving Pre-service Teachers' Self-efficacy on Technology Integration through Service Learning," *Canadian Journal of Action Research* 19, no. 1 (2018): 29.

[35] Hung-Bin Sheu, Robert W. Lent, Matthew J. Miller, Lee T. Penn, Megan E. Cusick, and Nancy N. Truong, "Sources of Self-efficacy and Outcome Expectations in Science, Technology, Engineering, and Mathematics Domains: A Meta-analysis," *Journal of Vocational Behavior* 109, no. 1 (2018): 130.

[36] Doug Oman, Carl E. Thoresen, Crystal L. Park, Phillip R. Shaver, Ralph W. Hood, and Thomas G. Plante, "Spiritual Modeling Self-Efficacy," *Psychology of Religion and Spirituality* 4, no. 4 (2012): 278.

doubt.[37] Of course, the effectiveness of verbal persuasion can be mediated by a number of factors, such as perceived genuineness, the value placed on the task, and credibility of the source.

Social persuasion has been most extensively studied in the context of academic performance of students, and it has found more mixed results compared to mastery experiences.[38] However, Sungjun Won and colleagues suggested the mixed findings might be due to confusion on who the social agent is providing the feedback. In their study of the relationship between teacher feedback and middle school student self-efficacy, they observed a positive connection between social persuasion (i.e., feedback) and students' academic efficacy beliefs.[39] Furthermore, the strength of the relationship was moderated by the perceived credibility of the teacher, a finding also consistent with Bandura's assertion.

The implications of social persuasion for the investigation of self-efficacy for biblical learning are relatively straightforward and consistent with the literature in other domains. Feedback loops are important in the efficacy-building process, but the feedback needs to be targeted to particular points of effort by those involved in Bible study, and the credibility (i.e., ethos) of the teacher or others providing feedback would likely moderate the impact.

Physiological and Affective States

The final source of efficacy-building information proposed by Bandura relates to the somatic states experienced during a particular task.[40] Hyper-arousal around negative states, such

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[37] Bandura, *Self-efficacy*, 101.

[38] Usher and Pajares, "Sources of Self-efficacy in School," 781.

[39] Sungjun Won, Sun-Young Lee, and Mimi Bong, "Social Persuasion by Teachers as a Source of Student Self-efficacy: The Moderating Role of Perceived Teacher Credibility," *Psychology in the Schools* 54, no. 5 (2017): 543-44.

[40] Bandura, *Self-efficacy*, 106.

as anxiety, stress, or physiological reactions can confound any efficacy gained through an experience. Conversely, positive states can help support efficacy growth. Of course, individuals will vary in how they cognitively and emotionally process these somatic states, which would naturally influence the degree of impact on personal efficacy. Any experiences designed to promote self-efficacy for biblical learning should seek to find an appropriate balance between challenge to participants but with sufficient supports to minimize negative affective states.

Elevating the Role of the Student in Biblical Learning

The research and theory on sources of self-efficacy point directly to the role of mastery experience as a key factor in the promotion of self-efficacy. The other sources can be useful in the process, but mastery experiences play a dominant role in the creation of one's efficacy beliefs. In the context of self-efficacy for biblical learning, therefore, the role and experience of the student (or, participant in a Bible study or a course on how to study the Bible) becomes extremely important because the nature of this experience will likely be influential in later beliefs.

If mastery experiences are necessary, then the participants must be actively involved in the process of learning. It would be rare that a traditional lecture-oriented study would result in a substantive experience. Learning could certainly occur, but learning is not the same as building self-efficacy beliefs for biblical learning. For example, a young man in a small group Sunday school class might learn about the meaning of some of Jesus's parables, but this is far different than the young man discovering for himself what these parables mean as a result of working through a structured, scaffolded process that elevates his role in the learning. This experience

should provide enough independence and challenge so the man values the gains made, but not be so difficult he does not perceive it as a mastery experience.

The elevation of the student role in the learning process is consistent with best practices in education research, and it serves well the intent of bolstering self-efficacy through mastery experiences. Importantly, these principles have also been demonstrated in the context of biblical learning. For example, Troftgruben discussed how active learning of Scripture in an online environment is strengthened with decentered instruction "which emphasizes the dissemination of authority to parties besides the instructor." Troftgruben observed: "What is distinctive for biblical studies is how these pedagogical foci can shift the focus away from professorial instruction and in turn enhance learner engagement with primary texts. …it can help courses in biblical studies focus on texts, their reading, and their interpretation in constructive ways."[41]

Toh and colleagues presented findings from a qualitative study of a small group Bible study designed to facilitate reflective dispositions through collaborative knowledge-building. Their findings point to effectiveness at deepening understanding and how participants engaged each other and the content.[42] Similarly, Jackie Smallbones discussed a Bible study approach designed to actively engage participants in the narrative of the text and thus place them in a stronger instructional position in the process.[43] In a review of two case studies of university Bible classes, Karla Bohmbach illustrated strong student engagement and impact by having students

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[41] Troy M. Troftgruben, "Decentered Online Bible Instruction: How Active Learning Enhances the Study of Scripture," *Teaching Theology and Religion* 21, no. 1 (January 2018): 34-35.

[42] Tze Keong Toh, Joyce Hwee Ling Koh, and Ching Sing Chai, "Developing reflective dispositions through collaborative knowledge-building during small group Bible study," *International Journal of Christianity and Education* 21, no. 2 (July 2017): 140-41.

[43] Jackie L. Smallbones, "Storymakers: A Holistic Approach to Bible Reading and Study," *Christian Education Journal* 12, no. 1 (Spring 2015): 81.

take over part of the instruction of the class.[44] These approaches to Bible study, and others like them, speak to an elevated role of the student in the learning process that is consistent with cognitive constructivist approaches.

This elevated role is relevant for the current review not only because it can facilitate deeper learning experiences, but also because it provides an opportunity to create mastery experiences for participants that may influence self-efficacy for biblical learning. It is also consistent with the literature on self-regulated learning,[45] metacognition, and development of "expert learners."[46] Expert learners are marked with higher levels of independent regulation of their learning and deepened understanding of content and process such they are able to conceptualize teaching content to others. Furthermore, Cansiz and Cansiz observed that mastery experience is predictive of preservice teachers' beliefs about constructivist approaches to learning, suggesting a possible interplay between mastery experience and a willingness to engage the very learning experiences that promote them.[47]

With this background in mind, engaging churchgoers in strong, yet scaffolded, opportunities to learn how to study the Bible has the potential for positive impact on efficacy beliefs. Processes by which they take responsibility for teaching some concepts to other participants elevates their role and has potential for challenging mastery experiences. The use of

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[44] Karla G. Bohmbach, "Teaching Students by Having Students Teach," *Teaching Theology and Religion* 3, no. 3 (October 2000): 170.

[45] Darren H. Iwamoto, Jace Hargis, Richard Bordner, and Pomaika'inani Chandler, "Self-regulated Learning as a Critical Attribute for Successful Teaching and Learning," *International Journal for the Scholarship of Teaching and Learning* 11, no. 2 (July 2017): 2.

[46] Saemah Rahman, Zuria Mahmud, Siti Fatimah Mohd Yassin, Ruslin Amir, and Khadijah Wan Ilias, "The Development of Expert Learners in the Classroom," *Contemporary Issues in Education Research* 3, no. 6 (June 2010): 1.

[47] Mustafa Cansiz and Nurcan Cansiz, "How Do Sources of Self-efficacy Predict Preservice Teachers' Beliefs Related to Constructivist and Traditional Approaches to Teaching and Learning?" *SAGE Open* 9, no. 4 (July 2019): 6.

such micro-teaching experiences, or very brief lessons designed to be challenging but with enough scaffolded support to avoid undue stress or other threats to efficacy-building information, has promise as a mechanism to promote self-efficacy for biblical learning.

Current Research on Self-efficacy for Biblical Learning

The above review addresses the status of biblical literacy, in general, and the role of the Bible in the discipleship or spiritual formation process. It is hypothesized that self-efficacy for biblical learning is an important individual variable that can predict increased engagement with Scripture. A review of the theoretical and empirical evidence for sources of efficacy-building information indicates strong support for using mastery experiences to promote self-efficacy. Bandura noted that "powerful mastery experiences that provide striking testimony to one's capacity to effect personal changes can produce a transformational restructuring of efficacy beliefs that is manifested across diverse realms of functioning. Extraordinary personal feats serve as transforming experiences."[48] Small group Bible study experiences that elevate the participants' roles and give them opportunities to engage in micro-teaching can target mastery experiences at a challenging level while also providing opportunity to capitalize on the other sources of efficacy information. These scaffolded experiences theoretically can influence self-efficacy for biblical learning.

To date, however, there are no known investigations that address self-efficacy for biblical learning specifically. The Christian education literature addresses participant engagement broadly, spiritual formation, and approaches to teaching biblical content and practice.

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[48] Albert Bandura, "Guide for Constructing Self-efficacy Scales," in *Self-efficacy Beliefs of Adolescents*, ed. Frank Pajares and Tim Urdan, (Greenwich, CT: Information Age Publishing, 2006), 308.

Nevertheless, this literature does not speak to either the assessment of self-efficacy for biblical learning or whether a small group experience that emphasizes micro-teaching as a mechanism to create mastery experiences can influence those efficacy beliefs.

Theological Foundations

The Bible and the degree it is engaged and studied is central to the motivation of the current study. The need for believers to participate with Scripture follows from the evangelical assumption discussed in Chapter 1 regarding the Bible as an expression of the inerrant word of God. Although the focus of this thesis is on self-efficacy beliefs regarding an ability to learn Scripture, such beliefs are relevant only to the extent that the object of study is foundational to one's faith and that increased learning has the potential to advance one's faith. Therefore, the theological implications reviewed here concentrate on the role of Scripture in the discipleship process and in self-identification with Christ.

Scripture's Role in Formation

Spiritual formation is facilitated by factors that promote discipleship and being conformed to the image of Christ. Participating with Scripture is foundational to such formation as the Bible represents the rule of faith for the Christian because it is recognized as having the authority of God. From this position, engagement with the Bible promotes an understanding of authority, spiritual growth from increased knowledge, and spiritual maturity.

Formation begins with the Bible as the authoritative revelation of God. The erosion of people's recognition of authority, especially spiritual truth, is well-documented by others and

manifested in often nebulous postmodern worldviews that dominate the culture.[49] This seep

toward cultural relativism is pervasive and often unintentional and unrecognized, even within

evangelical environments, thus making engagement with God's expression of truth all the more

important.

It is beyond the purpose of the current discussion to present an apologetic for the

authority of Scripture. Instead, such authority is assumed and therefore leveraged for spiritual

formation. As Morrow noted, "Evangelicals maintain . . . respect for and submission to the

Scriptures as a vital presupposition for spiritual formation."[50] As such, evangelical orthodoxy

assumes authority in Scripture for rule of life. In the context of preaching orientation, Joel

Breidenbaugh argued "the term 'evangelical' carries the notion of concern for the evangel, or

good news in Jesus Christ. Therefore, wherever Christianity is void of Christian orthodoxy and

the unique Person and work of Christ, one cannot consider it to be evangelical by definition.

Simply put, evangelical preaching must necessarily be doctrinal preaching."[51]

The Bible claims authority throughout and associates that authority with the conforming

of one's heart to the plans and things of God. Psalm 119, for example, represents a

comprehensive declaration of the authority and blessing of God's covenantal commandments in

life. Verses 9-12 illustrate the forming nature of exposure and submission to God's word:

> How can a young man keep his way pure?
>   By guarding it according to your word.

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[49] For broader discussions of the influence of postmodern thought, see R. Scott Smith, *Truth and the New Kind of Christian: The Emerging Effects of Postmodernism in the Church* (Wheaton, IL: Crossway, 2005), Douglas R. Groothuis, *Truth Decay: Defending Christianity Against the Challenges of Postmodernism* (Downers Grove, IL: InterVarsity Press, 2000), and Millard J. Erickson, *Truth or Consequences: The Promise and Perils of Postmodernism* (Downers Grove, IL: InterVarsity Press, 2001).

[50] Morrow, "Introducing Spiritual Formation," 33-34.

[51] Joel Breidenbaugh, *Preaching for Bodybuilding: Integrating Doctrine and Expository Preaching for the 21st Century*, rev. ed. (Orlando, FL: Renovate, 2016), 38.

> With my whole heart I seek you;
>> let me not wander from your commandments!
> I have stored up your word in my heart,
>> that I might not sin against you.
> Blessed are you, O Lord;
>> teach me your statutes!

Verse 105 in the same Psalm declares the guiding purpose of God's word. God's word is a central feature in the spiritual growth of a believer.

The Bible is replete with claims that meditation on, application of, and submission to God's word is the calling of all believers and a key process that forms them into obedience with Christ (e.g., Col 3:16, 1 Thess 2:13, 2 Tim 2:15). Acts 17:10-12, for example, makes clear the "noble" nature of eagerly immersing oneself in Scripture to search for truth as the standard by which to judge all matters:

> The brothers immediately sent Paul and Silas away by night to Berea, and when they arrived they went into the Jewish synagogue. Now these Jews were more noble than those in Thessalonica; they received the word with all eagerness, examining the Scriptures daily to see if these things were so. Many of them therefore believed, with not a few Greek women of high standing as well as men.

These Jews were remarkable in their openness to Paul's message, diligence in testing the message against Scripture at that time, and frequency in their "daily" search – all of which contributed to the belief in Christ for some.[52]

The writer of Hebrews articulated that "the basic principles of the oracles of God" (Heb 5:12) are necessary for spiritual growth, and that advancement in knowledge and application of truth is a marker of maturity (Heb 5:14-6:2). Participation with God's word immerses the reader in the authority of truth, leads to greater knowledge of God, and when obeyed fosters spiritual

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[52] Cf. Stanley M. Horton, *The Book of Acts*, The Radiant Commentary on the New Testament (Springfield, MO: Gospel Publishing House, 1981), 204-5. See also Charles R. Swindoll, *Acts*, vol. 5, Living Insights New Testament Commentary (Carol Stream, IL: Tyndale House, 2016), 339.

maturity. The purpose here is not to explicate all biblical references to the results of engagement

with God's word, but rather highlight this clear theme in Scripture, that is, God's word is given

to form his people into the image of Christ.

It can be argued that mere exposure to God's word can be spiritually forming through the

Holy Spirit because it is an expression of Christ (the Word) and thus represents the very power

of God (John 1). Nevertheless, an important assumption in the current argument is that the

Christian engages Scripture as opposed to merely reading it. Engagement can mean many things,

but it is certainly a more active process of attention and application than simply working through

the act of articulating words with appropriate grammar and syntax. Although spiritual formation

certainly includes increased knowledge of God and his commandments through Scripture, Walt

Russell argued that there is little distinction between informational and formative reading.

> *First*, we must reject the idea that there is a chasm between informational reading and
> formational reading. No such false dichotomy should exist in our reading of the Bible.
> Rather, we should first be reading to understand the intention of the biblical author within
> the biblical book we are reading. This involves *some* "informational" emphasis, but is not
> an end in and of itself, nor is it as intensive as an academic study of the passage. Rather,
> it is a means to the end of being spiritually formed according to the meaning of a biblical
> passage. There can be no true spiritual transformation apart from the true meaning of the
> biblical text! Although this demands some informational emphasis in the reading of the
> Bible, it should be balanced.[53]

Scripture's Role in Transformation

There is thus a fine line, if any at all, between spiritual formation and spiritual

transformation. The distinction is employed here only to separate a somewhat informational

approach to Scripture (operationalized for the moment here as increases in recognized authority,

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[53] Walt Russell, *Playing with Fire: How the Bible Ignites Change in Your Soul* (Colorado Springs: NavPress, 2000), 43. Emphasis in original.

knowledge, and maturity toward the image of Christ) from a transformative engagement as a believer humbly seeks the meaning of the Bible and submits to its power.

Inasmuch as the Bible speaks to its authority and the formative value of following its truth, Scripture goes further and also speaks to the capacity of God's word to make substantive change in peoples' lives, that is, transformation. Interaction with the Bible is interaction with Jesus Christ himself (John 1), which means being confronted with the metanarrative of God's redemptive history which leads to Christ, and thus it is a confrontation with the gospel. This is not to say that reading any given passage, with no prior contextual knowledge, somehow reveals these things with clarity. Rather, when empowered by the Holy Spirit, engagement with God and his word has the power to transform the believer into the image of Christ in ways that the person may not even be aware (Ezek 36:26-27; Jer 32:38-41; Rom 15:4; Phil 1:6). Paul discusses the deep, teaching role of the Holy Spirit in 1 Corinthians 2:10-16. The Holy Spirit, who "searches everything, even the depths of God" (v. 10b), leads believers in the wisdom of God in ways the "natural person" cannot comprehend (v. 14), ultimately forming in the believer the "mind of Christ" (v. 16b).

Many passages claim a transformative impact of God's word. Even while prophesying toward a time of exile for the nation of Judah,[54] Isaiah spoke of the sovereignty of God and the fact that his word, his plans, will manifest themselves for their intended purpose:

> For as the heavens are higher than the earth,
>   so are my ways higher than your ways
>   and my thoughts than your thoughts.
> For as the rain and the snow come down from heaven
>   and do not return there but water the earth,
> making it bring forth and sprout,
>   giving seed to the sower and bread to the eater,

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[54] John MacArthur, *The MacArthur Bible Commentary* (Nashville, TN: Thomas Nelson, 2005), 756-57.

> so shall my word be that goes out from my mouth;
>   it shall not return to me empty,
> but it shall accomplish that which I purpose,
>   and shall succeed in the thing for which I sent it (55:9-11).

In this case, the redemptive history of God will come to pass as intended and nothing will keep that from happening. The exile will eventually end, and the Davidic covenant will be fulfilled in Christ.

The above illustrates the power of God's word on a national level, but Scripture readily applies the transformative possibilities to individuals. Nothing is more transformative for a person than the miracle of saving faith, which comes from hearing the word of God (Rom 10:14-17) as revealed by the Holy Spirit. The message being heard represents the gospel, which "is the power of God for salvation to everyone who believes" (Rom 1:16a) because this word reveals the "righteousness of God" (1:17). Later in the letter to the Romans, the apostle Paul challenges his readers to be "transformed by the renewal of your mind" (Rom 12:2). The word of God is not explicitly referenced here, but the context of the letter is sufficiently focused on the righteousness of God as revealed in the gospel message that it is reasonable to imply that the exposure and submission to this word is what makes the transformation possible as empowered by the Spirit.

The teachings of Christ point further to the changing impact of truth. Addressing some believing Jews, Jesus said: "If you abide in my word, you are truly my disciples, and you will know the truth, and the truth will set you free" (John 8:31-32). Jesus went on to explain that their freedom was a transformation from being a slave to sin to being free in Christ. It is important to note the unity that Christ makes here between himself and his word.

Even more specifically, Christ declares that encountering truth results in our sanctification, or separation from the world and sin. Christ's high priestly prayer in John 17 connects truth with sanctification:

> I have given them *your word*, and the world has hated them because they are not of the world, just as I am not of the world. I do not ask that you take them out of the world, but that you keep them from the evil one. They are not of the world, just as I am not of the world. *Sanctify them in the truth; your word is truth*. As you sent me into the world, so I have sent them into the world. And for their sake I consecrate myself, that they also may be *sanctified in truth* (vv. 14-19, emphasis added).

Sanctification cannot be described without invoking some concept of transformation in people's lives. It is a miraculous process empowered by the Spirit of God. Truth, or the word of God, promotes this process.

In sum, engagement with Scripture not only can reinforce its authority and increase a forming knowledge of Christ, but it has the capacity to transform lives into the image of Christ. This supernatural process is superintended by the Holy Spirit, and as such is subject to the mysterious interaction between sovereignty and freewill. Nevertheless, the Bible is clear about its capacity to influence in powerful ways those that participate with its message.

<div align="center">Scripture's Role in Self-identification</div>

Finally, the role of Scripture in determining the believer's self-identification is also a key foundation for the value of biblical engagement. This point is particularly relevant for the current study's focus on self-efficacy beliefs. As a self-referent construct, self-efficacy is necessarily influenced by broader concepts of identity, and specific efficacy beliefs necessarily influence identity development. There are two applications of identity that are discussed here. The first is the believer's identity in Christ and the second is the believer's identity as a created being in the image of God.

The essential equivalency, or intimacy, between Christ and the Word of God has been noted above in reference to John 1. A full discussion of the depth and consequences of this seminal chapter is beyond the current purpose, but the chapter makes clear that Christ is eternal and fully God. Furthermore, Christ as the Word of God represents God's "powerful self-expression in creation, wisdom, revelation, and salvation."[55] Because the Bible is an expression of God's Word, then Scripture is inherently imbued with and reflects Christ. Therefore, when one engages Scripture, one engages Christ.

The Bible teaches that believers are also "in Christ" (e.g., Eph 2:4-10). Biblically, being in Christ becomes the major factor of the Christian's identity development. Colossians 2:9-10 captures the immense reality of what it means to be in Christ: "For in [Christ] the whole fullness of deity dwells bodily, and you have been filled in him, who is the head of all rule and authority."

The Pauline letters reference the phrase "in Christ" at least 84 times. In the letter to the Romans, the phrase is used 13 times.[56] Paul is perhaps most explicit on what the phrase means in Romans 6:3-4: "Do you not know that all of us who have been baptized into Christ Jesus were baptized into his death? We were buried therefore with him by baptism into death, in order that, just as Christ was raised from the dead by the glory of the Father, we too might walk in newness of life." For Paul, being "in Christ" means a core-level identification with his death and resurrection. Through this spiritual transformation, believers experience fullness in him (Col 2:10).

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[55] MacArthur, *The MacArthur Bible Commentary*, 1343.

[56] Charles R. Swindoll, *Romans*, vol. 6, Living Insights New Testament Commentary (Carol Stream, IL: Tyndale House, 2015), 154.

This discussion is highly relevant for biblical engagement. Because believers are "in Christ," and because the Word of God is a reflection of Christ himself, when believers learn from the Bible, they are learning more about themselves. They are learning about what it means to be conformed to the image of Christ. They are learning about, and therefore growing in, their own spiritual identities.

The second implication of Scripture's role in self-identification relates to the fact that humankind is made in the image of God (Gen 1:26-27). As a created being, a person cannot find complete identity outside of the context of the Creator. Bruce Ware argued that this unifies the image of the creation with the responsibility to represent the Creator.

> The image of God in man as functional holism means that God made human beings, both male and female, to be created and finite representations (images of God) of God's own nature, that in relationship with Him and each other they might be His representatives (imaging God) in carrying out the responsibilities He has given to them. In this sense, we are images of God in order to image God and His purposes in the ordering of our lives and the carrying out of our God-given responsibilities.[57]

Engagement with Scripture, which is the Creator's chosen self-expression to humanity, provides opportunity for believers to become more aware of their responsibility as an image-bearer.

Furthermore, it is particularly important for the current study to note that people carry unique attributes resulting from their creation. Robert Saucy noted several "capacities for human personhood" that follow from being created in the image of God, including self-conscious reality, self-determination or freedom, moral nature, and original righteousness.[58] Some elements of these attributes, particularly the first two, closely mirror the human agency concept of social

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[57] Bruce A. Ware, "Male and Female Complementarity and the Image of God," in *Biblical Foundations for Manhood and Womanhood*, ed. Wayne Grudem (Wheaton, IL: Crossway, 2002), 79.

[58] Robert L. Saucy, "Theology of Human Nature," in *Christian Perspectives on Being Human: A Multidisciplinary Approach to Integration*, ed. J. P. Moreland and David M. Ciocchi (Eugene, OR: Wipf and Stock, 2015), 27-28.

cognitive theory, which is used to psychologically ground the current study. Human agency speaks to capacity for choice in determining one's actions and motivations. This agency is much more than a psychological theory. Biblically, it comes from being created in the image of God. As Saucy noted, "As this freedom entails choices, which in turn involve rationality, it is obvious that it is related to the previous element of self-conscious thought. It is also foundational for [humankind] as a moral being."[59]

Theoretical Foundations

Given the authoritative and transformative power of Scripture, what are the practical methods of ministry by which local churches seek to engage attendees with the Bible and facilitate the agentic and self-determined individual study of God's word? This question speaks to the key issue of how church attendees develop in their spiritual formation to the point of independent consumption of and yielding to Scripture. This spiritual goal is clear in the Bible (cf. Luke 8:15, Eph 4:13-16, Col 1:9-10, Heb 6:1) and is central to an evangelical perspective on spiritual growth.

There many ways to frame this growth, whether it be spiritual formation, discipleship, or even more generically as biblical literacy. Regardless of frame, though, an understanding of and obedience to Scripture is foundational to the spiritual development desired. Efforts toward this end have resulted in many traditional and creative ways to promote Bible study, both in the local church and outside of it. The current study is situated in this broader evangelical goal of promoting Bible study, although the focus here is not on a method of Bible study per se, but rather on peoples' self-beliefs regarding their capacity to meaningfully engage Scripture.

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[59] Saucy, "Theology of Human Nature," 28.

It is beyond the current scope to provide a comprehensive review of ministry methodologies geared toward facilitation of biblical engagement, but several approaches commonly found with the contemporary local church are briefly reviewed here. Special focus is on each method's potential ability to impact church attendees' self-efficacy for biblical learning.

Pulpit Ministry

Traditionally, the most common mechanism to teach congregations Scripture and challenge Bible engagement is pulpit ministry. The knowledge and application of Scripture is communicated through the sermon, homily, or lesson of the day. It is common to find appeals for congregants to read the Bible and by faith lean on the word of God in their lives. Pulpit ministry has taken many forms across the years, but modern manifestations largely involve regular messages to the church body each week, typically delivered by the senior leadership of the local church.

This modern model of corporate worship has interesting implications for the idea of congregants engaging Scripture on their own. On one hand, it is likely that most evangelical church leadership regularly challenges people from the pulpit to study God's word and apply it to their lives. On the other hand, the weekly model of church attendance to hear the word of God be explained and applied by church leadership can present an implicit message that the Bible is a book in need of explanation by an expert.

Of course, the content flowing from the pulpit would have implications for how the audience perceives Scripture. Breidenbaugh argued that "preachers since at least the early-twentieth century have moved away from a semi-doctrinal exposition of Scripture to a thematic

discussion of popular trends."[60] Although this claim may be an overgeneralization, it nevertheless highlights the potential tension between pulpit ministry that is grounded and driven by Scripture and that which is motivated by external trends. It is reasonable to assume that the degree Scripture is recognized as authoritative corporately might influence the degree it is considered authoritative privately.

The potential implications of pulpit ministry regarding impact on self-efficacy for biblical learning are likely varied. There are no known investigations into a possible relationship, but social cognitive theory would suggest that impact on self-efficacy would be toward the minimal end of the continuum. As reviewed above, self-efficacy tends to be facilitated through mastery experience and positive modeling, and less so with passive experiences. These dynamics are well-supported in education research.[61] It is reasonable to expect similar results in the broader lecture-style approach of pulpit ministry given the somewhat passive stance of the congregant. It is recognized, however, that the transformative power of Scripture and the active ministry of the Holy Spirit can make the sermon experience much more than a simple educational lecture. As such, the possible impact on self-efficacy is likely more varied in a pulpit ministry situation than traditional educational environments.

Christian Education Models

Christian education has existed in some form for as long as the church has existed since education occurs with any exposure to Scripture or the early gospel of Christ. Pulpit ministry is certainly a form of Christian education, for example. For the purposes of this discussion, though,

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[60] Breidenbaugh, *Preaching for Bodybuilding*, 38.

[61] Cf. Usher and Pajares, "Sources of Self-efficacy in School."

Christian education is delimited to mean traditional models of Bible study that typically coincide with a local church's worship service. These models are often traditionally referred to as Sunday school with the overall goal of facilitating spiritual formation through biblical knowledge and application.

Sunday school models largely began in England in the 1780s, primarily as a mechanism to teach literacy and discipline to poor, working children. Sunday school was, therefore, more school than Christian education. Sunday became the day for education because the children were often working during the other days of the week. Although Sunday schools existed prior to this time, Anglican philanthropist Robert Raikes is commonly recognized as a pioneer and key founder of the movement. This movement grew exponentially, eventually spread to America, and used the Bible as the textbook for learning to read and eventually fostering biblical education.[62]

This expression of Christian education has changed dramatically over time, and the modern manifestation in American evangelical churches is far more restricted in scope and purpose than Raikes's vision. Contemporary Sunday schools are commonly limited to the weekly congregational worship period and all ages are often targeted by church ministries, although children remain a key focus. The purpose of a Sunday school program can vary widely between and even within churches, and include Bible studies, topical lessons, support groups around common struggles, social interaction, and so forth.

Given the extensive diversity of structure and purpose of Sunday schools in Christian education, it is difficult to predict potential impact on self-efficacy for biblical learning. First,

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[62] Timothy Larsen, "When Did Sunday Schools Start?" *Christianity Today*, July 8, 2008, https://www.christianitytoday.com/history/2008/august/when-did-sunday-schools-start.html.

such efficacy would depend on the Sunday school focusing on biblical study in some fashion. Second, the typically smaller size of the Sunday school environment at least provides the potential for increased participant engagement in an active way. Such environments would normally lean toward greater efficacy growth, but only to the extent that they facilitate the sources of efficacy discussed above, particularly mastery experiences. If a Sunday school experience involves passive students listening to a Bible teacher, there would be little reason to expect outcomes different from that hypothesized for pulpit ministry.

Small Group Ministries

The more recent progression of Sunday school is an expansion of small group ministries of many types. These small groups may occur in conjunction with a weekly worship service, or they may occur throughout the week, either on a church campus, within the community, or in congregants' houses. Regardless of time and location, a primary driver behind the modern proliferation of small group ministry is the pursuit of spiritual formation, with the understanding that such formation often occurs best in the context of biblical community.

This idea has biblical precedent found both in admonitions to function in supportive unity as a diverse body of Christ (Rom 12:4-8; 1 Cor 12:12-13) and in the practical examples of early church fellowship (Acts 2:42-47). As Petitt noted, "[T]he most basic parameters of any discussion on spiritual formation must include the idea of life change. …The second most basic, foundational underpinning of the spiritual formation process is the idea of *other persons*, or those in one's particular *community*. That is, change for the Christian does not normally involve change that occurs in isolation from others."[63]

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[63] Pettit, "Introduction," 19. Emphasis in original.

Small group ministry models and purposes can be even more diverse than that of Sunday school approaches. In many ways, the concept of small group ministry has overtaken Sunday school as a means to engage people within biblical community for the purposes of discipleship. The diversity of expression, however, makes assessment of potential impact on self-efficacy for biblical learning tenuous.

If small groups foster biblical community in meaningful ways, then there exists a strong potential for impact through vicarious modeling and verbal persuasion. Small group environments also provide potential for engagement of participants in ways that facilitate direct experiences promoting positive self-belief in one's ability to engage Scripture in active ways. Finally, small groups have potential for meaningful application of biblical truth as people share their real lives with one another.

These potential impacts are nevertheless dependent upon a focus on the Bible as part of the small group activity. A necessary condition of building self-efficacy belief in biblical learning is engagement with the Bible. Among the diverse array of small group ministry applications are groups focused on personal interests, support for particular struggles, and social fellowship. These all have roles to play in the broader ministry of the church, and it is certainly possible to have a dual purpose of biblical engagement with auxiliary interests. However, groups that do not actively engage participants in Bible study experiences would not theoretically be expected to promote self-efficacy.

<center>Individual Discipleship</center>

When Jesus called his twelve disciples to mentor in the now present kingdom of God, he simultaneously set the stage for a New Testament model of small group ministry and individual

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discipleship. The mentoring of the twelve is sometimes pointed to as an example of small group

biblical community toward the end of spiritual formation as these men shared their lives

together. However, the unique relationships that Jesus formed with these men was likely as much

individualized as it was collective. Indeed, discipleship as a spiritual principle is based on the

concept of following and learning from Christ and "focuses on what we do in following Jesus

and growing in the Lord."[64] Of course, there are Old Testament examples of individualized

mentoring that could be construed as master-pupil relationships (e.g., Moses and Joshua, cf.

Exod 17:8-14, Exod 33:11; Elijah and Elisha, cf. 1 Kings 19:16-21), but the New Testament

model makes discipleship an explicit expectation in the life of one who follows Christ, both

personally (John 12:26) and as an evangelistic pursuit (Matt 28:19-20).

Numerous discipleship programs exist within the modern evangelical church. Although

many small group ministries could be characterized as having a discipleship purpose, the

discipleship ministries in focus here emphasize individuals or groups of only a few persons to

promote deeper study and relationship building. These programs also vary on a continuum of

formality with informal, organic relationships on one end and formal, designated meetings on the

other.

What is most important about individual discipleship for the current study is that it has

strong potential for impacting one's self-efficacy beliefs for biblical learning. The focused and

often active nature of these relationships are well-suited to promote mastery experiences. The

heightened accountability can lead to risk-taking and facing challenges that may have otherwise

been avoided. Each of these potential outcomes is dependent, of course, on discipleship

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[64] Darrell L. Bock, "New Testament Community and Spiritual Formation," in *Foundations of Spiritual Formation: A Community Approach to Becoming Like Christ*, edited by Paul Pettit (Grand Rapids, MI: Kregel, 2008), 105.

approaches that seek such active, growth-driven relationships between mentor and student which focus on biblical learning.

This quick review of church ministries seeking to promote Bible engagement demonstrates a wide diversity of practical methodologies ranging from corporate teaching to individual relationships. Theoretically, approaches that provide active experiences, challenge participants to pursue new levels of engagement, and provide support so participants can succeed in new knowledge or skills have the strongest potential to foster positive self-efficacy for biblical learning. The ministry methodology employed in the current study was a small group experience seeking to capitalize on each of these issues, primarily through challenging participants to engage peers in brief teaching segments (i.e., micro-teaching) regarding their own learning about a biblical passage.

Conclusion

The current study is grounded in social cognitive theory, which proposes that human agency is manifested through people's self-efficacy beliefs for specific actions. This premise supports the study's research question regarding whether a scaffolded, small group experience which utilizes micro-teaching about a passage of Scripture as a model of participation will positively relate to self-efficacy for biblical learning and doctrinal awareness. The focus on biblical learning rests on the theological foundation of the role of Scripture in a believer's life. Increasing engagement with the Bible promises to have significant effects on a believer's spiritual formation, transformation, and identity. Therefore, an investigation as to whether a targeted small group experience will positively relate to self-efficacy beliefs for biblical learning

has promise for contributing to the literature regarding spiritual formation, given that self-efficacy beliefs are known predictors of future behavior in many contexts.

Chapter 3: Methodology

The following chapter outlines the methodology and procedures used to carry out the current study. A pilot study was conducted to develop one of the instruments for use. The primary intervention centered around implementation of a brief, small group experience designed to teach participants Bible interpretation skills while using micro-teaching as key mechanism to promote mastery and engagement.

Intervention Design

The intervention was developed in response to the problem described in Chapter 1 regarding biblical literacy and engagement with Scripture. Rather than focusing on a particular Bible study or attempting to facilitate increased content knowledge among church attendees, the current investigation focused on participant's self-efficacy beliefs regarding their ability to study and learn from Scripture. The motivation for this focus was grounded in research indicating that self-efficacy beliefs are strong predictors of future behavior within specific domains.[65] Weak self-efficacy beliefs for biblical learning would theoretically lead to less Bible engagement and stronger self-efficacy beliefs to more engagement. Strong efficacy beliefs tend to correlate with motivation for and persistence in future behavior. Therefore, the current study focused on the assessment of self-efficacy for biblical learning during a brief course on how to study the Bible.

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[65] Cf. Bandura, *Self-efficacy*, 3.

The Small Group Course

A seven-week small group designed to facilitate understanding of how to study the Bible represented the core intervention of the current study. The course focused on three common hermeneutical issues. First, the role of textual and historical context was explored and applied to a passage. Second, participants evaluated how a passage fits within the grand story of God (i.e., redemptive history). Finally, the connection of a passage to relevant doctrine was studied.[66]

The overarching point of this content sequence was to help participants understand the importance of context for interpretation and situate a passage in both biblical theology and systematic theology to help establish meaning for the passage. In the context of preaching, Timothy George echoed this dual emphasis, but with focus on biblical exposition and doctrinal applications: "Every doctrinal sermon must be contextually rooted in sound exegesis; and every expository or biblical sermon should place a given passage in the widest theological framework possible."[67]

Pedagogically, the course involved a mixture of didactic instruction led by the current researcher and activities designed to bring attention to and application of the three hermeneutical points discussed above. Most importantly, the participants were expected to engage in a series of three micro-teaching experiences (approximately five minutes in length), during which they taught the rest of the class using one of the three hermeneutical issues relative to a specific passage of Scripture. The first micro-teaching experience was called a "share-back" to help

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[66] There are many resources on hermeneutics, but the reader is referred to Andreas J. Köstenberger and Richard D. Patterson, *Invitation to Biblical Interpretation: Exploring the Hermeneutical Triad of History, Literature, and Theology*. (Grand Rapids, MI: Kregel, 2011), for a comprehensive and straightforward approach. The authors emphasize historical and textual focus with an eye on biblical theology. The systematic/doctrinal element discussed here is addressed less in the book, but the emergence and presence of doctrine is heavily implied.

[67] Timothy George, "Doctrinal Preaching," in *Handbook of Contemporary Preaching*, ed. Michael Duduit (Nashville: Broadman, 1992), 96.

reduce the anxiety associated with having to teach, but this was changed to "teach-back" at the second event to emphasize the importance of processing the information in a way that facilitates others' learning.

The purpose of the micro-teaching experiences was to elevate the challenge and accountability for learning the passage to the point of contextual comprehension so that it can be articulated to others. This teaching process promotes deep cognitive processing and organization of ideas. The model was conceptualized and employed here because it has promise as a strong mastery experience which, if positively navigated, can build participants' self-efficacy for biblical learning.

This small group intervention was designed explicitly to address the current thesis - that a scaffolded, small group experience which utilizes micro-teaching of a biblical passage as a model of participation will positively relate to self-efficacy for biblical learning and doctrinal awareness. Table 3.1 provides a general outline for seven-week course.

Table 3.1. Outline of Seven-week Small Group Course on How to Study the Bible

Week	Topic/Activity	Approx. Time (minutes)
1	Conduct pre-assessments.	20
	Orientation to three areas of study: context, grand story of the Bible, and doctrine.	10
	Select Scripture passages and outline micro-teaching schedule.	10
	Review resources.	10
	Introduce role of textual and historical context to Bible study.	25
2	Understanding Scripture in textual and historical context.	20
	Micro-teaching lessons (4) by participants on context of passage.	25
	Feedback on micro-teaching lessons.	10
	Introduction to the grand story of the Bible.	15
3	Understanding Scripture as part of the grand story of the Bible.	40
	Micro-teaching lessons (4) by participants on context of passage.	25
	Feedback on micro-teaching lessons.	10
4	Review role of the grand story on Bible study.	10
	Micro-teaching lessons (4) by participants on connection of passage to grand story of the Bible.	25
	Feedback on micro-teaching lessons.	10
	Introduction to how Scripture informs doctrine.	25
5	Understanding Scripture as informative to doctrine.	35
	Micro-teaching lessons (4) by participants on connection of passage to grand story of the Bible.	25
	Feedback on micro-teaching lessons.	10
6	Review role of doctrine in Bible study.	20
	Micro-teaching lessons (4) by participants on connection of passage to doctrine.	25
	Feedback on micro-teaching lessons.	10
	Wrap up of Bible study in light of context, grand story of the Bible, and doctrine.	15
7	Micro-teaching lessons (4) by participants on connection of passage to doctrine.	25
	Feedback on micro-teaching lessons.	10
	Summary of course with example.	15
	Conduct post-assessments.	20

(Table 3.1 continued)

Note. Each weekly meeting was approximately 70-75 minutes in length. The sequence was designed for an eight-person group but can be adjusted for fewer participants.

Participants

Attendees at Midway Church were recruited to participate in the course described above which was titled "How to Study the Bible." Participants were adult volunteers, but there were no other restrictions on age or any other demographics. Participants were assessed on a number of variables at the beginning and end of the course with both quantitative and qualitative methods. Regarding some quantitative measures, the interpretation of the change from pretest to posttest focused on descriptive statistics and effect size information rather than statistical significance testing.[68] Nevertheless, a power analysis was conducted to provide a general frame of reference for possible sample size. The power analysis was conducted with the free-access G*Power program for a one-way analysis of variance with two repeated measures (e.g., pretest and posttest).[69] Alpha level was set at .05, an estimated correlation of .70 between the repeated measures was used, and standard power was computed at .80. Sphericity correction was not applicable because there were only two measures. Using Jacob Cohen's rough benchmarks for effect sizes,[70] a large effect size ($f = .40$, or $\eta^2 \approx .14$) would require ten participants to be

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[68] For a discussion of the role of effect sizes vis-à-vis statistical significance testing based on a "growing awareness regarding the need for information beyond or instead of [null hypothesis significance testing] for result interpretation," see Robin K. Henson, "Effect Size Measures and Meta-analytic Thinking in Counseling Psychology Research," *The Counseling Psychologist* 34, no. 5 (September 2006): 604.

[69] Franz Faul, Edgar Erdfelder, Albert-Georg Lang, and Axel Buchner, "G*Power 3: A Flexible Statistical Power Analysis Program for the Social, Behavioral, and Biomedical Sciences," *Behavior Research Methods* 39, no. 2 (May 2007).

[70] Jacob Cohen, *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. (Hillsdale, NJ: Lawrence Erlbaum, 1988), 285-87.

statistically significant. Each intervention group allowed up to eight participants to allow time for micro-teaching activity and high engagement.

Location and Time

Two small groups were held during the first and second Sunday school periods on Sunday morning. Midway Church holds two worship services on Sunday, with Sunday school sessions running concurrently. The first Sunday school period is the more heavily attended because people then attend the second worship service. The first class included seven participants and the second class had four. The groups were conducted in a room with a long table that seated all participants and a white board for teaching use was available.

Measures

Self-efficacy for Biblical Learning

Although self-efficacy measures abound for a variety of domains, there is no known measure of self-efficacy for biblical learning. Therefore, an instrument was developed for use because this was a primary outcome for the current study. Details regarding development of the Self-efficacy for Biblical Learning Scale (SEBLS) are outlined below when discussing procedures for the pilot study.

The final SEBLS consists of 12 items that can be administered in short order. The items focus on efficacy beliefs related to the three hermeneutical foci discussed above, including confidence in one's ability to understand context, situate a passage in the grand plan of God, and relate a passage to relevant doctrinal positions. A fourth element includes the ability to apply

Scripture to one's life. SEBLS items are discussed in greater detail below regarding their development in the pilot study. Appendix A presents the initial 13 items for the SEBLS before it was reduced to 12 items in the pilot study.

Bandura provided guidelines on the development of self-efficacy measures.[71] These guidelines were consulted to help ensure items were reflective of the self-efficacy construct, as opposed to other related concepts such as generalized confidence or self-concept. An 11-point response scale ranging from 0-10 was used to help maximize response variation and reduce floor or ceiling effects. Following Bandura's recommendations, the scale was anchored with "cannot do at all" (0), "moderately certain can do" (5), and "absolutely certain can do" (10), such that higher scores reflected stronger levels of self-efficacy.

Retrospective Pretest of Self-efficacy for Biblical Learning

At posttest, a retrospective pretest was also conducted for the SEBLS instrument. This type of assessment is intended to get participants to reflect backward to the beginning of the class and rate what their self-efficacy was at that time.[72] The purpose of this approach is to provide

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[71] Albert Bandura, "Guide for Constructing Self-efficacy Scales," in *Self-efficacy Beliefs of Adolescents*, ed. Frank Pajares and Tim Urdan (Greenwich, CT: Information Age Publishing, 2006). Bandura's general guidelines for efficacy scale construction were available as an unpublished document for many years until they eventually were published as a chapter in this edited volume.

[72] Cf. Jeff M. Allen and Kim Nimon, "Retrospective Pretest: A Practical Technique for Professional Development Evaluation," *Journal of Industrial Teacher Education* 44, no. 3 (Fall 2007): 27. Laura G. Hill, "Back to the Future: Considerations in Use and Reporting of the Retrospective Pretest," *International Journal of Behavioral Development*, Online First (October 2019): 1, https://journals.sagepub.com/doi/10.1177/0165025419870245. Todd D. Little, Rong Chang, Britt K. Gorrall, Luke Waggenspack, Eriko Fukuda, Patricia J. Allen, and Gil G. Noam, "The Retrospective Pretest-Posttest Design Redux: On its Validity as an Alternative to Traditional Pretest-Postest Measurement," *International Journal of Behavioral Development*, Online First (October 2019): 1, https://journals.sagepub.com/doi/full/10.1177/0165025419877973. Kim Nimon, Drea Zigarmi, and Jeff Allen, "Measures of Program Effectiveness Based on Retrospective Pretest Data: Are All Created Equal?" *American Journal of Evaluation* 21, no. 1 (March 2011): 8. Clara C. Pratt, William M. McGuigan, and Aphra R. Katzev, "Measuring Program Outcomes: Using Retrospective Pretest Methodology," *American Journal of Evaluation* 21, no. 3 (September 2000): 341.

information about whether or not participants may have overrated their self-efficacy beliefs at pre-test. Importantly, this potential overrating is not necessarily impression management, but it can be a by-product of self-referent questions when participants have not yet engaged in the intervention (a process also called response-shift bias). Thus, they have not been fully exposed to the depth or rigor of the intervention and therefore "do not know what they do not know" yet. In essence, it is possible that participants rate themselves more highly than they would have if they had a better sense of what it means to study the Bible in a systematic way. Retrospective pre-tests can be useful to evaluate this possibility.[73] The exact SEBLS instrument was used, but with the following instructions to change the frame of reference for evaluation: "Think about the process of this class along with what you may have experienced, learned, and practiced about Bible study. Now think back to your approach before the class and at that point rate what your confidence SHOULD HAVE BEEN that you could do the following when studying the Bible."

Impression Management

In the pilot study for instrument development noted below, Impression Management (IM) was assessed as a validity check for SEBLS scores. IM is a specific expression of the broader concept of socially desirable responding, or the process of an individual responding to an assessment in a way to cast him or herself in a positive light by over-emphasizing positive traits

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[73] For an applied example of retrospective pre-test use, see Debra Moore and Cynthia A. Tananis, "Measuring Change in a Short-term Educational Program Using a Retrospective Pretest Design," *American Journal of Evaluation* 30, no. 2 (June 2009): 189.

and under-emphasizing negative traits. IM refers to the attempt to provide elevated self-descriptions toward the end of creating a socially desirable image to others.[74]

There are multiple assessments related to social desirability, and one commonly used scale is Delroy Paulhus's Balanced Inventory for Desirable Responding (BIDR), which contains 40 items assessing two subscales, including IM.[75] The BIDR has been used widely in the literature, but due to its length Claire Hart and colleagues developed a shortened 16-item version (BIDR-16) with good evidence for the factor structure and convergent and discriminant validity for its scores. Only the eight-item IM subscale was used for the current study. Scores on this scale yielded adequate reliabilities, for a brief measure, in Hart's investigation (coefficient alphas = .66 - .74).[76] Responses are on an eight-point scale anchored with "totally disagree" (1) and "totally agree" (8), and four items are reverse scored. The scale can be found in Appendix B with permission for use in Appendix C. Discriminant validity was assessed by correlating the impression management scores with SEBLS scores. Positive but low correlations were expected.

Five-factor Model of Personality

Additional discriminant validity comparisons in the pilot study for instrument development were made between SEBLS scores and a brief measure of personality. Because self-efficacy is a self-referent construct it is important to distinguish it from more general personality variables. A longer and more psychometrically robust measure of personality was not

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[74] Claire M. Hart, Timothy D. Ritchie, Erica G. Hepper, and Jochen E. Gebauer, "The Balanced Inventory of Desirable Responding Short Form (BIDR-16)," *SAGE Open* (October-December 2015): 2, https://doi.org/10.1177/2158244015621113.

[75] Delroy L. Paulhus, "Measurement and Control of Response Bias," in *Measures of Personality and Social Psychological Attitudes*, ed. John P. Robinson, Phillip R. Shaver, and Lawrence S. Wrightsman (San Diego, CA: Academic Press, 1991).

[76] Hart, "Balanced Inventory," 3-7.

used due to significant time limits for data collection. The Ten-Item Personality Inventory (TIPI) is a brief assessment designed to mirror the widely used five-factor model of personality.[77] The TIPI employs pairs of traits to measure Extraversion, Emotional Stability, Openness, Conscientiousness, and Agreeableness.

Respondents rate themselves relative to pairs of traits (e.g., Extraversion: extraverted, enthusiastic) on a seven-point scale anchored with "disagree strongly" (1) and "agree strongly" (7). The full TIPI scale is presented in Appendix D and the authors have provided an open permission for use (see Appendix E).[78] One item for each domain is reverse scored and higher scores reflect stronger endorsement of the personality domain. Low to moderate correlations with SEBLS scores were expected. These comparisons reflect discriminant validity with substantive personality constructs, which should be more general than specific self-efficacy beliefs for biblical learning.

Self-esteem

SEBLS scores were also evaluated relative to a global measure of self-esteem. Self-efficacy beliefs are theoretically distinct constructs from self-esteem, with the later focusing on "judgments of self-worth" rather than specific beliefs in one's capacity to succeed at a task.[79] Therefore, self-efficacy for biblical learning should not be highly correlated with general self-esteem.

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[77] Samuel D. Gosling, Peter J. Rentfrow, and William B. Swann, Jr., "A Very Brief Measure of the Big-Five Personality Domains," *Journal of Research in Personality* 37, no. 6 (December 2003).

[78] Refer to https://gosling.psy.utexas.edu/scales-weve-developed/ten-item-personality-measure-tipi/ for open permission for use. Retrieved May 30, 2019.

[79] Bandura, *Self-efficacy Beliefs*, 11.

Due to time considerations with data collection, the Single-Item Self-Esteem Scale (SISE) was used as a quick, global self-esteem assessment. Appendix F presents permission for use from the author. The SISE asks respondents to rate themselves on one item, "I have high self-esteem," using a five-point scale ranging from "not very true of me" (1) to "very true of me" (5). Richard Robins and colleagues examined the relationships of scores from this single item to the commonly used Rosenburg Self-Esteem Scale[80] and NEO-Five Factor Inventory,[81] a measure of the five-factor personality model. Despite its single-item format, SISE scores demonstrated good convergence with the RSE and similar patterns of relationships between both the SISE and RSE with the five personality domains.[82] A recent study found similar outcomes using German versions of the instruments.[83]

Bible Engagement

Levels of biblical engagement prior to the intervention could be an important covariate to engagement, or increases in engagement, during and after the intervention. Because the intervention targets self-efficacy beliefs for biblical learning, high levels of prior engagement are potentially indicative of strong self-efficacy beliefs and therefore could serve as a confound with the design.

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[80] Morris Rosenberg, *Society and the Adolescent Self-image*. (Princeton, NJ: Princeton University Press, 1965), 17-18.

[81] Paul T. Costa, Jr. and Robert R. McCrae, *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) Professional Manual*. (Odessa, FL: Psychological Assessment Resources, 1992).

[82] Richard W. Robins, Holly M. Hendin, and Kali H. Trzesniewski, "Measuring Global Self-esteem: Construct Validation of a Single-Item Measure and the Rosenburg Self-esteem Scale," *Personality and Social Psychology Bulletin* 27, no. 2 (February 2001): 154-55.

[83] Julia Brailovskaia and Jürgen Margraf, "How to Measure Self-esteem with One Item? Validation of the German Single-Item Self-Esteem Scale (G-SISE)," *Current Psychology* (June 2018). https://doi.org/10.1007/s12144-018-9911-x.

Therefore, three questions were asked to assess the level of participants' frequency of engagement with the Bible. The first question focused on frequency of reading the Bible: "*On average*, how much time do you spend *each week* reading the Bible?" The second question was similar but focused on time spent listening: "*On average*, how much time do you spend *each week* listening to the Bible in audio format?" These questions are asked separately to help distinguish active (reading) from more passive (listening) engagement. The third question probed depth of engagement: "*On average*, how much time do you spend *each week* studying or learning the Bible (do not include time spent with church sermons/messages)?" All of these questions were followed with a response option for the number of hours and minutes in each activity each week.

Task Difficulty of Biblical Learning

Perceived difficulty of a particular task is another possible covariate to the development of self-efficacy belief. Completed tasks that are considered easy are not likely to add to efficacy strength while tasks perceived to be difficult are likely to have the opposite effect, if navigated successfully.[84]

As such, perceived task difficulty for studying the Bible was assessed with a single question: "How difficult is it for you to study a passage in the Bible and grasp it to the point of being able to explain what it means?" Responses were on an 11-point scale anchored at "not difficult at all" (0), "moderately difficult" (5), and "extremely difficult" (10). The question

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[84] Cf. Megan Tschannen-Moran, Anita Woolfolk Hoy, and Wayne K. Hoy, "Teacher Efficacy: Its Meaning and Measure," *Review of Educational Research* 68, no. 2 (Summer 1998): 231-32. The role of task difficulty is addressed in this article in the context of self-efficacy for teachers. See also Bandura, *Self-Efficacy*, for a more general treatment.

includes a reference to being able to explain the passage in order to strengthen the assessment of difficulty. The ability to articulate a concept in either written or oral form is a marker of increased mastery of a concept.

Prior Experience as Bible Teacher

It is possible that experience teaching an adult Bible study would be positively related to self-efficacy for biblical learning due to the process of learning and teaching Scripture. Indeed, this is a fundamental concept in the current study which hypothesizes that micro-teaching experiences will help promote self-efficacy beliefs. Therefore, one question asked, "Do you have any prior experience in a formal role as an adult Bible teacher?" with dichotomous response options of "yes" (1) and "no" (2).

Doctrinal Awareness

Each participant within an intervention group selected a different Scripture passage with which to work during the course. A list of possible passages was provided, and each was chosen for use based on its potential connection with a biblical doctrine to support the third hermeneutical point discussed above. To assess participants' awareness of the doctrine associated with their passages, the following open-ended prompt was presented and responded to in written form: "Please explain what the biblical position of [relevant doctrinal topic added here] is. Just write what you know about this, if anything, in your own words. Add whatever support you can for your thoughts, but do not worry about precise language, spelling, grammar, or exact Bible references. If you know nothing of this biblical position, please feel free to just

write that." Note that the word "doctrine" was not used in the prompt to avoid situations where participants might not know the meaning of that word or have a particular reaction to it.

Expert Evaluation of Doctrinal Awareness

Content analysis was conducted to assess improvement in participants' written doctrinal awareness responses from pretest to posttest. In addition, a panel of four experts rated each response based on the degree it reflected both depth of understanding and accuracy regarding the biblical position on the topic. The 11-point rating scale was anchored at "*extremely shallow depth* of understanding, and/or *very inaccurate* in the explanation or evidence presented" (0), "*moderate depth* of understanding, and/or *some inaccuracies* in the explanation or evidence presented" (5), and "*extremely strong depth* of understanding, and/or *very accurate* in the explanation or evidence presented" (10). Ratings were averaged to yield a pretest and posttest evaluation across the four raters. These ratings provided an objective evaluation of doctrinal awareness change.

The raters all had degrees in biblical studies, theology, or practical ministry. One rater was currently working toward a Master of Divinity degree, and the other three had completed masters or doctoral degrees in one of these areas. Importantly, the raters were blind to whether participant responses were from pretest or posttest. Also, the order of pretest and posttest responses was randomized both within and between each rater. These measures provided control for possible rater bias.

Semi-structured Interviews

All participants were interviewed before and after the intervention to ascertain their perceptions on a range of issues related to the current study and provide important additional data to the quantitative assessments. These interviews were semi-structured around several pre-established questions, but the responses were allowed to lead to other areas and follow-up questions were asked to increase clarity or depth of response. The questions focused on participants' engagement with Scripture, potential reasons for their level of engagement, and their self-beliefs and confidence levels for studying and understanding the Bible. Interviews lasted approximately 10-15 minutes and were set up individually for each person to accommodate schedules. Interviews were recorded with permission and transcribed by the researcher for later analysis. The guiding questions for the interviews are listed in Appendix G.

Teaching Confidence and Accuracy

As an additional method for tapping into whether the micro-teaching experience reflected a mastery experience for the participant, two brief observational ratings were completed by the current researcher for each micro-teaching segment. One rating evaluated teaching confidence as a proxy for whether the experience was being perceived as successful by the participant. Confidence is affected by multiple factors, of course, but it often follows from or exists concurrently with mastery experience. Appendix H presents the rubric used for this rating using a 5-point scale with higher scores reflecting greater confidence.

Additionally, a second rating of teaching accuracy allowed for a proxy assessment of content mastery for each micro-teaching segment. Accuracy reflects sufficient Bible study to present concepts with minimal errors and is therefore indicative of mastery experience from a

different perspective. The brief rubric for teaching accuracy used a 5-point scale and is also found in Appendix H. Higher scores indicated stronger accuracy.

Together, these two ratings helped assess whether the micro-teaching experience functioned as a mastery experience that could contribute to self-efficacy growth. If the experience is not sufficiently scaffolded to be successful, it may contribute little to personal efficacy. If the experience is too negative, it can actually diminish efficacy. Because each micro-teaching segment was rated, it was possible to assess any change in ratings of teaching confidence and accuracy across the course of the intervention.

Observational Data

In addition to the measures and interviews noted above, observational data were collected and recorded in the form of field notes.[85] These observations centered on participants' attitudes, emotional responses, patterns of communication with each other and the researcher, engagement, and confidence levels. Focus was on behavior, emotion, speech, and nonverbal cues that informed participants' levels of self-efficacy for biblical learning.

Field notes were recorded as soon as possible after each interaction with a participant in order to promote accuracy of recall. Applicable interactions primarily consisted of interviews and each group training. Field notes were not made regarding any auxiliary interactions that occurred in the general context of the church. Only activity related to the study was recorded in order to maintain reasonable ethical boundaries governing agreement to participate in the study.

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[85] Ernest T. Stringer, *Action Research*, 4th ed. (Los Angeles: Sage, 2014), 113-14.

Demographics

Several questions solicited demographic information, including age, ethnicity, and gender. A single question was used to assess whether participants had experience in a formal role as an adult Bible teacher to provide another validity check for the SEBLS, such that those that have held a formal role should theoretically reflect somewhat stronger efficacy beliefs due to the experience.

Ethical Considerations

The intervention occurred in the environment of Midway Church where both the researcher and participants attend church. Prior relationships existed between the researcher and some participants, as well as among the participants themselves, although the nature and depth of these relationships varied. This environment was helpful regarding the participant researcher's ability to build rapport and provide helpful scaffolding in the learning process. However, these relationships also required close attention to one's own biases and expectations regarding other's behavior and attitudes in order to allow participants to operate freely and avoid misinterpretation of observations or other data.

The researcher is not a staff member of the church and does not hold any formal position there. He serves as an adult volunteer teaching a Sunday school class and assists periodically with training of small group leaders. As such, there is little risk of any dual relationship of power or influence over participants other than the normal structure of investigator and participant.

Certain evangelical assumptions were made by the researcher about the nature of God and inerrancy of the Bible as discussed in Chapter 1. It was also assumed that adult learners function well and are motivated by a cognitive constructivist perspective on teaching and

learning, and that depth of processing is facilitated and evidenced by articulating one's understanding of material to others. These assumptions are grounded in the researcher's broad exposure to theoretical and practical principles of educational psychology and experience as a university professor. They helped form the basis for the current intervention's focus on micro-teaching as a mechanism to promote self-efficacy growth.

Participation was contingent on providing informed consent, which included the right to discontinue the project at any time or decline response to any inquiry made in interviews or through other data collection methods. The methodology for this study was approved by the Liberty University Institutional Review Board (IRB). See Appendix I for IRB approval.

Hard copies of all data from the primary study were kept confidential and locked in a secure filing cabinet in the researcher's office. Data from the pilot study for instrument development were anonymous and secured in the same fashion. For quantitative responses, data were entered into one or more spreadsheets for analysis. These electronic files were stored on the researcher's password-protected computer. Pseudonyms were used in the communication of any qualitative results.

Implementation of the Intervention Design

The following sections outline the details of implementation of the intervention, including procedures for data collection. A pilot study was conducted to facilitate development of the SEBLS instrument for use in the primary study and these procedures are also discussed. Finally, approaches to data triangulation and ensuring data validity, reliability, and credibility are reviewed.

Procedures

Participant Recruitment

Participants were recruited from Midway Church in late summer in anticipation of the Fall "How to Study the Bible" course. The church conducts a small group promotion in middle to late August that helped facilitate communication and awareness of this opportunity. Recruitment was pursued through announcements made in the church bulletin, via a regular announcement video that is shown during Sunday morning worship services, and by word of mouth. Interested parties were pointed to an information table and provided contact information to learn more about the course. Snowball sampling was attempted by asking those that wish to participate to talk to others and invite them as well.

Upon expressing interest, information was provided about the general content and activities of the course, the nature of the study along with the need for informed consent, and participation in brief interviews and assessments. Twelve participants signed up across two classes. However, one person withdrew just before beginning the class, leaving seven participants in the first Sunday morning class and four in the second class. Of these, another person was not able to make three of the seven classes and thus was not able to participate in the final "teach-back" time. Due to incomplete data, this person was therefore removed from the sample leaving ten participants for final analysis.

Course Administration

As noted previously, the course ran for seven weeks and Table 3.1 above summarized the content. Didactic portions of the course emphasized cognitive engagement, questioning, example and non-example, and other pedagogical techniques to facilitate learning. The participants' role in the course was elevated as they were asked to actively engage in the learning process throughout.

Importantly, the participants' experiences were scaffolded around their micro-teaching sessions. These teaching sessions were intended to be challenging but growing opportunities. Therefore, the researcher attempted to help minimize anxiety levels of participants and sought to provide clarity with expectations and communication. Each micro-teaching session was supported first with in-class discussion and examples. Participants were pointed toward reliable resources they use to facilitate their study and preparation for their micro-teaching.

At the beginning of the course, participants selected a different biblical passage (a textual unit, typically a paragraph or two) to study from a list of researcher-selected options. This list of passages was developed with several principles in mind. First, only New Testament passages were used to help focus the course. Second, passage clarity was relevant, as opposed to use of more obscure or controversial passages. Third, only one passage was selected from a single book or letter. Finally, an apparent connection with a different evangelical doctrinal concept was important to facilitate the exploration of how Scripture informs and is informed by doctrine. The passages in the list included: Matt 5:16, Luke 13:18-20, John 14:15-26, Acts 4:13-22, Rom 3:9-20, Gal 5:16-25, Eph 2:11-18, Phil 1:18-26, Col 1:15-20, Heb 4:14-5:4, 2 Pet 1:3-11, Rev 21:22-27.

In advance of each micro-teaching event, participants were taught an instructional worksheet which blended some class concepts with critical questions (CQs) to help participants

probe their passage and context. The worksheets also challenged participants to frame their understanding in a way that they can communicate it to others. This included a request that one probing question be asked of the group in each micro-teaching session. The request to form and ask a question of others facilitates cognitive processing of the content. The three instructional worksheets are provided in Appendices J, K, and L. Additional auxiliary materials were provided as well as examples and to help inform the discussion in the class.

Following each brief micro-teaching lesson, a few minutes were spent asking questions or providing feedback to the participant. This feedback came from the group and the researcher, but the researcher guided the feedback to ensure that it was supportive of the participant's efforts. However, care was taken to ensure the feedback was genuine and appropriate as a form of verbal persuasion, as opposed to obligatory which is not helpful in fostering self-efficacy beliefs.

Data Collection

Pre-interviews were conducted as arranged individually with each participant prior the beginning of the course. Informed consent was obtained prior to each interview. Pseudonyms are employed when reporting results. Only the researcher had access to the key that identified to whom the pseudonyms belong.

Pre-assessments were completed as a group at the beginning of the first week of the course. The self-report survey was explained, distributed, and completed prior to continuing with content. The survey took approximately 15 minutes to complete and included the SEBLS resulting from the pilot study development and the measures of Bible engagement, doctrinal awareness, and task difficulty of biblical learning. The same assessments, with the addition of

the SEBLS retrospective pretest, were administered as a posttest at the end of the final (seventh) week of the course.

Immediately following the micro-teaching lessons, each participant was rated by the researcher on his or her teaching confidence and teaching accuracy using the appropriate rubrics. The process was repeated for all three rounds of participant teaching. Field notes were completed as soon as possible after each course session and as needed during other times to document observations. Finally, post-interviews were set up according to individual schedules as soon as feasible after conclusion of the course. Table 3.2 presents each variable or assessment method in the pilot study and primary study along with when the data were collected.

Table 3.2. Summary of Study Variables and Assessments

Study Phase	Variable/Method	Timing

Pilot Study for Instrument Development	Self-efficacy for Biblical Learning
	Impression Management
	Five-factor model of personality
	    Extraversion
	    Emotional Stability
	    Openness to Experience
	    Conscientiousness
	    Agreeableness
	Self-esteem
	Biblical Engagement
	Task Difficulty of Biblical Learning
	Prior Experience as Bible Teacher
		Before primary study

Primary Study	Pre-interviews	Immediately prior to course
	Self-efficacy for Biblical Learning Biblical Engagement Task Difficulty of Biblical Learning Doctrinal Awareness Field Notes for Observations	Week one of Bible course
	Teaching Confidence Teaching Accuracy Field Notes for Observations	During micro-teaching events
	Self-efficacy for Biblical Learning Retrospective Self-efficacay for Biblical Learning Biblical Engagement Task Difficulty of Biblical Learning Doctrinal Awareness Field Notes for Observations	Week seven of Bible course
	Post-interviews	Immediately following conclusion of the course.

Pilot Study for Instrument Development

A pilot study was conducted to evaluate the development of the SEBLS instrument. The study consisted of administering the SEBLS along with several other measures to examine the convergent and divergent validity for SEBLS scores with other related or unrelated constructs. The measures used are described above and listed in Table 3.2.

Development of the Initial SEBLS Items

Because there are no known assessments related to self-efficacy for biblical learning, items were developed to assess the construct. All items are prefaced with "When studying the Bible, I can…" to orient responses toward efficacy beliefs. Per Bandura's recommendations, "items should be phrased in terms of *can do* rather than *will do*. *Can* is a judgment of capability; *will* is a statement of intention. Perceived self-efficacy is a major determinant of intention, but the two constructs are conceptually and empirically separable."[86] The response scale and anchors are noted above and the initial SEBLS is presented in Appendix A.

Content for the initial items was based on several commonly held hermeneutical expectations for biblical interpretation and application. First, three items were written to address perceived efficacy for being able to place a passage in the larger story of God's plan for the world (e.g., "Realize how a passage fits in the overall story of the Bible"). Second, three items address perceived ability to situate a passage in the textual and historical context (e.g., "Know how history helps inform understanding of a passage"). Third, three items address perceived ability to relate a passage to a doctrinal position (e.g., "Explain how a passage relates to a statement of faith"). Fourth, three items speak to application of a passage (e.g., "Apply a passage

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[86] Bandura, "Guide for Constructing," 308-09. Emphasis in original.

to my life in a clear way"). Finally, one item was included regarding the ability to remember a

passage (i.e., "Remember a Bible passage after reading it"). These 13 items were initially

hypothesized to tap into a single construct. Factor analytic methods were used to evaluate this

assumption and refine the instrument with possible item deletions.

Participants for the Pilot

Participants for the pilot were recruited from churches in the community other than

Midway Church to avoid possible contamination of the sampling pool at Midway Church for the

primary study. To identify churches for pilot data collection, the pastoral staff at Midway Church

was asked to provide recommendations based on their contacts and, if possible, make a

preliminary support communication (e.g., email) to the relevant person at the other church. The

researcher followed this up with a direct contact and, for those churches willing to participate,

worked out details for data collection times. In addition to pursuing these referrals, the researcher

made direct contact with pastors at other possible churches to explain the study and seek access

for data collection. Church recruitment focused on protestant churches with conservative,

evangelical orientations regarding primary orthodoxy similar to Midway Church in the primary

study. Five churches participated in the pilot study. They included Baptist or similar

congregations such as Bible churches and other non-denominational churches with similar

orientations on primary theology. Within this sampling frame, the participating pilot churches

were relatively homogeneous regarding conservative, evangelical orientation, but represented

some diversity in expression.

Because factor analytic methods were planned to evaluate the SEBLS, the necessary

sample size for factor analysis was considered. However, the appropriate sample size for factor

analysis is difficult to determine *a priori* because the adequacy of a sample size depends heavily on the strength of the factor model obtained, which of course is not known until after analysis.[87] MacCallum and others demonstrated that quality factor solutions can be obtained when communalities are high for sample sizes well below 100. However, larger samples are needed as factor model quality reduces.[88] The initial SEBLS contains 13 items and is hypothesized to be a single-factor instrument. If one factor is determined, then it is possible that a sample size of roughly 100 may be adequate for an exploratory factor analysis. However, because the sample will be split to follow an exploratory approach with a confirmatory factor analysis to verify the structure, a minimum of 260 participants is likely needed to provide at least a ten to one ratio of participants to items for both approaches.

Procedures for the Pilot

Participating churches provided access to Sunday school classes, small group meetings in homes, and midweek adult Bible studies. In each group, the study was explained to all pilot participants and informed consent completed. The assessment was anonymous for those completing the pilot as no identifying information was requested. The pilot measures noted in Table 3.2 were placed in a single survey. The measures were ordered randomly to create five different surveys to control for possible order effects in the responses, and these versions were randomly administered at all sites. The exception to this random ordering was the demographic

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[87] Daniel J. Mundfrom, Dale G. Shaw, and Tian Lu Ke, "Minimum Sample Size Recommendations for Conducting Factor Analyses," *International Journal of Testing* 5, no. 2 (2005): 160-61.

[88] Robert C. MacCallum, Keith F. Widaman, Shaobo Zhang, and Sehee Hong, "Sample Size in Factor Analysis," *Psychological Methods* 4, no. 1 (March 1999): 96.

questions, which were placed at the end of the survey in all cases. Completion of the pilot survey took approximately 15-20 minutes.

Data Analysis for the Pilot

The sample was randomly split into two subsamples. One subsample was used to examine SEBLS scores with item analysis and internal consistency was computed with coefficient alpha.[89] Items were then submitted to exploratory factor analysis using principle axis factoring extraction to evaluate construct structure following recommended procedures.[90] The second subsample was used to conduct a confirmatory factor analysis to test the structure observed in the first subsample. Competing models were also tested at this stage as rival hypotheses.

After refinement of the SEBLS, the full sample was used to compute correlations between SEBLS scores and the other measures to examine convergent and divergent validity. Expected relationships between SEBLS scores and the other measures are noted above when possible.

Data Triangulation

The intervention and its potential relationship with self-efficacy for biblical learning was explored from multiple data perspectives to provide triangulation for interpretation. Data were

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[89] Robin K. Henson, "Understanding Internal Consistency Reliability Estimates: A Conceptual Primer on Coefficient Alpha," *Measurement and Evaluation in Counseling and Development* 34, no. 3 (October 2001): 180-82. See also David L. Streiner, "Starting at the Beginning: An Introduction to Coefficient Alpha and Internal Consistency," *Journal of Personality Assessment* 80, no. 1 (January 2003): 99.

[90] Robin K. Henson and J. Kyle Roberts, "Use of Exploratory Factor Analysis in Published Research: Common Errors and Some Comment on Improved Practice," *Educational and Psychological Measurement* 66, no. 3 (June 2006): 409-10.

from self-report quantitative measures, qualitative open-ended questions and interviews, and situated observational data as reflected in field notes. Each of these perspectives helped provide a comprehensive look at the intervention, participants' self-efficacy beliefs, and their experiences in the process.

Validity, Reliability, and Credibility

The pilot study provided an opportunity to evaluate validity and reliability of scores on the SEBLS measure as well as other assessments used in that stage. The existing instruments have an acceptable history of psychometric evidence for their scores to warrant inclusion here; although, it is recognized that the brief measures of personality and self-esteem are not as strong as longer, more comprehensive assessments. They nevertheless have empirical support for use when time for data collection is a factor.

Regarding the qualitative interview data and the project overall, credibility was supported through triangulation of data, persistent observation, and member checking.[91] The first two of these are discussed above. Member checking was used to reflect possible interpretations back to participants to ensure they are representative of participant intensions and give them a chance to clarify if needed. This was done at each interview as a matter of procedure as well as more informally throughout the study when the opportunity arose to seek confirmation of data.

Data Analysis

For the primary study, SEBLS scores were mainly analyzed for change from pretest to posttest with a one-way, repeated measures analysis of variance (ANOVA). The retrospective

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[91] Stringer, *Action Research*, 92-3.

pretest scores were also examined relative to both pretest and posttest to evaluate perceptions of self-efficacy change after having experienced the intervention. Analyses were conducted with the SPSS software package. Interpretive emphasis was on change and effect size measures.[92]

All qualitative data were analyzed for themes using an inductive, iterative coding system.[93] As the data for a given source were read, concepts were summarized with a descriptive code. As additional data were reviewed, repeating concepts were given the same code or new descriptive codes were generated. This process was conducted with a simple system where the narrative unit (e.g., an intact thought, point, observation, or perspective) was recorded with the relevant descriptive code using various colors to allow visualization of patterns. Codes were regularly examined for applicability and were refined or reassigned when later descriptive codes were a better representation of the data.

Following this process, all codes were reviewed for possible commonality and emergence of broader themes as the descriptive codes were combined into still higher levels of generality. Importantly, because generality must still be grounded in the actual content of the narrative unit, content checking was regularly conducted to ensure that the message of the narrative unit was still reflective of the descriptive codes used at any level. After each data source was analyzed separately (i.e., qualitative response to the doctrinal awareness question, interviews, and field notes), the intra-method themes were explored across data sources (i.e., inter-method) for either convergence or divergence of ideas. This process helped facilitate the triangulation of data, at least across qualitative sources, which were then compared with quantitative outcomes. Again,

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[92] Cf. Henson, "Effect Size Measures."

[93] Andrew P. Johnson, *A Short Guide to Action Research*, 2nd ed. (Boston: Pearson, 2005), 83-86. See also Stringer, *Action Research*, 139-145.

content checking was important in the inter-method comparisons to ensure comparability or

contrast of the specific message of the participant across sources of information.

Chapter 4: Results

This chapter presents the findings from the thesis investigation. The chapter is divided into two primary sections. First, the pilot study is reviewed which tested the psychometric properties of the Self-Efficacy for Biblical Learning Scale (SEBLS). Second, results from the primary study are presented, which used the SEBLS and other measures to help evaluate participant experiences during a seven-week class on how to study the Bible that incorporated multiple micro-teaching activities.

Pilot Study for Instrument Development

The pilot study was conducted to develop the Self-efficacy for Biblical Learning Scale (SEBLS) and evaluate the reliability and validity of its scores. The resulting SEBLS was then used in the primary study as a key outcome to assess self-efficacy change.

Participants

Participants were adults attending a church group of some sort across five different churches in the north Texas area ($n=381$ initially, see data screening below). The churches were primarily surburban in setting, but with some rural influence in one case. Overall church sizes ranged from several hundred to about two thousand in Sunday morning attendance. Additional church description is given above. Data collection occurred in small group meetings in homes, small to large Sunday school classes, and Bible study groups during the week.

Demographics

On average, pilot study participants were middle-aged adults (M=49.17, SD=16.42, 11 cases did not report age), but age ranged widely from 18 to 92. The age distribution was reasonably symmetrical (skewness=.43) and normally distributed (kurtosis = -.67). The sample was quite homogeneous regarding ethnicity with most identifying as White/Caucasian (89.7%). Much smaller percentages identified as Hispanic (3.7%), Asian/Pacific Islander (1.3%), and Black (1.1%). A few smaller percentages were present for Native American, multiple selections, or other, and 7 cases did not report ethnicity. Gender was fairly evenly divided between female (50.3%) and male (47.9%) with 7 cases not reporting. Finally, most of the sample reported no prior experience in a formal role as an adult Bible teacher (66.4%).

Data Screening

Because the pilot study addressed development of the SEBLS, data screening first focused on its items. Among the initial respondents (*n*=381), three were dropped due to excessive missing data or out of bounds entries on SEBLS items bringing the sample size to *n* = 378. Of these, three additional cases had one missing data point on one SEBLS item. The score distributions for these items were slightly negatively skewed, and therefore the missing data points were replaced with the distribution median. Table 4.1 presents descriptive statistics for the thirteen initial SEBLS items. All items were reasonably symmetrical (only slight negative skewness) and normally distributed.

Table 4.1. Descriptive Statistics for Initial SEBLS Items (*n* = 378)

Item	Mean	SD	Skewness	Kurtosis
1. Realize how a passage fits in the overall story of the Bible. (G)	7.08	2.05	-.56	-.10
2. Understand what biblical or doctrinal positions apply to a passage. (D)	6.21	2.21	-.31	-.52
3. See how a passage fits with the text around it. (C)	7.33	1.95	-.66	.04
4. Apply a passage to my life in a clear way. (A)	7.56	1.84	-.77	.51
5. Remember a Bible passage after reading it. (M)	5.64	2.27	-.08	-.64
6. Related a passage to both the Old and New Testaments. (G)	5.85	2.46	-.37	-.60
7. Explain how a passage relates to a statement of faith. (D)	6.85	2.06	-.64	.07
8. Understand the historical context of the whole book or letter a passage is in. (C)	5.78	2.39	-.20	-.77
9. Understand how a passage matters for me. (A)	7.54	1.85	-.76	.14
10. Explain how God's plan for the world informs as passage. (G)	6.89	2.07	-.62	.01
11. Apply a passage to a core message of the Bible. (D)	6.91	2.06	-.61	-.14
12. Know how history helps inform understanding of a passage. (C)	6.23	2.21	-.27	-.65
13. Explain how a passage is relevant to the modern world. (A)	7.23	1.89	-.77	.51

Note. Scores on all items ranged from 0-10 except for items 3 and 9, which had minimums of 1

and 2, respectively. G=items 1, 6, and 10 relate to the Grand Story. D=items 2, 7, and 11 relate to

(Table 4.1 continued)

Doctrine. C=items 3, 8, and 12 relate to Context. A=items 4, 9, and 13 relate to Application.

M=item 5 relates to Bible Memory.

A missing variable analysis indicated less than three percent of missing data on the rest of

the variables other than the SEBLS. Because missingness was minimal and spread across the

other variables, listwise deletion was used for all subsequent analyses. As such, the effective

sample size varied slightly across analyses.

Sample Split

In order the evaluate the factor structure of the SEBLS scores, the total sample was

randomly divided into two subsamples: A (*n*=182) and B (*n*=196). Subsample A was used to

conduct item analysis and an exploratory factor analysis to determine a preliminary factor

structure. It was hypothesized that the SEBLS would yield a unidimensional structure, although a

four-factor model was also plausible given the intent to measure the three hermeneutical

principles along with application. Subsample B was then used to conduct a confirmatory factor

analysis of the model derived from the exploratory analysis along with testing several competing

models as rival hypotheses.

Item level descriptive statistics in each subsample were very comparable to the overall

results reported in Table 4.1. Demographic breakdowns of the subsamples also mirrored those

reported above for the total sample.

Exploratory Factor Analysis

Item Analysis

For subsample A, item analysis was conducted for the thirteen SEBLS items as a

preliminary check for internal consistency reliability as reflected in inter-item correlations and

measured by coefficient alpha.[94] The initial reliability was very strong, α=.949.[95] The corrected

item-total correlations were high and ranged from .547 to .849 with the lowest correlation for

item 5. Coefficient alpha was not improved with deletion of any of the items except only very

slightly for item 5 (improving by .001). Overall, there was no evidence for item deletions based

on item analysis, although item 5 appeared to be the weakest among the rest. Item 5 is the only

one related to remembering a Bible passage.

Common Factor Analysis

The correlation matrix of all SEBLS items was submitted to a factor analysis with

principal axis factor extraction (i.e., common factor analysis). This extraction was employed to

take into account possible measurement error in the scores and reflect potential latent constructs

in the data. Two factors had eigenvalues greater than one; but, the first eigenvalue was dominant

(λ=8.192) and the second was weak and barely exceed one (1.031). Extraction converged after

six iterations and the first factor explained 60.51% of the variance in the items. The second factor

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[94] Lee J. Cronbach, "Coefficient Alpha and the Internal Structure of Tests," *Psychometrika* 16, no. 3 (September 1951): 297.

[95] See Henson, "Understanding Internal Consistency," for a discussion of coefficient alpha along with context for interpreting coefficient magnitude.

explained much less (5.50%). Visual inspection of the scree plot reflected a single-factor solution.[96]

Parallel analysis and minimum average partial tests were conducted to further explore the number of factors.[97] Both of these were developed for use with principal components analysis, and their use with principal axis factoring can sometimes lead to overestimating the number of factors to retain. This was apparently the case for the current data as parallel analysis indicated many factors and minimum average partial indicated two. However, when using a principal components analysis, parallel analysis indicated a one-factor solution.

Overall, a dominant, one-factor solution was present in the data, and therefore a new factor analysis was conducted to extract a single factor. The resultant model was strong with an eigenvalue of 7.812 explaining 60.09% of the variance in the items (extraction converged after four iterations). Item communalities were generally high and ranged from .309 to .761. The lowest belonged to item 5 and indicated that about 31% of the item's variance was reproduced by the factor. By contrast, the second lowest communality was .494 for item 8, which indicated almost 50% of the item's variance was reproduced. As expected, the factor pattern/structure coefficients were strong and ranged from .555 to .872, again with the lowest belonging to item 5. Excluding item 5, all factor pattern/structure coefficients were at .703 or above.

Item 5 played a modest role in the factor model, but it was weaker than the other items on the SEBLS, which all reflected strong connections to a unidimensional factor solution. Importantly, this item was the only one written to tap into remembering a biblical passage, and

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[96] The factor analytic procedures used generally follow the recommendations of Henson and Roberts, "Use of Exploratory Factor Analysis," 409-10.

[97] All parallel analyses and minimum average partial tests were conducted using syntax provided by Brian P. O'Connor, "SPSS and SAS Programs for Determining the Number of Components Using Parallel Analysi and Velicer's MAP Test," *Behavior Research Methods, Instruments, & Computers* 32, no. 3 (September 2000): 396-402.

therefore did not explicitly reflect the three hermeneutical principles and application, which were the primary focus of the construct. As such, item 5 was deleted from the instrument.

Revised Factor Analysis

Because item deletions can change the factor structure, another common factor analysis was conducted on the remaining twelve items. A dominant factor was again observed with an eigenvalue of 7.870, now explaining 63.00% of variance after extraction (seven iterations required). The second factor was much weaker with an eigenvalue of 1.003 (5.84% of variance). Results from parallel analysis and a minimum average partial test mirrored those discussed above, and visual inspection of the scree plot indicated one-factor.

Therefore, a final factor analysis was conducted extracting a single factor. This solution reproduced 62.54% of the variance in the original items (λ=7.504). Communalities ranged from .490 to .759, indicating that the model reproduced between one-half to three-quarters of variance across the items. Factor pattern/structure coefficients were very strong, and all were .700 and above. The internal consistency reliability for the final twelve items was α=.950. Table 4.2 presents the final factor model for the twelve-item SEBLS along with item level means and standard deviations.

Table 4.2. Final Factor Solution for the Twelve-item SEBLS ($n = 182$)

Item	Pattern/Structure Coefficient	h^2	Mean	SD
1. Realize how a passage fits in the overall story of the Bible. (G)	.845	.714	6.99	2.10
2. Understand what biblical or doctrinal positions apply to a passage. (D)	.781	.611	6.19	2.27
3. See how a passage fits with the text around it. (C)	.833	.694	7.48	1.83
4. Apply a passage to my life in a clear way. (A)	.721	.519	7.55	1.78
5. Related a passage to both the Old and New Testaments. (G)	.753	.567	5.88	2.38
6. Explain how a passage relates to a statement of faith. (D)	.822	.676	6.84	1.90
7. Understand the historical context of the whole book or letter a passage is in. (C)	.700	.490	5.79	2.39
8. Understand how a passage matters for me. (A)	.738	.545	7.52	1.80
9. Explain how God's plan for the world informs as passage. (G)	.814	.662	6.85	2.09
10. Apply a passage to a core message of the Bible. (D)	.871	.759	6.86	2.06
11. Know how history helps inform understanding of a passage. (C)	.780	.609	6.17	2.23
12. Explain how a passage is relevant to the modern world. (A)	.811	.658	7.20	1.95
Eigenvalue	7.50			
% of Variance	62.54			

(Table 4.2 continued)

Note. Items are renumbered here after deletion of item 5, but otherwise kept in the same order.[98]

h^2=communality coefficient. G=Grand Story. D=Doctrine. C=Context. A=Application.

       Table 4.2 result reflects a strong factor solution. The variance explained is well above the

average (52.03%) found by Henson and Roberts in a review of exploratory factor analyses in

psychological literature.[99] Given that the majority of factor analyses in their study were actually

principal components analyses, which typically will yield higher percentages of variance, the

current variance explained (62.54%) is particularly noteworthy considering that a common factor

analysis was used that allows for the influence of measurement error.

       Viewed another way, the strength of the model is reflected in the magnitude of the

obtained factor pattern/structure coefficients, which are well above those typically observed in

factor analyses. The above authors found that analysts used an average cut-off of .40 to

determine whether a coefficient was meaningful. The maximum cut-off found was .50.[100] By

contrast, the current factor solution yielded factor pattern/structure coefficients of .70 and higher

for all items.

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[98] This table only includes 12 items because item 5 was deleted from the original 13 items in Table 4.1. Justification for deletion of item 5 from the instrument is provided in the narrative.

[99] Henson and Roberts, "Use of Exploratory Factor Analysis," 404.

[100] Henson and Roberts, "Use of Exploratory Factor Analysis," 402.

Confirmatory Factor Analysis

Multivariate Normality and Data Screening

Subsample B (*n*=196) was used to test the factor model found in the exploratory factor

analysis above. Confirmatory factor analysis with maximum likelihood estimation was used,

which assumes multivariate normality. A graphical test described by Henson was examined to

evaluate the assumption.[101] This approach is based on the multivariate Mahalanobis distances

values for each case as plotted with expected χ^2 values. Two cases were found to be extreme

multivariate outliers negatively influencing normality. Inspection of the cases revealed values

that were illogical relative to the construct, such as extremely high and low scores on similar

items. Therefore, both cases were dropped from further analysis bringing subsample B to *n*=194.

The cases were also dropped from all future analyses with the full sample, resulting in a new

total sample size of *n*=376. Multivariate normality was checked again without the cases and

deemed tenable.

Model Testing

The purpose of a confirmatory factor analysis is to test the hypothesis of a particular

model, in this case that found in the exploratory factor analysis above. However, because

different models can potentially fit the data equally well, it is useful to compare the model in

question with other rival hypotheses as different plausible conceptualizations of the data

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[101] Robin K. Henson, "Multivariate Normality: What is it and How is it Assessed?" in *Advances in Social Science Methodology*, Vol. 5, edited by Bruce Thompson (Greenwich, CT: JAI Press, 1999), 193.

structure. For the current data, Model 1 reflected the twelve-item, single-factor solution from the exploratory analysis and is presented in Figure 4.1. Model 2 added the original item 5, which was dropped above, resulting in the original thirteen-item, single-factor solution. This model was included as an additional test of the decision to drop item 5. Model 3 used the twelve items but was based on a four-factor solution with each of the three hermeneutical principles and application as separate but correlated factors with the three items each. In all cases, the scale of latent factors was set by fixing an item factor coefficient to 1.00, and error paths were also set to 1.00. No errors were allowed to correlate. Confirmatory analyses were conducted using the variance-covariance matrix with maximum likelihood estimation in SPSS AMOS (v. 26).
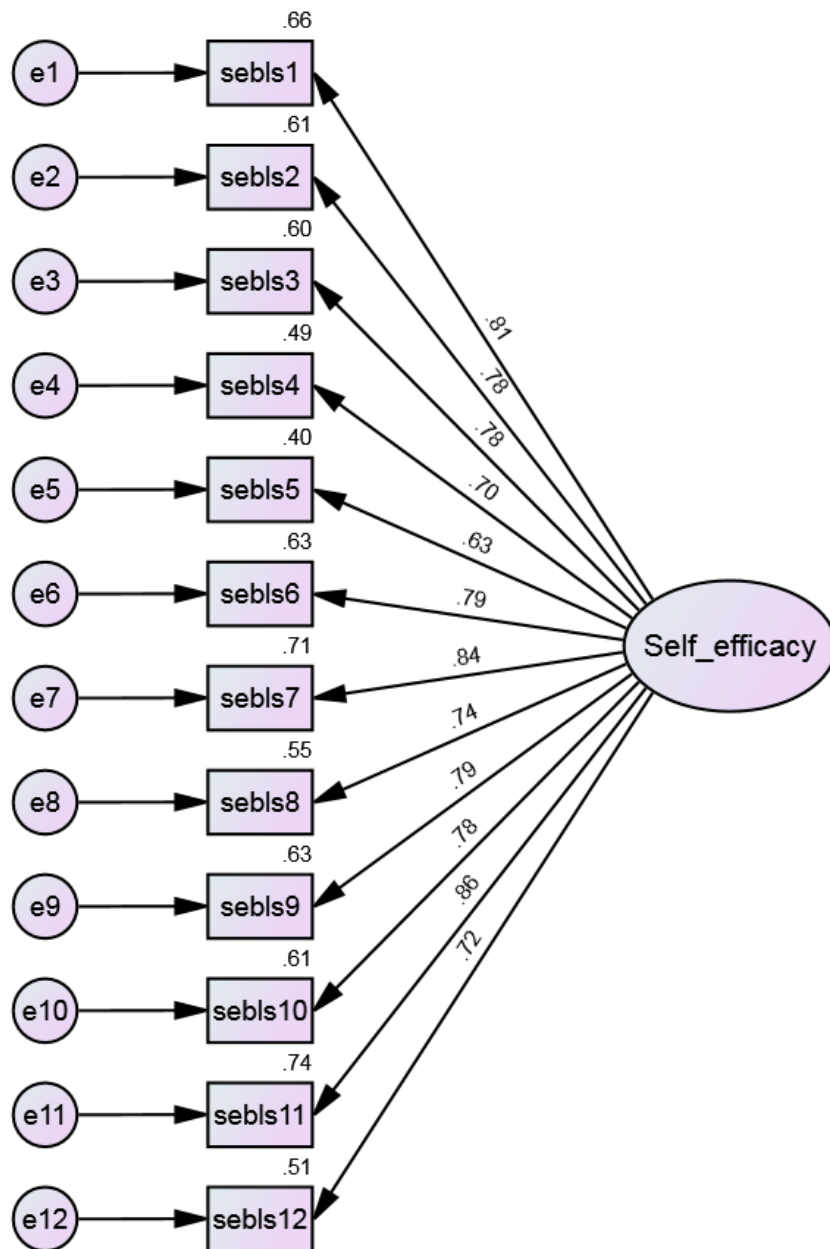
Figure 4.1. Standardized solution with R^2 values for the twelve-item, single-factor model for the

SEBLS in subsample B (n=194). Item numbering is consistent with Table 4.2.

Table 4.3 presents the traditional goodness-of-fit χ^2 test to evaluate the degree the proposed model fits the data. However, it is well known that this statistical significance test tends to reject reasonable models with large sample sizes. Other fit statistics were also consulted, including the CFI, RMSEA, and SRMR indices, which are commonly employed to help evaluate model fit.

Table 4.3. Confirmatory Factor Analysis Results for Competing Models (*n*=194)

	χ^2	*df*	*p*	CFI	RMSEA	SRMR
Model 1	259.62	54	<.001	.890	.140	.053
Model 2	285.99	65	<.001	.888	.133	.052
Model 3	201.05	48	<.001	.918	.129	.048

Model 1 yielded a statistically significant result which indicates poor model fit from a null hypothesis standpoint. However, as noted, the power of this statistic is heavily influenced by sample size and commonly rejects good models. It is presented here only for completeness in reporting. Of greater interest are the other fit indices. The CFI is lower and the RMSEA is higher than some commonly cited criteria (.95 and .06, respectively)[102], although others have argued that these cutoffs are too rigid, especially when conducting analyses at the item level and when there are more than a few variables per factor to foster construct validity, both of which apply in

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[102] See Li-tze Hu and Peter M. Bentler, "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives," *Structural Equation Modeling* 6, no. 1 (1999): 27.

the current study.[103] Furthermore, an empirical review of confirmatory factor analysis reporting

practices demonstrated that the average CFI in practice was actually below and the average

RMSEA was slightly above the criteria.[104] As noted by Gordon Cheung and Roger Rensvold:

> models with more items and more factors can be expected to yield smaller values of these [goodness-of-fit indexes]. This is due to the omission of small, theoretically insignificant factor loadings and correlated error terms. . . .This should serve as a warning to researchers who judge model fit in accordance with some generally accepted criterion (e.g., CFI = .90) while ignoring the effects of model complexity.[105]

Indeed, the current Model 1 fit statistics are curious given the very strong exploratory

factor analysis results that were obtained in the prior subsample. It is possible, of course, that the

model simply did not fit well in the second subsample and the purpose of a confirmatory factor

analysis is to check that very possibility. However, the item level results are quite contradictory

to poor fit, and instead point to excellent measurement quality. Figure 4.1 includes the

standardized factor loadings (pattern/structure coefficients) and the R^2 values for the Model 1

items. All loadings were statistically significant, but more important was their substantial

magnitude with an average of .785 (SD=.047). The loadings were consistently high and would be

considered excellent relative to DiStefano and Hess's review of confirmatory factor analysis

practice.[106] Considered another way, the strength of the model is reflected in the amount of

variance in the items that was reproduced by the self-efficacy for biblical learning factor,

[103] Herbert W. Marsh, Kit-Tai Hau, and Zhonglin Wen, "In Search of Golden Rules: Comment on Hypothesis-testing Approaches to Setting Cutoff Values for Fit Indexes and Dangers in Overgeneralizing Hu and Bentler's (1999) Findings," *Structural Equation Modeling* 11, no. 3 (July 2004): 325-26

[104] Dennis L. Jackson, J. Arthur Gillaspy, Jr., and Rebecca Purc-Stephenson, "Reporting Practices in Confirmatory Factor Analysis: An Overview and Some Recommendations," *Psychological Methods* 14, no. 1 (March 2009): 16. This review included published studies from 1998 to 2006.

[105] Gordon W. Cheung and Roger B. Rensvold, "Evaluating Goodness-of-fit Indexes for Testing Measurement Invariance," *Structural Equation Modeling* 9, no. 2 (April 2002): 250.

[106] Christine DiStefano and Brian Hess, "Using Confirmatory Factor Analysis for Construct Validation: An Empirical Review," *Journal of Psychoeducational Assessment* 23, no. 3 (September 2005): 234.

averaging 62% (mean R^2=.618, SD=.074). The factor accounted for more than half of the variance in all items, sometimes substantially more.

The item level results provide an important context for interpreting the fit indices as reflective of a strong model. In fact, the CFI was attenuated and the RMSEA was inflated by a phenomenon coined the *reliability paradox* by Gregory Hancock and Ralph Mueller. These researchers demonstrated that fit statistics can be substantially negatively affected when measurement quality is high (i.e., high factor loadings), and models can yield very strong fit statistics when measurement quality is low.[107]

This paradox is further demonstrated in Daniel McNeish and colleagues' simulation of fit statistic impact which varied measurement quality (loadings) while holding the strength of the model constant. The Model 1 results mirror their findings relatively closely for the RMSEA, and the CFI and SRMR were actually stronger than would be anticipated from their study. In sum, the reliability paradox is at work in the current data, and therefore the fit statistics should be interpreted in that context. As noted by McNeish and colleagues, "It is increasingly clear that no single cutoff value for any particular AFI [approximate goodness-of-fit index] can be broadly applied across latent variable models."[108] Furthermore, "it is vital to have a general idea of the values of the standardized loadings to assess AFIs because, without this context, the values of the AFIs are uninterpretable."[109]

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[107] Gregory R. Hancock and Ralph O. Mueller, "The Reliability Paradox in Assessing Structural Relations within Covariance Structure Models," *Educational and Psychological Measurement* 71, no. 2 (April 2011): 306.

[108] Daniel McNeish, Ji An, and Gregory R. Hancock, "The Thorny Relation between Measurement Quality and Fit Index Cutoffs in Latent Variable Models," *Journal of Personality Assessment* 100, no. 1 (January 2018): 50.

[109] McNeish, An, and Hancock, "Thorny Relation," 50.

Therefore, when taken in the context of the Figure 4.1 loadings and consistent with current thinking on fit interpretation, Model 1 demonstrated excellent fit with the data. This is both consistent and expected given the strength of the exploratory factor analysis.

Two competing models were compared with Model 1. Model 2, which included item 5, performed similarly to Model 1 (see Table 4.3). The χ^2 increased and the CFI decreased (reflecting worse fit) while the RMSEA and SRMR decreased slightly (reflecting better fit). However, item 5 yielded the only loading less than .70 (at .63) and accordingly had the lowest variance accounted for by the factor (R^2=.39). Interestingly, even though this item performed worse than the others, it is likely that the reliability paradox allowed the overall fit to appear relatively stable. Nevertheless, Model 2 is rejected in favor of Model 1 given the weaker psychometric quality of item 5 and for the substantive reasons discussed above.

Model 3 tested a four-factor structure with three items each (excluding item 5). See Table 4.2 for item to factor identification (grand story, doctrine, context, and application). All factors were allowed to correlate. The fit of this model improved slightly over Model 1 (Table 4.3). However, the improved fit reflects extremely slight distinctions among the factors. The average interfactor correlation was .93 and one correlation estimate was above 1.00, indicating essential unity between those factors. Discriminant validity among the factors was insufficient, especially given the increased complexity of the model. Therefore, Model 3 was rejected as well, and Model 1 was retained as the best and most parsimonious solution.

Having confirmed Model 1 in subsample B, the solution was then tested with the entire sample (n=376). Figure 4.2 presents the resultant standardized factor loadings and item level R^2 values. Results were essentially identical to the subsample B outcomes in Table 4.3, with χ^2(54)=439.67 (p<.001), CFI=.894, RMSEA=.138, and SRMR=.052. The χ^2 naturally increased

due to the larger sample size. The construct reliability of the factor was very strong as assessed

by coefficient $H=.954$.[110] Because H reliability is computed from the standardized factor

loadings, this coefficient also speaks to the high measurement quality of the SEBLS. The

unidimensional self-efficacy for biblical learning factor model was used in all subsequent

analyses.

[110] Gregory R. Hancock and Ralph O. Mueller, "Rethinking Construct Reliability within Latent Variable Systems," in *Structural Equation Modeling: Present and Future – A Festschrift in Honor of Karl Jöreskog*, edited by Robert Cudeck, Stephen du Toit, and Dag Sörbom (Lincolnwood, IL: Scientific Software International, 2001). 202.
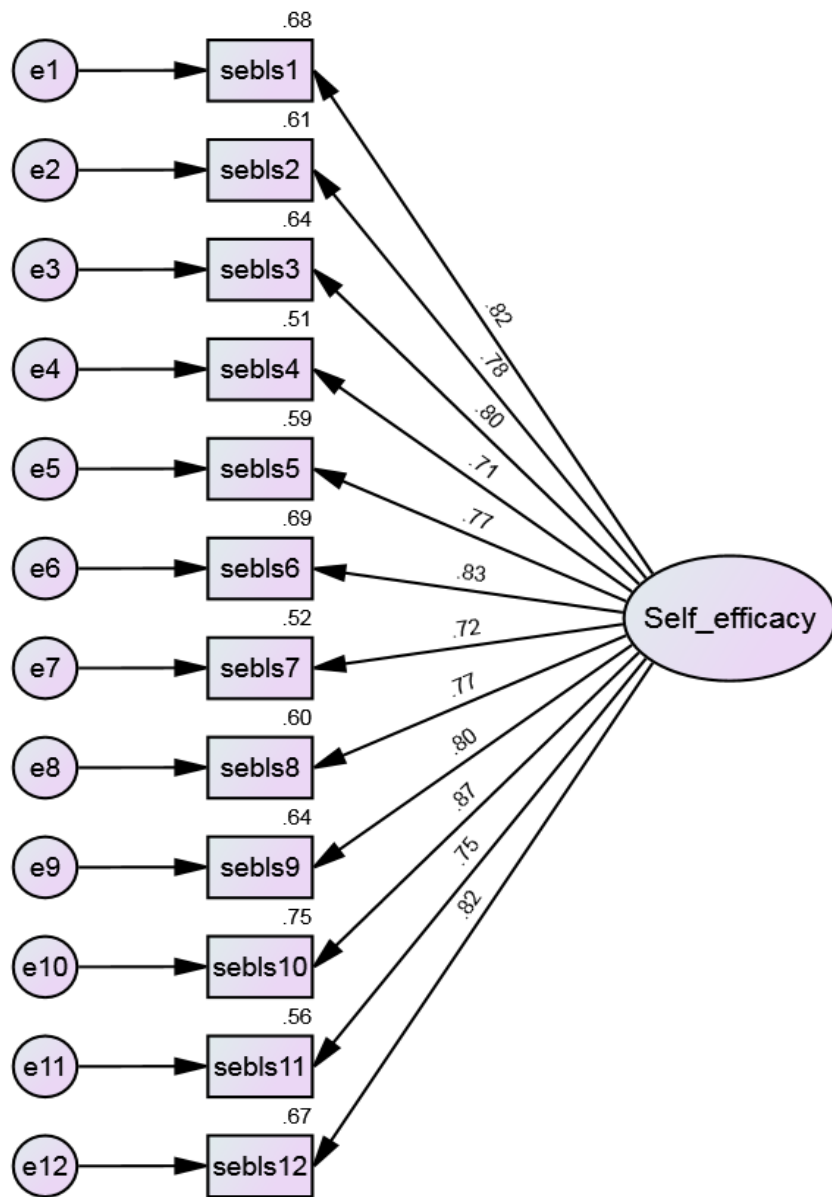
Figure 4.2. Standardized solution with R^2 values for the twelve-item, single-factor model for the

SEBLS in the full sample (n=376). Item numbering is consistent with Table 4.2.

Multigroup Invariance Testing

To further evaluate the quality of the SEBLS scores, a series of multigroup measurement

invariance tests were conducted to examine whether the model held across different groups in the

sample. The purpose of these evaluations was to ensure that the nature of the self-efficacy for

biblical learning construct is comparable across groups, which is particularly important for any

future attempts to compare the groups on the factor. If the instrument does not perform similarly,

then the meaning of the construct may vary for different subgroups of a population.[111]

In the multigroup invariance test process, the configural model is tested to see if the

factor model is consistent between the groups, which was established above to be a

unidimensional model with twelve indicators and no correlated errors. It is important to establish

this structure in both groups as a baseline with which to compare the more restrictive invariance

tests to come. No parameters (i.e., factor loadings, factor variance, or error variances) were

constrained to be equal between the groups at this stage.

The second stage tests equality of the factor loadings between the groups, sometimes

called measurement or metric invariance. This model is more restrictive because it assumes that

the items relate to the factor in the same way between groups. If the items do not behave

approximately the same way for both groups, then this stage will show weaker fit. Of course, if

that occurs, it indicates group differences in terms of how the items define the factor and

therefore the construct may be different for the groups.

The third stage is a test of equality of the factor variance between the groups, which is

added on top of the equality of the factor loadings in stage two. This test would normally

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[111] Barbara M. Byrne, "Testing for Multigroup Equivalence of a Measuring Instrument: A Walk through the Process," *Psicothema* 20, no. 4 (November 2008): 872.

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evaluate equality of all the factor variances and covariances (sometimes called structural invariance), but because the model is unidimensional there is only one-factor variance to consider. As before, this model is more restrictive than the previous one, and so noteworthy reduction of fit would indicate group differences.

The final stage is a test of equal error variances for each item between the groups. Reduction of fit at this even more restrictive point would point to differences in the residual variance of the items not explained by the factor. These results are reported here, but "it is now widely accepted that testing for the invariance of these error parameters represents an overly restrictive test of the data."[112] As such, meeting this condition was not required to establish strong factorial invariance.

Because each subsequent stage tests are more restrictive model, it is possible to test the change in the χ^2 statistic (using the difference in the *df* between levels) from one model to the other for statistical significance. For factorial invariance, the χ^2 statistic should not be statistically significant, thus indicating no difference between the models. However, this difference test "has been found to be highly sensitive to sample size in invariance testing" and thus even "trivial differences between groups may be flagged as noninvariant across populations."[113] Therefore, both CFI and RMSEA for the models are reported for possible changes in fit. Specifically, Cheung and Rensvold suggested that CFI should not worsen by more than -.01 to indicate comparable models,[114] while others have suggested that measurement

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[112] Barbara M. Byrne, "Testing for Multigroup Invariance Using AMOS Graphics: A Road Less Traveled," *Structural Equation Modeling* 11, no. 2 (April 2004): 274. See also Peter M. Bentler, *EQS: Structural Equations Program Manual* (Encino, CA: Multivariate Software, 2004).

[113] Yoonjeong Kang, Daniel M. McNeish, and Gregory R. Hancock, "The Role of Measurement Quality on Practical Guidelines for Assessing Measurement and Structural Invariance," *Educational and Psychological Measurement* 76, no. 4 (August 2016): 536.

[114] Cheung and Rensvold, "Evaluating Goodness-of-fit Indexes," 251.

quality should be considered more directly in the evaluation of model differences.[115] The CFI change criterion was used as an initial judge of model invariance while bearing in mind that the measurement quality of the items was high as discussed above.

Multigroup invariance tests were conducted for five grouping variables. The first test evaluated whether the construct was consistent between men and women. There is no inherent reason to believe that self-efficacy should vary by gender. The second test examined possible age differences. Age was measured as a continuous variable; therefore, it was divided into low and high groups for the invariance comparison. The variable was reasonably symmetrical and normal and so was split into two groups at the median (46) with the median age included with the low group. Thus, the low age group was 46 and below and the high age group was 47 and above. Because self-efficacy is a confidence-related construct, it is possible that its nature may vary with age.

The third invariance test compared those that reported having prior experience teaching an adult Bible study versus those that had no such experience. Because mastery experiences can lead to improved self-efficacy according to social cognitive theory, it is possible that prior experience teaching the Bible may influence the nature of the self-efficacy for biblical learning construct. Similarly, the fourth invariance test compared low and high groups regarding reported time spent reading, listening, or studying the Bible. Such experience could result in different structures for the self-efficacy factor. The time spent in each of these activities was summed to create a total time of biblical engagement variable. Because many people spend little time with the Bible, this variable was highly kurtotic and positively skewed. The median (240 minutes per

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[115] Kang, McNeish, and Hancock, "Role of Measurement Quality," 558.

week) was used to split the variable in low (240 minutes or less per week) and high (more than 240 minutes) groups for the invariance test.

Finally, because personal judgments of task difficulty can influence the amount of self-efficacy building information that is gained from a particular experience, a fifth invariance test compared those with low versus high self-ratings for the difficulty of studying a Bible passage and grasping it to the point of being able to explain what it means. This variable was assessed on an eleven-point scale and scores were fairly symmetrical and normal. The mean (3.84) was used to split into low (less difficulty) and high groups of approximately equal sizes.

Table 4.4 presents results for all five multigroup invariance tests. For gender, there were no statistically significantly differences between subsequent models, and the CFI estimates were consistent. This held true even at the most restrictive (and unnecessary) model with equal error variances. Age had a very similar outcome. Only the equal error variances model was statistically different, but each CFI was within -.01 of the prior estimate at all levels which indicates factorial invariance.

Table 4.4. Multigroup Measurement Invariance Tests for Five Dichotomous Variables

Groups	n	Invariance Level	$\Delta\chi^2$	Δdf	p	CFI	RMSEA
Male	181	Configural	524.75	108	<.001	.884	.103
Female	188	Factor loadings	13.29	11	.275	.884	.098
		Factor variance	.545	1	.460	.884	.097
		Error variances	10.55	12	.568	.884	.093
Low Age	184	Configural	498.42	108	<.001	.890	.100
High Age	181	Factor loadings	18.32	11	.074	.888	.096
		Factor variance	.037	1	.847	.888	.095
		Error variances	38.41	12	<.001	.881	.094
Prior Exp.	120	Configural	482.99	108	<.001	.885	.097
No Prior Exp.	249	Factor loadings	26.41	11	.006	.881	.095
		Factor variance	5.522	1	.019	.879	.095
		Error variances	88.19	12	<.001	.856	.099
Low Bible	192	Configural	491.33	108	<.001	.888	.099
High Bible	175	Factor loadings	13.61	11	.256	.887	.094
		Factor variance	.079	1	.779	.887	.094
		Error variances	27.91	12	.006	.882	.091
Low Diff.	173	Configural	525.84	108	<.001	.867	.102
High Diff.	198	Factor loadings	14.88	11	.188	.865	.098
		Factor variance	1.33	1	.249	.865	.098
		Error variances	28.54	12	.005	.860	.095

Note. Δ=change in the statistic. For the configural model tests, the baseline χ^2 and *df* are reported in the change column even though there is technically no prior model comparison.

Prior experience teaching an adult Bible study class was a bit more variable in the results. Constraining the factor loadings to be equal yield a statistically significant $\Delta\chi^2$, but this is not too concerning because of the power of this test to detect small differences as discussed above. Importantly, the CFI changed by only -.004, well within expected criteria for comparable

models. The equal factor variance result was consistent as well. Only when error variances were constrained to be equal did model-data fit seem to diminish somewhat (ΔCFI=-.023). Even here, though, the differences might be overstated given the high measurement quality of the items. Nevertheless, equal error variances are not required for establishing factorial invariance between the prior experience groups.

The results for low and high Bible engagement and low and high task difficulty were very similar to each other. Both yielded a statistically significant difference at the equal variances level, but the CFIs were quite consistent across all models. Factorial invariance was thus tenable for both tests.

In sum, the results supported multigroup measurement invariance for all comparisons. In four of the comparisons, theoretically meaningful grouping variables that may have influenced the nature of the construct were used. The fact that all yielded invariant results lends strong support to the generality of the SEBLS instrument, at least across the groups and variables examined here. The SEBLS was also invariant across gender.

Convergent and Discriminant Validity

Descriptive Statistics for Validity Variables

Total scale scores were computed as averages for all items on the SEBLS, impression management (IM), and each of the five personality domains on the Ten-Item Personality Inventory (TIPI). The IM and TIPI domains required recoding of some items due to negative or inverse wording for the construct. For IM, this included items 1, 3, 4, and 5. For the TIPI, this

included items 2, 4, 6, 8, and 10. Table 4.5 presents descriptives for all variables used in the pilot study for checking convergent and divergent validity.

Table 4.5. Descriptive Statistics for Variables in Validity Analysis

Variable		Mean	SD	Skewness	Kurtosis	*n*
Self-efficacy for Biblical Learning		6.68	1.65	-.38	-.21	376
Impression Management		5.31	1.19	-.62	.52	372
Extraversion		4.18	1.75	-.08	-1.04	371
Agreeableness		5.13	1.20	-.44	-.41	371
Conscientiousness		5.73	1.12	-.89	.44	371
Emotional Stability		4.87	1.37	-.50	-.43	371
Openness to Experience		4.80	1.31	-.37	-.30	371
Self-esteem		3.51	.93	-.46	.15	366
Difficulty of Biblical Learning		3.84	2.14	.34	-.37	371
Bible Engagement						
Time Reading		2hrs 28min	2hrs, 24min	1.82	4.16	369
	(Median)	2hrs, 0 min				
Time Listening		0hrs, 59min	3hrs, 41min	9.68	114.92	370
	(Median)	0hrs, 0min				
Time Studying		2hrs, 15min	2hrs, 35min	2.58	10.08	367
	(Median)	1hr, 30min				

Excluding Bible engagement, all variable distributions were approximately symmetrical and normal. The Bible engagement measures were somewhat positively skewed, although only time spent listening to the Bible was extremely skewed. For these variables, the median is also reported as a better measure of central tendency. The mean and median difference was most pronounced for time spent listening to the Bible, which also had an extremely high kurtosis value. Many participants did not listen to the Bible in audio format, or only listened briefly, and thus the median reflected no time spent engaging the Bible in this manner.

Validity Correlations

The convergent and divergent validity of SEBLS scores were explored by computing correlations with other variables that theoretically should or should not be correlated with SEBLS scores in particular ways. Table 4.6 presents the Pearson correlations between self-efficacy for biblical learning and the relevant variables. Each is discussed in light of *a priori* expectations for the relationships.

Table 4.6. Pearson Correlations between Self-efficacy for Biblical Learning and Validity Variables

Var	Ef	IM	Ex	Ag	Co	ES	Op	SE	Di	Re	Li	St	PE
Ef	1.00												
IM	.13	1.00											
Ex	.09	-.04	1.00										
Ag	.12	.21	-.03	1.00									
Co	.11	.21	-.01	.05	1.00								
ES	.22	.26	.08	.20	.15	1.00							
Op	.11	.05	.31	.04	-.04	.03	1.00						
SE	.23	.14	.25	.00	.21	.40	.16	1.00					
Di	-.49	-.09	-.05	.00	-.04	-.17	-.07	-.13	1.00				
Re	.27	.00	.07	.10	.00	.03	.07	-.01	-.17	1.00			
Li	.10	-.05	.06	.01	.04	-.02	.08	.04	-.04	.22	1.00		
St	.21	.04	.09	.05	.00	-.01	.03	.01	-.18	.69	.18	1.00	
PE	-.38	-.04	-.07	.01	.05	-.10	.05	-.08	.27	-.27	.03	-.22	1.00

Note. *n*s ranged from 358 to 376. Correlations as low as .11 are statistically significant at α=.05 with *n*=358. Ef=self-efficacy for biblical learning, IM=impression management, Ex=Extraversion, Ag=Agreeableness, Co=Conscientiousness, ES=emotional stability, Op=openness to experience, SE=self-esteem, Di=difficulty for biblical learning, Re=time spent reading the Bible, Li=time spent listening to the Bible, St=time spent studying the Bible, PE=prior experience as an adult Bible study teacher (1=yes, 2=no).

Impression management

As explained above, impression management reflects a person's tendency to cast him or herself in a positive light by over-emphasizing positive traits and under-emphasizing negative traits. It is an attempt to provide elevated self-descriptions toward the end of creating a socially desirable image to others. If participants responded to the SEBLS in a way that was related to impression management, then the validity of the SEBLS scores would be suspect. However, a small correlation would reflect good discriminant validity with the impression management construct, and this was supported in the current data ($r=.13$).

Personality domains

Both self-efficacy for biblical learning and personality measures are self-referent constructs and therefore are likely to be positively related. However, personality is theoretically distinct from self-efficacy because the latter is a judgment of future capacity and there is no reason to believe that this judgment should be strongly related to personality. Personality measures reflect a higher level of generality and lack the specific context necessary to assess self-efficacy confidence. Therefore, all of the personality domains in the five-factor model were expected to be positively correlated with SEBLS scores at small to moderate levels. The results indicated that these correlations were actually much closer to the low end of that spectrum (.09, .12, .11, .22, .11 for extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience, respectively), thereby indicating good discriminant validity between personality and self-efficacy for biblical learning.

Self-esteem

Because self-esteem is an evaluation of self-worth rather than a specific judgment about one's ability to succeed at a task, the two constructs are theoretically distinct. This distinction was borne out in the current data with a low correlation (.23). The relationship was positive as expected since both constructs are explicitly self-referent, but only reflected about 5% of shared variance between the variables. As such, the self-efficacy for biblical learning scores had good discriminant validity with self-esteem.

Difficulty for biblical learning

Convergent validity was assessed through the relationship between self-efficacy scores and self-reported difficulty in studying a Bible passage and understanding it to the point of being able to explain what it means. Self-efficacy should be lower if the task at hand is perceived as increasingly difficult, and therefore a moderate negative correlation was expected. The observed relationship was r=-.49 and thus supports the convergent validity between the variables in a theoretically meaningful way.

Bible engagement

Three variables were used to assess the amount of time participants engaged the Bible each week. The questions asked how much time was spent reading, listening, and studying or learning the Bible. Because Bible engagement should reflect increased levels of comfort and experience with the Bible, it was hypothesized that these measures would be somewhat related to self-efficacy for biblical learning. However, because activity with Scripture would not

necessarily be strongly related to the specific judgment of one's ability to study and learn Scripture, the correlations were expected to be small to moderate correlations.

The obtained correlations were $r=.27$, .10, and .21 for reading, listening, and studying, respectively. Although the relationships were in the anticipated positive direction, their magnitudes were somewhat lower than expected. Nevertheless, it was anticipated that self-efficacy for biblical learning would be distinct from just activity with the Bible, and as such these results provide modest support for the discriminant validity of SEBLS scores.

Prior experience as an adult Bible study teacher

Finally, a moderate relationship was expected between self-efficacy for biblical learning and whether participants had ever served as a teacher of an adult Bible study class. The theoretical rationale for this hypothesis is outlined above in the discussion on why teaching the Bible can facilitate mastery experiences in biblical learning. For the current data, this correlation was $r=-.38$. The negative direction results only from the coding of the dichotomous prior experience variable (1=yes, prior experience, 2=no prior experience). Therefore, participants that had prior experience as a Bible study teacher tended to also report higher self-efficacy for biblical learning, which supports convergent validity of SEBLS scores.

Summary of Validity Evidence

The pilot study provided a comprehensive assessment of the SEBLS. Of the original thirteen items, twelve were retained with strong psychometric properties as demonstrated across independent samples. The results indicate excellent evidence for a unidimensional structure that was invariant across multiple theoretically relevant groups. The convergent and discriminant

validity evidence for the SEBLS scores was in predicted directions in all cases, and the magnitudes of the correlations were usually consistent with *a priori* theoretical expectations. In sum, the evidence for the factorial structure, reliability, and validity of scores obtained on the SEBLS is strong.

Primary Study

Participants

Twelve participants initially signed up for the "How to Study the Bible" course. One person withdrew prior the beginning of the class due to personal reasons. Another person was unable to attend three of the seven class meetings and therefore was not able to participate in the final micro-teaching experience. Due to limited involvement, particularly regarding missing a key element of the intervention, this person was dropped from data analysis, leaving ten participants as the final sample. Average age was reported as 55.89 (SD=6.86) with six women and three men. Ethnicity is not reported specifically due to the low sample size, but the composition was primarily White. Pseudonyms are used when referencing participants below.

Pre-interview Analysis

All participants were interviewed prior to the beginning of the class to explore their perceptions and beliefs about Bible study and the pending class. Transcribed interviews were analyzed for themes and commonalities in responses as described above. The thematic results are reported below, along with participant quotations when appropriate for illustrative purposes.

Desire for Spiritual Growth

Each participant indicated that their interest in the class was in some way related to an overall desire for spiritual growth. The type of desired growth varied somewhat among persons, but the hope for some sort of advancement in spiritual development was unanimous. This hope was accompanied with a general excitement about taking the class and what might be learned from it. In general, the desire for spiritual growth was manifested in two subthemes.

Personal ownership of biblical learning

Four participants framed their desire for spiritual growth as wanting to increase their personal ownership of the Bible study process, as opposed to reliance on others' interpretations and teaching (e.g., pastors, Bible teachers). This personal ownership was motivated by a sense of needing to understand Scripture individually, rather than any sense of distrust of the other sources.

> I'm more interested in learning to study Scripture and do more investigation myself. Because we can find topical studies, we can find book studies on books, we can have devotionals and they're all good. They all have a place. But myself, I'd like to know if I have a question or something I want to know more about, that I have the skills to go find what other people - instead of what they have found which is all, you know, all helpful and all beneficial absolutely - but just to be able to say for myself, what can I find. Because that to me is important to be able to do your own thought process and research as well as take teaching from others. (Eva, pre-interview)

> I feel like I always need someone to help me walk me through that part. (Ruth, pre-interview)

Seeking depth of understanding

Half of the participants framed their desire for spiritual growth as seeking some sort of increased depth in biblical understanding. This was expressed variously as a stronger relationship

with God by learning his word, a new study method to facilitate depth, or even as seeking

methods to help simplify the complexity of the Bible toward greater understanding.

> But I also realize that I need to get it personally resonated more into my heart, you know, even though I feel like it's getting there, but I really need to have it resonate with me more. (Hattie, pre-interview)

> I'm hoping and praying that I learn more about the Bible itself along with that, you know. Because if you study it properly and retain that then you learn more about the gospel. (Tony, pre-interview)

Deficit Perspective in Current Level of Bible Engagement

All participants commented on the need for more engagement with Scripture.

Interestingly, this need did not refer just to the general idea that more engagement with Scripture

is better, but rather that the current level of engagement was somehow insufficient or lacking in

some way. This deficit perspective was unanimous.

> I would say for me, yes. I feel like I am not doing all that I could and should [to study the Bible]… So, really the more I can do, you know, the less I waiver and the better I feel about myself which is kind of important. (Trey, pre-interview)

> Weekly, unfortunately, you know. (Rosa, pre-interview)

> Well, yeah, it's not enough. It's definitely not enough, (Keisha, pre-interview)

It is important to note that this perspective existed regardless of how often participants

reported engaging the Bible, either verbally in the interview or quantitatively on the posttest

survey. Reported engagement ranged from mostly daily to sporadic across months. This

potentially raises relevant questions about the influences on such thinking irrespective of the

actual level of engagement.

Common, but Uneven Use of Resources

In conjunction with their Bible engagement, all participants reported using external resources to help their learning. For many, this included simply listening to additional sermons or teaching (typically from pastors at other churches), but for others it included more active research such as consulting commentaries. Multiple people also pointed to curriculum-based Bible studies, sometimes with a central teaching lead on video.

Although the use of resources was common across the participants, the type of resources used and, more importantly, the manner in which they were used was rather uneven. It would not be expected, of course, that the participants all use similar resources to support their learning. However, the level of structure and consistency of approach is directly relevant for the current study given the focus of the intervention class on how to study the Bible.

Uncertain Self-efficacy to Pursue Biblical Understanding with Depth

The above themes provide an important backdrop for placing the other results in context. However, the final pre-interview theme is more directly relevant as an outcome for the current study's focus on self-efficacy for biblical learning. When asked about one's ability to study the Bible in a meaningful way and learn from it, participant responses were mixed. Overall, results pointed to a largely uncertain self-efficacy for biblical learning. More specifically, four participants indicated limited ability, four indicated some ability but qualified it in some way (e.g., doubts, not disciplined enough), and two indicated ability without qualification. An example of each of these is provided below.

> *Limited ability:* Yeah, I don't. I don't have a good, I don't feel confident about that. And that's probably what's kept me…because when I am confident about something, I dive in at first and I'm a leader and I'm all about it. So, I've done that my whole life and I think

that's a part of me and a part of the reason why I haven't dove into some things. (Ruth, pre-interview)

Ability, but qualified: I have the ability, but my flesh gets in the way. You know we all have fleshly obstacles to overcome. (Monique, pre-interview)

Ability, unqualified: I can do it and I've done it. You know, I can . . . Read it, comprehend it, do all my questions and be ready for my class. So, I can do that. (Jessica, pre-interview)

Self-efficacy for Biblical Learning

Participants completed the SEBLS at the beginning of the first class and again at the end as a posttest outcome to quantitatively evaluate possible change in reported self-efficacy for biblical learning. The qualitative pre-interview data suggested mixed levels of self-efficacy at the beginning, and post-interview data are reviewed below to examine change from that perspective.

A retrospective pretest was also completed at the end as a check for whether participants may have overestimated their self-efficacy in the beginning. The purpose and logic of a retrospective pretest is discussed above. Table 4.7 presents descriptive statistics for average SEBLS scores at each measurement, and all variables were reasonably symmetrical and normally distributed. Examination of the means indicates gains in self-efficacy after the class intervention. Participants also rated their beginning self-efficacy noticeably lower when doing so retrospectively after the class.

Table 4.7. Descriptive Statistics for Self-efficacy for Biblical Learning (*n*=10)

SEBLS Administration	Mean	SD	Skewness	Kurtosis
Pretest	5.71	2.19	-.08	-.61
Retrospective Pretest	3.60	1.58	.11	-1.65
Posttest	7.28	1.33	.37	-.16

Two repeated measures analysis of variance (ANOVA) procedures were conducted to compare pretest and retrospective pretest self-efficacy to posttest self-efficacy. The sphericity assumption did not apply because there are only two times of measurement. Table 4.8 presents results for change in pretest to posttest means and the increase in average self-efficacy was statistically significant, $F(1,9)=8.17$, $p=.019$. The partial η^2 (.476) indicated that almost fifty percent of the variance in the scores was attributable to time of measurement, after controlling for variance due to the subjects. Expressed another way, the posttest mean is a little less than one standard deviation higher than the pretest mean (Cohen's *d*=.87). Both of these effect sizes would be considered large by most standards and reflect considerable gain from pretest to posttest in self-efficacy for biblical learning.[116]

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[116] Cf. Jacob Cohen, *Statistical Power Analysis*, and Robin K. Henson, "Effect Size Measures."

Table 4.8. Repeated Measures ANOVA for Self-efficacy for Biblical Learning from Pretest to Posttest (*n*=10)

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Time	12.40	1	12.40	8.17	.019	.476
Subjects	45.52	9	5.06			
Error	13.66	9	1.52			
Total	71.58	19				

Table 4.9 presents results for the repeated measures ANOVA comparing the retrospective pretest to posttest means. This gain was also statistically significant, $F(1,9)=56.58$, $p<.001$. The partial η^2 (.863) was very large with time of measurement accounting for well over three quarters of the variance in self-efficacy scores, after controlling for variance due to subjects. The standardized mean difference effect size (*d*=2.52) was also strikingly large, indicating that the posttest mean was two and a half standard deviations higher than the retrospective pretest mean.

Table 4.9. Repeated Measures ANOVA for Self-efficacy for Biblical Learning from

Retrospective Pretest to Posttest (*n*=10)

Source	SS	df	MS	F	p	η_p^2
Time	67.92	1	67.92	56.58	<.001	.863
Subjects	27.60	9	3.07			
Error	10.80	9	1.20			
Total	106.33	19				

Because the purpose of a retrospective pretest is to allow comparison with the regular

pretest to evaluate whether participants may have overrated their self-efficacy in the beginning, a

Cohen's d effect size was computed between these means. The standardized difference (*d*=1.10)

indicated that participants rated their pretest self-efficacy more than one standard deviation lower

when doing so retrospectively after the class. This difference was statistically significant per a

paired-samples *t*-test, *t*(9)=4.66, *p*=.001 (two-tailed). The large correlation between the regular

and retrospective pretests (*r*=.76) supports the reliability of the retrospective measure. Although

participants on average rated their pretest self-efficacy lower retrospectively, the relative order of

participant ratings was fairly consistent.

Figure 4.3 provides a visual representation of the differences between the two pretest

measures and the change to posttest. In sum, and as reflected in the statistical outcomes above,

the gain from pretest to posttest is quite noteworthy, and the gain from retrospective pretest to

posttest is substantial.
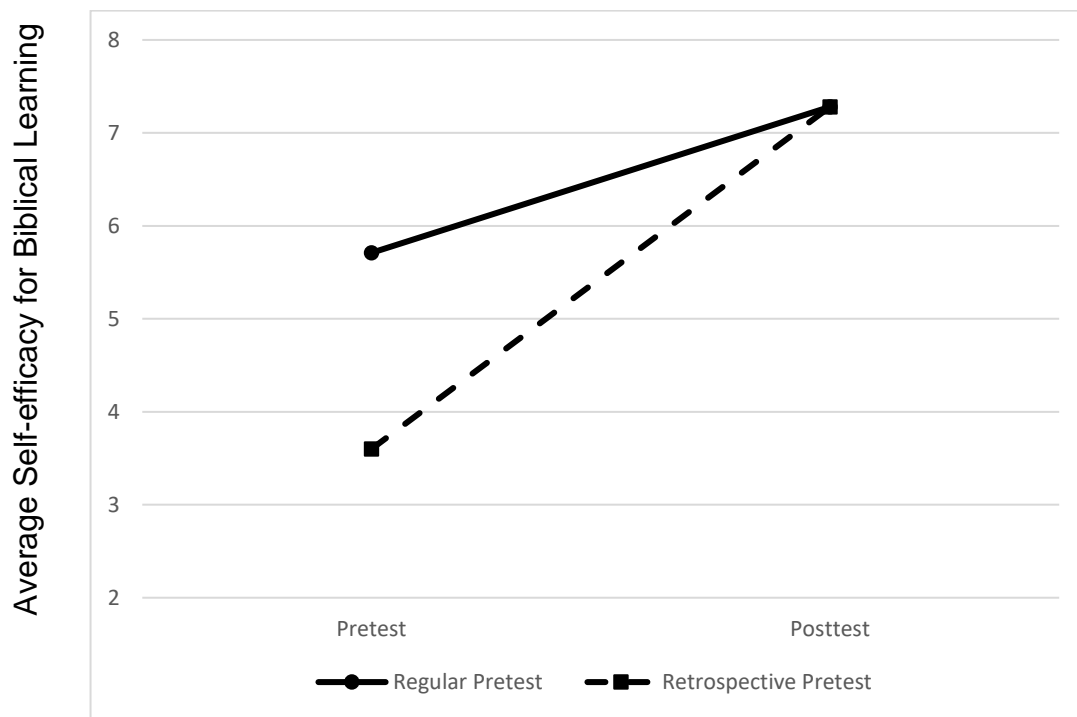
Figure 4.3. Mean gains from regular and retrospective pretest to posttest on the SEBLS.

Teaching Confidence and Accuracy

During each micro-teaching experience, participants were rated for their teaching confidence and teaching accuracy of content using the rubrics discussed above. Both of these were used as proxy measures for whether the micro-teaching process was a mastery experience for the participant. Table 4.10 provides the average ratings for each of the three micro-teaching experiences. The first involved sharing with the class what was learned about the context around the passage ("share-back"). To elevate the engagement level, the next two micro-teaching opportunities were framed as teaching the class something about the passage ("teach-back") related to how it connects with God's grand story of the Bible and how it informs or is informed by doctrine.

Table 4.10. Descriptive Statistics for Confidence and Accuracy Ratings for Micro-teaching Experiences (*n*=10)

Micro-teaching Experience	Confidence		Accuracy	
	Mean	SD	Mean	SD
On Context ("share-back")	2.40	.97	2.70	.95
On Grand Story ("teach-back")	2.60	1.07	3.30	1.06
On Bible Position/Doctrine ("teach-back")	4.00	.67	4.60	.70

The means in Table 4.10 demonstrate average increases in teaching confidence and accuracy for each successive micro-teaching experience. Repeated measures ANOVAs were conducted to examine these increases statistically across the three points in time. For teaching confidence, the sphericity assumption was met for the analysis (Mauchly's W=.983, χ^2=.134, p=.935). Results are given in Table 4.11 and supported statistically significant growth in confidence, $F(2, 18)$=33.10, p<.001. After controlling for variance due to subjects, the change across time accounted for almost 80% of the variance (η_p^2) in the teaching confidence ratings.

Table 4.11. Repeated Measures ANOVA for Teaching Confidence Ratings for Micro-teaching Experiences (*n*=10)

Source	SS	df	MS	F	p	η_p^2
Time	15.20	2	7.60	33.10	<.001	.786
Subjects	18.67	9	2.07			
Error	4.13	18	.23			
Total	38.00	29				

The sphericity assumption was also met for the repeated measures analysis of teaching accuracy ratings (Mauchly's *W*=.931, χ^2=.572, *p*=.751). Table 4.12 reflects statistically significant improvement in accuracy, *F*(2, 18)=33.08, *p*<.001, again with almost 80% of the variance in accuracy ratings being attributable to time of measurement, after controlling for subjects. Figure 4.4 visually displays the means for both confidence and accuracy. Accuracy ratings were higher than confidence ratings, but both showed some improvement for the second micro-teaching experience and distinct increases for the third micro-teaching opportunity.

Table 4.12. Repeated Measures ANOVA for Teaching Accuracy Ratings for Micro-teaching Experiences (*n*=10)

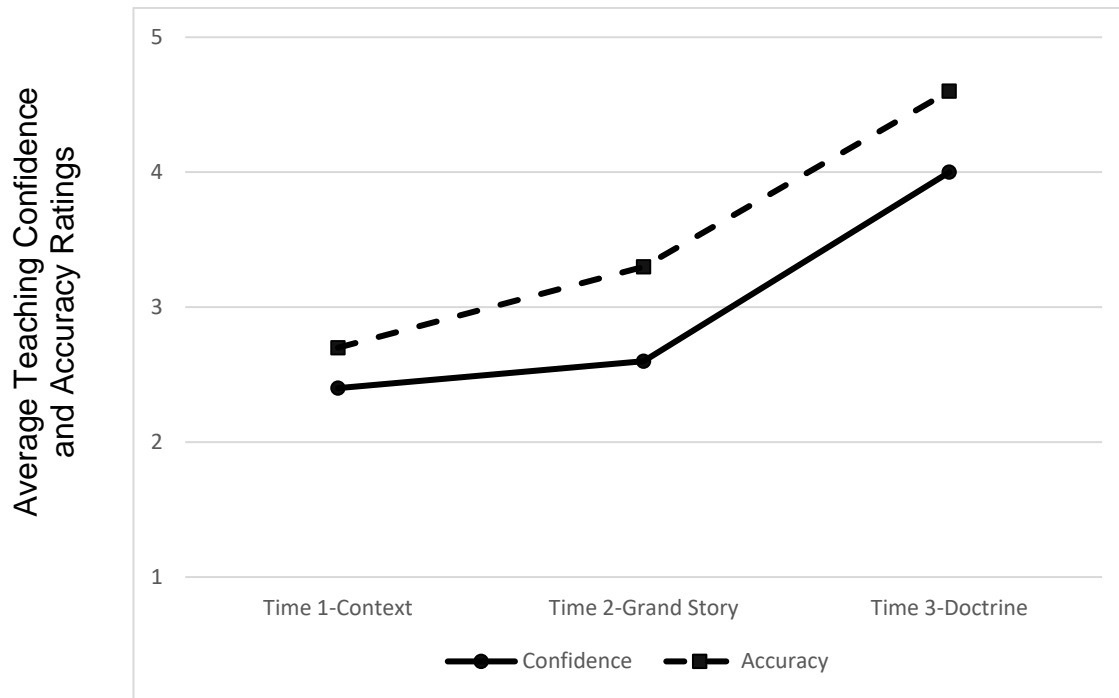| Source	SS	df	MS	F	p	η_p^2
Time	18.87	2	9.43	33.08	<.001	.786
Subjects	17.47	9	1.94			
Error	5.13	18	.285			
Total	41.47	29				

Figure 4.4. Mean change in teaching confidence and accuracy ratings for the three micro-teaching experiences.

Doctrinal Awareness

Participants provided narrative descriptions of a doctrinal position related to their passages before and after the class. The intervention was designed primarily to influence self-efficacy for biblical learning, but a secondary goal was facilitation of a deeper understanding of doctrine as a function of Bible study using the micro-teaching process. One simple measure of comprehension is word fluency, or the amount of words used to describe the doctrinal position. With greater understanding of a topic comes an increased likelihood of longer, richer descriptions of that topic. Word count is not a measure of accuracy or content depth, but it does provide a proxy measure for breadth and general understanding.

The average word count increased by about forty words from beginning (M=58.20, SD=26.79) to end of the class (M=98.50, SD=48.62), although the standard deviation also increased. This mean difference was statistically significant in a paired-samples *t*-test, $t(9)=2.71$, $p=.024$ (two-tailed), with a large effect size ($d=1.03$). On average, word fluency after the class was about one standard deviation higher than before engaging the intervention.

Beyond word count, depth and accuracy of participants' doctrinal responses were evaluated with four external raters as described above. In absolute terms across all forty ratings (i.e., four raters for ten participants), the raters indicated that 72.5% of the participants improved in written expression of the doctrinal position (20.0% decreased, 7.5% no change). This is a high percentage of improvement, but four raters were used to specifically help control for possible idiosyncrasies in individual ratings. Therefore, the experts' ratings were averaged for each participant, yielding an average pretest doctrinal awareness score and an average at posttest. These averages represent better indicators of participants' doctrinal awareness.

On average, eight of the ten participants showed improvement in the accuracy and depth of their written statements on their doctrinal position. One person showed no gain but was rated high at both pretest and posttest (7.25), and one person showed a slight decline at posttest. Overall, though, the average posttest rating (M=6.35, SD=1.41) was about two points higher than the average pretest rating (M=4.43, SD=1.44). These average expert ratings were explored further with a repeated measures ANOVA, with results presented in Table 4.13. The posttest increase was statistically significant, $F(1,9)=9.84$, $p=.012$. The partial η^2 (.522) was large with time of measurement accounting for over one-half of the variance in doctrinal awareness ratings, after controlling for variance due to subjects. The standardized mean difference effect size ($d=1.35$) was substantial. The average expert rating at posttest was over one standard deviation higher than at pretest.

Table 4.13. Repeated Measures ANOVA for Expert Ratings of Doctrinal Awareness from Pretest to Posttest ($n=10$)

Source	SS	df	MS	F	p	η_p^2
Time	18.53	1	18.53	9.84	.012	.522
Subjects	19.59	9	2.18			
Error	16.94	9	1.88			
Total	55.06	19				

An independent content review of the responses by the researcher was largely consistent with the average expert ratings. The only variation involved the person rated as demonstrating no

change in doctrinal accuracy and depth. The researcher considered this person's responses as showing slight improvement. However, this is a minor difference in perspective and the rest of the participant responses were judged in the same direction.

As an example of significant doctrinal awareness improvement, one participant indicated before the course that she had never heard of the doctrinal position that she was being asked about. However, the post-response provided a rich description of the position with references to both Old and New Testament Scripture as support. More subtle shifts in depth and accuracy tended to use more precise language, expand on concepts, and sometimes include Scripture references.

<center>Post-interview Analysis</center>

Post-interviews were conducted individually in the week following the last class session. As with the pre-interviews, transcriptions were analyzed for themes and commonalities in responses. The analysis included consideration of the pre-interview data as well, particularly regarding potential change in self-efficacy. The thematic results are reported below, along with quotations when appropriate for illustrative purposes.

Impact on Ability and Confidence

Central to the current study is the nature of self-efficacy growth, if any, for participants during the class. Pre-interview responses reflected mostly perceptions of limited or qualified ability to study the Bible, along with two persons who expressed no known limitations. Post-interview responses pointed to perceived improvement in ability or confidence for eight participants. The remaining two implied a positive experience but did not comment on improvement in self-efficacy related perceptions directly. Interestingly, the two individuals who

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indicated strong ability with no limitations at pre-interview still indicated considerable growth

from the class. Because this is a central outcome for the current study, a quote is included from

each participant as an exemplar.

Indicated growth in ability or confidence:

Oh, stronger . . . sometimes I feel like I'm going in the wrong direction or I'm seeing it wrong, you know, and I'm not. And that's what, I guess I needed confidence and [the class] helped me build confidence I guess you could say. (Ruth, post-interview)

I think it's definitely been expanded. (Eva, post-interview)

. . . like on a number from 1 to 10? I came into it pretty confident with that, but yeah, I'm definitely confident in it now. (Tony, post-interview)

That's another thing that I think I got out of it. Cause I wouldn't normally do that [i.e. ask questions and take risks with ideas]. [*What do you think about your ability now?*] Oh gosh, a ton . . . Yes, absolutely. I mean, I'm not a hundred percent confident about everything . . . but I'm way . . . I feel much better . . . yeah, platform. Foundation. (Hattie, post-interview)

. . . I still feel like I can do it. But maybe it's a smidge easier now I would say. Just a couple more things to kind of look at and think about . . . (Trey, post-interview)

Oh, I think [my ability] increased dramatically. . . . Absolutely. Because I went from wandering . . . and not wondering, but wandering around . . . Now I think that the process that we've learned is great. I feel like that the way I kind of take it in, and I think I explained to you, is more I get the history behind something, so that helped me . . . that's how I feel, I mean I really do. I feel like it helps dramatically. (Keisha, post-interview)

I mean, I feel confident and thinking, okay I can interpret this Scripture and apply it . . . For me to be able to just say, yeah I feel confident in doing that, because I have to be humble and know that I can't do it on my own power. (Monique, post-interview)

Well I feel even . . . I feel a lot better. I actually feel that the class took me up a notch so to say, or a couple notches in how I study. (Jessica, post-interview)

Positive experience, but no direct indication of growth in ability or confidence:

There's a quote that says that growth is the only guarantee that tomorrow will be different than today or even better, right? . . . And so you know really it's like in a way, I don't know I feel like I need to be taught more about the Bible as much as I need to just apply the Bible, you know . . . Really the application part is when it makes a difference. I mean are you going to apply it? (Max, post-interview)

I enjoyed it. I think it was great and it was a real motivator for me to study more than ever on any of . . . on anything . . . all in all it was great. It was a really good thing . . . Because I found that it took a lot of study. A lot. (Rosa, post-interview)

The interview data corroborate the quantitative results, and both point to change in self-efficacy for biblical learning from beginning to the end of the class for most participants. The observation that those who entered the class with relatively solid belief in their ability to study the Bible in a meaningful way, but still demonstrated growth in ability or confidence, also speaks to the important role of the retrospective pretest above. The context and cognitive processing of efficacy information is important in such evaluations. New experiences and knowledge demand a reassessment of capacity.

Micro-teaching as a Key Process for Growth

The evidence supports notable change in self-efficacy, but the current thesis assumes that this change is facilitated by a micro-teaching process while learning how to study the Bible. The participants were unanimous in asserting that the micro-teaching expectation in the class was critical to their experience, and all but one person stated that the class would be much different if the "share-back" and "teach-back" elements were not used. This difference was primarily framed as a less intense, more shallow experience, or a class in which participants would ultimately engage less and thus get less out of it. The one dissenting voice suggested that similar outcomes could be attained with a less direct method of sharing one's learning, but still recommended some mechanism to reflect what was being learned about a passage.

Of course, the heightened engagement that micro-teaching facilitates is intimately connected to the level of accountability that it brings to the learning process, and this is clear in the post-interview data. The accountability to study and prepare, however, naturally leads to

deeper and more expansive thinking in the process which informs the mastery experience in

biblical learning. Below are examples of participant perceptions of the value of the micro-

teaching process (called share-back and teach-back in the class).

> I think by going through those exercises and actually applying them, or doing the best
> you can to apply them, and then the holding accountable of the teach-back is you
> exercising that. I mean you can fill your head with all sorts of things but until you use
> that knowledge or use that, what you've learned, you haven't exercised it. If you don't
> exercise it, then it doesn't grow. If you haven't put it to the test, you haven't challenged
> yourself in that new thought or that new element or whatever. So, it just, it doesn't grow.
> (Max, post-interview)

> *Max also commented on observing growth through the micro-teaching of another:*

> Yeah I mean I could just see in her, you know. . . . Yeah each week, every time she did it
> she had more and more momentum and you could tell she'd built in her confidence up in,
> okay how do I find resources that help me understand this? So yeah, that was kind of
> cool. (Max, post-interview)

> It made me organize my thoughts about the whole thing and put together the big
> picture. And also be able to organize the ideas, the small details, the parts to the whole is
> that sphere,[i.e., interpretation spiral] thing you taught us. (Hattie, post-interview)

> I think the share-back, teach-back model, expectation . . . for me that was great
> motivation to put the time in during the week so you didn't . . . so you hopefully had
> something thoughtful to say. So, in terms of lighting a fire under me it was wonderful. I
> really don't see how you could get as much out of the study without it frankly. . . . I really
> liked that part of it. I don't really see how you could have the class without it. (Trey, post-
> interview)

Modeled Structure and Process Integral to Learning

Another theme evident in the post-interviews related to the benefit of the Bible study

structure and process that was used. This structure provided a framework that was integral to the

biblical learning of the participants. An important point here is that few of the participants felt as

if they had an adequate structure or process to employ when studying Scripture, for some even

after many years of being a Christian interested in growing closer to God through studying his

word. For example, during an in-class discussion of the three interpretation principles, one

person asked the group if they had ever heard of these principles as a way to study the Bible,

along with the idea of an interpretation spiral to understand how the part informs the whole and

vice versa. The structure was new to all in the group. The perceived value of the structured

process was further noted in the post-interviews.

> I like the way it was structured, the way you structured and gave the worksheets and the different points, and questions, and all that helped to guide it. But it was amazing, I had no idea that I was going to be able to access all that information. And I couldn't make sense of it all because there was so much, but it was really, really, very, very interesting and satisfying and it was more than I thought it could be really. (Eva, post-interview)

> Oh, I think it was really good as far as giving us kind of some guidelines and a thought process to go through with studying. I thought someone giving us some good resources, and then try to teach us how to, I guess dive into each of the other . . . each of the elements, it helps me tremendously. It's like I had a thought of somewhere to go. . . . Well, I think now when I read a Scripture, first of all it's not going to be reading, reading, reading and you know just keep going . . . it'll be more reading a section, diving into it, understanding that before you go on to something else. . . . So, I think it'll slow me down and make me study and learn each passage before I go on. (Keisha, post-interview)

As discussed above, the purpose of the structure was not only to help facilitate a method

for Bible study, but also to provide enough scaffolding and support to the participants to help

minimize their uncertainty and anxiety during the process, given the deleterious effects that can

have on self-efficacy growth. Despite this effort, the negative role of anxiety was noteworthy for

several, and this is discussed further below. However, the structure was successful in helping

many participants to organize their use of resources and provide a way to bring thinking back to

the text at hand. The pre-interviews suggested a very uneven, inconsistent use of resources

coming into the class, and thus the ability to organize one's thinking and study in a structured

process is supportive of self-efficacy development.

> Well it helps me take into consideration all the different aspects of how you would look at a broader text and then zero in on what . . . like if you were assigned a passage to teach or study or whatever you're doing, or for your own self . . . Just the circle back [i.e.,

interpretation spiral], I like that . . . you circle back and say, okay so what other things do I see in this passage, or the why behind the writing. Why did they teach that? Or why was that written? How can I apply that to my life today? I love looking at Bible study like that. (Monique, post-interview)

But when I did sit down and do it, it was great. I thought that the wheel . . . I call it . . . like the wheel diagram [i.e., interpretation spiral] was very helpful. I'm a visual learner so that really kind of helped me grasp it more. (Jessica, post-interview)

I think I will always look for the big idea. I will always look at . . . I will always read my references if I'm not sure. I understand what I'm reading cause I think that has really helped me. And I will always dig deeper. (Ruth, post-interview)

Generalized Learning and Interdependence of Scripture

One theme emerged from the post-interviews that was not expected relative to the current thesis. That is, most participants pointed to generalized learning that extended beyond the class or to an increased awareness of the interdependence of various Scripture passages. Although it was not hypothesized as part of the thesis, generalized learning (or, applying new learning in novel situations) would theoretically be expected from an active learning experience that facilitates deep cognitive processing. Furthermore, increases in self-efficacy would theoretically be related to tendencies to generalize learning due to elevated agency and expectation of positive outcomes.

. . . like yesterday Pastor [name] was talking and you start thinking differently when you start hearing Scripture and what's being said. . . . Yeah, the brain is kind of clicking more than before. You know, you're not just sitting there. You're a sponge but it's like you're an active sponge all of a sudden. (Tony, post-interview)

It really helped me when [Bible book], you know, taking that Bible study, I was glad I was doing that at the same time cause it kind of helped . . . do you think it's because you've been studying a little differently? Well, probably so . . . I just looked at everything a little differently. And understood it a little bit better . . . (Ruth, post-interview)

Participants also commonly commented on a greater awareness of the interdependence of Scripture, which is a specific manifestation of new learning. This outcome would naturally flow

from the assumptions stated above concerning the existence of a triune God, that the Bible

emanates from him, and that it reflects an inherent unity of progressive revelation of God. For

example:

> Like the process wasn't overwhelming, just the amount of . . . it's the Bible. . . . And then
> you start to see all this, and you see - oh this might be a connection! (Eva, post-interview)

In addition to the post-interviews, field notes documented that both classes independently

came to the conclusion that many of the passages they were studying were related to each other

as well as with many portions of the rest of Scripture. Interestingly, this occurred for both groups

on the same day (week 5) and generated a group discussion about how connected the different

parts of the Bible really were. As an additional observation, prior to this group discussion, one

participant even pulled the researcher aside and asked if a point of the class was to reveal at the

end that all the passages were related.

Importantly, this was not an intended purpose of the study design. As described above,

passages were selected primarily to represent diversity across New Testament books or letters

and under the condition of having an apparent connection with a different evangelical Bible

position. If anything, the passages were purposefully selected to represent some diversity.

Nevertheless, the inherent unity of Scripture became increasingly apparent to participants.

Barriers to Learning

The post-interviews also corroborated field observations related to two possible barriers

to people's learning, and therefore also potential barriers to self-efficacy growth. Both factors

were anticipated, but their impact was stronger than expected. Neither was unanimously

experienced, but multiple participants commented on them and thus the factors emerged as a

theme.

Stress load with micro-teaching

The micro-teaching expectation may naturally create a level of anxiety for those not comfortable with speaking in front of others, concerned about the accuracy of their information or judgment of others, or some combination of both. Because anxiety levels that are too high can work against self-efficacy development[117], multiple steps were taken to help minimize this possibility (e.g., scaffolded experience, guided worksheets, minimal time commitment, encouragement). Nevertheless, the stress load associated with the micro-teaching process was noteworthy for several participants.

> For me it was nerve-wracking . . . .I dreaded it really bad. (Rosa, post-interview)

> I think people become overwhelmed and afraid. I mean, obviously I was, so once I got in there and I realized everybody is just like me. . . . but I think for a recruitment process . . . (Keisha, post-interview)

> I'm just not comfortable. . . . Yeah, [the teach-back] is just not my deal. . . . It's just not my deal, there I tried. (Tony, post-interview)

Challenges related to information overload and time management

An additional challenge concerned the significant volume of information that participants had to process. This volume came from multiple sources, including the study skill content of the course, the procedural load of having to apply and practice the skills, the many external resources available to consult, and the magnitude of the Bible itself. Limited time to process this information exacerbated the challenge for some. The time limits took several forms, including

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[117] Bandura, *Self-efficacy*, 106.

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the condensed, seven-week length of the course and the practical limits of life on personal Bible study.

> Oh, the challenge part is just the number the number of sources out there that you kind of feel compelled to at least take a peek at each of them. And then, you know, then that quickly leads you to 'been at it an hour now and I really haven't written down one thing.' So, you just, you know, where do you kind of stop and draw the line? (Trey, post-interview)

> . . . the challenging part for me was time. (Jessica, post-interview)

> Well, it was overwhelming at first, like with everybody else. And it was challenging because I was trying to get too detailed. . . . You know how you said you had to dig down, but yet you have to focus on the main points? . . . Well, I'm detail oriented so I dug dug dug dug dug, and then I get too far off base and that really . . . at first that frustrated me. I was like stressed out, especially the second [teach-back] for some reason. Really stressed out . . . (Hattie, post-interview)

Another ironic impact of time was observed related to the five-minute cap on each micro-teaching experience. Before the class, several participants commented on whether they would be able to teach for that long and fill the time. However, it became immediately apparent at the first micro-teaching that this was not much time to share the amount of information that had been covered and learned. Several people then began to feel pressure from having to keep their teaching limited to that time.

> The biggest challenge for me was having to, of course, present back and know exactly what I'm supposed to be, you know, fitting it into that five minutes. That was probably the hardest because I felt like I learned so much, so it was hard to find what was the most important to present . . . (Ruth, post-interview)

> . . . like that first week I was like, five minutes is nothing and people are . . . and before I started the class, I'm like what am I going to say for five minutes? . . . So that was a little difficult, so maybe with the next class you say "guys five minutes really isn't very long" . . . You just, let's practice five minutes here . . . (Eva, post-interview)

Summary

This chapter presented results from both the pilot study to develop the SEBLS and the primary study that examined potential change in self-efficacy for biblical learning and doctrinal awareness after participating in a seven-week course on how to study the Bible. Micro-teaching played in important role in the course, and results pointed to these experiences as central to participants' overall positive outcomes. Both self-efficacy for biblical learning and doctrinal awareness improved across the course, as evidenced in both quantitative and qualitative methods.

Chapter 5: Conclusion

The thesis motivating the current study stated that a scaffolded, small group experience which utilizes micro-teaching of a biblical passage as a model of participation will positively relate to self-efficacy for biblical learning and doctrinal awareness. The findings point toward clear support for the thesis from multiple data sources. Improvements were observed in both reported self-efficacy and in the depth and accuracy of written summaries of doctrinal positions related to a studied passage of Scripture. Furthermore, the micro-teaching element of the course was recognized as critical to facilitating depth of study and learning, which created a mastery experience to provide self-efficacy building information.

Measurement of Self-efficacy for Biblical Learning

There are no known measures of self-efficacy for biblical learning, and therefore the pilot study was necessary to first develop an instrument to fill this void in the literature. Self-efficacy as a construct has seen a long history of research and application, particularly since Bandura's comprehensive treatment of the construct as situated in his broader social cognitive theory.[118] Although the application of self-efficacy to biblical learning is relatively novel, at least in terms of specifically operationalizing a variable that is congruent with social cognitive theory, it has potential implications for the more general issues surrounding Bible engagement and biblical literacy. Because self-efficacy, as an expression of human agency, has been commonly found to be predictive of future effort toward a range of activities, the theory-supported assumption is that

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[118] Bandura, *Self-efficacy*.

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self-efficacy for biblical learning may influence the degree people engage with Scripture.[119]

Future research will need to explore those possibilities in broader ways, but the development of an instrument that can measure the construct is an important step in this line of inquiry.

The SEBLS demonstrated a strong factor structure in the exploratory analysis, which was then confirmed in an independent sample. Of particular note was the ability of the single factor to explain a considerable amount of variance in the original items. The variance explained was well above that normally found in factor analyses, which is a key indicator of factor strength.[120]

The unidimensional structure supports the use of the SEBLS global score to collectively represent self-efficacy for each of the three hermeneutical principles and application of Scripture. Although a single factor was anticipated, it was informative to empirically confirm the close relationships between these four areas. This lends support to the idea that belief in one's ability to handle any of the hermeneutical principles or apply the Bible to one's life is just as important as any of the other aspects of biblical learning.

It is possible, of course, that a researcher might decide to use just a subset of items to try to more specifically represent a certain principle (e.g, only the three items for understanding a passage in context), but this would ignore the strong correlations between items across all areas. It would also ignore the observation that Model 3 in the confirmatory factor analyses resulted in

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[119] A broad summary of evidence for self-efficacy as a strong predictor of future behavior is found in Bandura, *Self-efficacy*. Since publication of *Self-efficacy*, a wide range of studies have further documented the pervasive nature of the self-efficacy construct in many areas of life. A complete review of this literature is well-beyond the scope of the current study, but Usher, "Tracing the Origins of Confidence," summarizes some of this literature and is a useful starting point for additional reading. Other works provide summaries by way of meta-analyses of self-efficacy in specific domains. For example, in teaching performance, see Robert M. Klassen and Virginia M. C. Tze, "Teachers' Self-efficacy, Personality, and Teaching Effectiveness: A Meta-analysis," *Educational Research Review* 12, no. 2 (June 2014): 59. In physical activity and recreation, see Stephanie Ashford, Jemma Edmunds, and David P. French, "What is the Best Way to Change Self-efficacy to Promote Lifestyle and Recreational Physical Activity? A Systematic Review with Meta-analysis," *British Journal of Health Psychology* 15, no. 2 (May 2010): 265.

[120] Henson and Roberts, "Use of Exploratory Factor Analysis," 404.

extremely high factor correlations when separate factors were tested, which ultimately resulted in rejection of Model 3. Even if a single principle were assessed with a subset of items, the substantive meaning of that factor cannot reasonably be separated from the substantive meaning of the rest of the areas. Without stronger discriminant validity among the sub-areas, only the global score is recommended for future research.

Beyond factor structure, the convergent and discriminant validity of SEBLS scores was in expected directions for every validity coefficient tested across a range of other theoretically relevant variables. Overall, this provides a solid nomological network of validity meaning on which to build additional evidence as the instrument is used more in the literature.[121] Furthermore, the invariance performance of the SEBLS provides preliminary support for consistency in the nature of the self-efficacy for biblical learning construct across multiple groups. In sum, the SEBLS scores yielded strong psychometric characteristics for both reliability and validity. Therefore, the instrument can be employed in research seeking to measure self-efficacy for biblical learning.

Change in Self-efficacy

In the primary study, the overall change in self-efficacy was larger than anticipated as evidenced in both survey and interview data. The effect sizes from pretest to posttest were large by most standards, but the short term duration of the intervention places them in even starker relief. As a psychological construct, self-beliefs are not typically quite so malleable, and so the shifts observed seem to point to a particularly meaningful process per interview statements.

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[121] Lee J. Cronbach and Paul E. Meehl, "Construct Validity in Psychological Tests," *Psychological Bulletin* 52, no. 4 (July 1955): 290.

The difference between the regular pretest and the retrospective pretest should not be overlooked. Participants tended to rate confidence in their abilities much lower retrospectively, most likely because of the challenge and learning experienced in the process. Before the class, there was a slight contradiction between the moderate self-ratings on the SEBLS and the pre-interviews that implied former Bible study practices that lacked the structure to promote deeper cognitive processing. As people learned more and practiced the study skills in the course, they likely developed a better frame of reference for a structured study process that challenged their initial conceptions about self-ability. Given the lower retrospective ratings, it seems the depth and challenge of the process revealed areas for growth that were previously held more securely.

There are two implications from this finding. First, future research on self-efficacy for biblical learning should consider the use of a retrospective pretest so this phenomenon can be evaluated. Second, the difference calls for a more thorough study of the influences and reasons for the higher self-efficacy beliefs initially held. It should be noted that impression management is not likely the culprit given the weak relationship found with SEBLS scores in the pilot study.

Although it is not possible to further explore the influences on the regular and retrospective pretest differences in the current design, it is possible to comment on potential influences on self-efficacy improvements observed during the course. The interview and field note data pointed to two general factors here: (a) the Bible study method, structure, and support provided, and (b) the micro-teaching experiences. Each is discussed in turn, followed by a review of the evidence that they helped create a mastery experience for participants.

An Interpretation Method and Guidance

As discussed above, the pre-interviews indicated that participants tended to use external resources in their Bible study, but there was little evidence that the resources were part of a cohesive and consistent plan for approaching Bible study. Post-interviews and field observations indicated that the study method used in the course played a significant role in helping many participants organize their thinking and learning. The course was designed to provide supports in order to help promote a mastery experience, deepen learning, and reduce anxiety. However, it was not anticipated that the structure itself would be seen as quite so impactful on participants' self-efficacy development.

A range of resources were provided at the beginning of the study, but it was the hermeneutical method used and the worksheets provided to facilitate the method that were most helpful. The hermeneutical frame was a three-fold process to explore a passage in textual and historical context, regarding fit in the grand story of Scripture (biblical theology focus), and relative to doctrinal positions (systematic theology focus). A worksheet with guiding questions was modeled for each of these areas and participants were asked to use the worksheets to guide their study (see Appendices J-L). These principles were novel to most, but the idea of studying the historical context around a biblical book or letter was understood more commonly.

The approach led to two important outcomes as regards the current study. The structure brought organization to participants' study process, which was more sporadic formerly, and thereby provided a greater opportunity for focus and success. Second, it provided a vehicle to promote depth of learning. At each stage, there was a specific issue to be explored which seemed to promote more time and focus in that area. It is not assumed that there is a singular

methodology for biblical learning, but consistency with an appropriate method is more conducive to learning than uneven, inconsistent approaches.

Additionally, the course emphasized thinking about interpretation as part of a hermeneutic spiral to demonstrate how the whole informs the part (passage), and how the part informs the whole. This was contrasted with a common approach taught to lay persons that is more linear (e.g., observe, interpret, apply). This concept was very new to most, if not all, participants and it resonated with many through the class. It was brought up without prompt in multiple post-interviews and referred to as the "circle back," "sphere," and "wheel diagram." The method seemed to facilitate deeper reflection and helped demonstrate the interrelatedness of Scripture.

The Role of Micro-teaching

The micro-teaching opportunities played a critical role in the participants' experience and challenged them toward growth. The unanimous interview data for this assertion is presented above and will not be revisited here, but the micro-teaching role in the process was an important part of the current thesis. Because the concept is grounded in social cognitive theory, the impact was not surprising. However, the magnitude of the impact seemed stronger than anticipated.

It is hypothesized that the strength of impact was elevated because of a possible interaction between the structure provided and the micro-teaching experience. Certainly, both factors are discussed here as key elements for self-efficacy gain. However, the dynamic interplay between them can only be speculated at this point because the current study did not explicitly explore this possibility.

As regards micro-teaching, though, the enactive experience of having to learn about a passage, organize one's understanding of that passage in a way to reflect it to others, and then verbally reflect that understanding collectively requires a person to think more deeply about the passage. The mastery experience created by this process can then provide self-efficacy building information. Other sources of efficacy building information were also in play, such as vicariously observing others both struggle with their passages and successfully reflect learning about them, managing the heightened anxiety that can come with a teaching event, and receiving encouraging feedback from others about their understanding. The self-efficacy literature discussed above supports each of these assertions.

Evidence for Mastery Experience

The claim that the micro-teaching opportunities and hermeneutical structure served as self-efficacy building, mastery experiences is certainly consistent with theory. Self-efficacy beliefs should be predictive of future behavior, effort, and positive outcomes.[122] To evaluate the theoretical assumption, though, the current study included assessments of teaching confidence and accuracy as proxy measures for whether the process was indeed perceived as a mastery experience. Both variables demonstrated growth across the course.

Teaching confidence certainly has implications for self-efficacy for biblical learning given similarity in the concepts. However, teaching confidence as measured here was more of a behavioral indicator of the possible internal self-referent belief. Stronger self-efficacy beliefs should manifest in greater displays of confidence while teaching if the event is perceived as a

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[122] Bandura, *Self-efficacy*. See also Henson, "The Effects of Participation in Teacher Research," 36.

mastery experience. If the event is not perceived as a mastery experience, then confidence may

not follow suit.

Teaching accuracy can also be used as a proxy measure for mastery experience, although

the theoretical link appears somewhat weaker. Mastery presumes a successful experience, but the

perception and cognitive processing of the experience is very important in determining whether

it provides efficacy-building information.[123] It is possible, for example, that a person may

perceive the teaching experience to be successful even though the actual content of the

presentation contains inaccuracies. Nevertheless, there remains logic behind the idea that

accurate content would at least be a reflection of mastery because such content likely results

from appropriate study of Scripture, use of resources, and the ability to explain the information

to others. In sum, the observed growth in rated teaching confidence and accuracy serves as

empirical evidence that the process was perceived as a mastery experience, and therefore likely

supportive of self-efficacy change.

Change in Doctrinal Awareness

Although self-efficacy for biblical learning was the primary focus here, doctrinal

awareness was examined to evaluate a possible impact on learning biblical content, which of

course would be an eventual goal of influencing self-efficacy. The teaching accuracy results

noted above already speak to improved content learning based on ratings of the micro-teaching

opportunities, but doctrinal awareness was reflected mainly in participants' written descriptions

of a doctrinal position related to their passages. Ten of the participants demonstrated noteworthy

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[123] Bandura, *Self-efficacy*, 116.

improvement from beginning to end of the course. While overall the gains were not as dramatic as with self-efficacy for biblical learning, they were relatively consistent nonetheless.

Perhaps more interesting was the growing awareness among participants of the interdependence of Scripture. The hermeneutical method and hearing others teach-back on their passages led to new perspectives on Scripture as a unified revelation from God. Many participants commented on connections in terms of biblical story, doctrinal relatedness, and the consistency of God's character. The three hermeneutical principles used seemed to highlight biblical consistency that illuminated the participants' passages.

The implications of this awareness may extend well beyond the understanding of a particular passage. Being able to develop a broader and more cohesive cognitive schema for how Scripture informs itself provides a stronger foundation for new learning and the ability to connect new Scripture to prior knowledge.[124] As this foundation expands, the possibility for successful learning increases (mastery experience), which may result in stronger self-efficacy beliefs for biblical learning. Such beliefs could then contribute, in turn, to more persistent engagement with the Bible.

Practical Implications for Ministry

The current study has a number of implications for local church ministry, or perhaps other ministries that have an orientation toward biblical literacy or discipleship. The common goal of helping believers understand and apply the Bible in their lives may find advancement with greater attention to the role of the students (e.g., parishioners, congregants) and their self-

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[124] For a review of the constructivist nature of cognitive psychology and learning, including the role of prior knowledge in learning new declarative and procedural knowledge, see Ellen D. Gagné, Carol Walker Yekovich, and Frank R. Yekovich, *The Cognitive Psychology of School Learning*, 2nd ed (New York, NY: HarperCollins, 1993).

beliefs concerning their ability to study Scripture. This also potentially applies to individuals who have not come to faith as part of their process of exploring the message of Scripture, but it is simply less likely that these individuals would engage a similar process in a group setting.

A large number of ministry programs have biblical learning as a desired outcome. The current study suggests there is value in developing opportunities in these programs that promote mastery experience in studying and reflecting learning. This elevated role of the student could potentially be accomplished in many ways, but micro-teaching found support here as a deep mastery experience. There is strong evidence that such mastery experiences can facilitate self-efficacy growth, in general, and they played a clear role in the current study. Development of ministry programs, therefore, would do well to purposefully consider ways to create such student-centered experiences as part of the process, in addition to focus on content.

For example, many small groups include some element of Bible teaching and group discussion, both noble tasks. The group discussion is typically intended to allow people opportunity to express their views and in doing so find commonality with others and consider ways to apply the teaching. However, would the discussion resonate more deeply if it were re-framed toward stronger elements of shared teaching? The same possibility can occur in a range of other small group church experiences or Christian education settings. It is important to emphasize that this process is primarily for the benefit of the person involved in the micro-teaching. The nature and quality of the participant's micro-teaching matters, of course, but it is secondary to the personal impact on the participant having gone through the process.

A possible response to this view is the concern that biblical instruction should be accurate and avoid error, and therefore those involved in that process should be well-trained. The Bible indeed emphasizes the important role of teaching in maintaining faithful doctrine and lifts the

accountability of the teacher: "Not many of you should become teachers, my brothers, for you know that we who teach will be judged with greater strictness" (Jas 3:1). However, most biblical references to avoidance of error focus on caution toward false doctrine and malevolent teachers (e.g., Eph 4:13-14, 2 Pet 3:17, 1 John 4:4-6), not the genuine pursuit of truth through expression of one's learning in a way that others can learn as well. Furthermore, the micro-level of teaching studied here does not likely reach the level of teaching responsibility that the Bible addresses. They are different processes, really, and use of the word "teaching" should not confuse them. Finally, assuming a qualified teacher is present, errors can be discussed and corrected, and this type of feedback is a valuable learning opportunity for the entire group.

This enactive process does not have to occur in a group setting, of course. Individual discipleship can place responsibility on the disciple to study and teach-back. In many ways, this model is already often used in individual discipleship because it is seen appropriately as an apprenticeship. The amount of teaching involved should be sensitive to the situation, always keeping in mind the important balance between challenge and promoting a mastery experience.

Regardless of the setting, if micro-teaching is to be used more frequently, then there are also implications for the training of small group leaders and disciplers. There are learning principles involved in the process that are important, such as maintaining the balance noted above, providing sufficient supports, willingness to "speak the truth in love" (Eph 4:15) and correct errors in positive ways, and management of group dynamics to promote a constructive environment. The goal is mastery experience, not just participation.

Finally, the current study revealed the important role of a structured hermeneutical process in the participants' gains in both self-efficacy and doctrinal awareness. Most lacked an appropriate structure to guide their Bible study, and this contributed to feeling overwhelmed and

lost in the volume of the Bible and auxiliary resources. This raises a few very important questions concerning practical ministry. Does the church actually teach Bible study skills to congregants? Or, does the church focus more on teaching the content of the Bible? And, if the church does teach Bible study skills, does the method promote deep reflection on the text as opposed to a more linear process that might not yield the same level of cognitive processing?

It would be inappropriate to over-generalize any of these questions, and ultimately they are empirical questions that should be studied further. However, the current study at least implies potential deficits in people's understanding of some basic hermeneutical methods. Is it possible that the church too often assumes congregants have the skills necessary to study the Bible with confidence? A more adverse question could also be asked, but is nonetheless reasonable. That is, is it possible the church assumes that congregants are not able to learn and develop these skills, or that learning them without more comprehensive education may lead to error? Perhaps the process should be reserved for seminary students.

A particularly intriguing point here is that the methods used in the current study are not somehow unique. They would be common elements to most Bible college or seminary courses on hermeneutics, or parts of courses on biblical or systematic theology.[125] If there is value in the seminary education of ministers, then there is value in extending some similar skills to church attendees. To be clear, this does not imply that the current participants somehow mastered these skills. Most remain novice to the principles used. However, they now have some new tools to practice and refine to support their Bible study, and increased confidence in the ability to do so. Concerning evangelical development of critical thought, Ravi Zacharias suggested:

> Sometime in the 1980s, Christians in the West began to label evangelistic techniques and reconfigure church services to reduce the message to the lowest level of cognition in the

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[125] For example, Köstenberger and Patterson, *Invitation to Biblical Interpretation*.

audience. A nobly intentioned as that was, the end result was the lowest level of writing and gospel preaching one could imagine. Mass media was brought to aid this purpose, and before long evangelicals were seen to be masters in entertainment and minimalists in thought. As this was happening, the intellectual arenas were being plundered and young minds gradually driven away from their "faith" in the gospel message. Christians are paying our dues today and likely will pay for an entire generation.[126] P. xiv

While Zacharias's broom may sweep too broadly, the current study suggests that higher levels of biblical engagement and skill development are possible, at least in a focused group.

Recommendations for Future Research

Continued Development of the SEBLS

As with any new instrument, researchers conducting substantive investigations should continue to explore the factor structure and psychometrics of SEBLS scores. Such characteristics are inured to obtained scores from particular samples rather than to instruments directly.[127] Psychometric information for SEBLS scores across samples from multiple substantive studies will either add to the validity evidence or provide clarity on when the instrument should and should not be applied.

Future research on the SEBLS will benefit from evaluation using more diverse samples. The current sample was predominantly White, which potentially creates a limitation in the instrument's application if the nature of the construct actually varies in other racial or ethnic groups. There is no known reason to expect differences to occur, but it is a plausible outcome

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[126] Ravi Zacharias, "Introduction: An Apologetic for Apologetics," in *Beyond Opinion: Living the Faith We Defend*, edited by Ravi Zacharias (Nashville, TN: Thomas Nelson, 2007), xiv.

[127] Cf. Tammi Vacha-Haase, Robin K. Henson, and John C. Caruso, "Reliability Generalization: Moving Toward Improved Understanding and Use of Score Reliability," *Educational and Psychological Measurement* 62, no. 4 (August 2002).

until otherwise ruled out. Additionally, the current sample represented a conservative, evangelical perspective. It would be interesting to explore whether self-efficacy for biblical learning may function differently in other traditions or denominations that might invoke different hermeneutical thinking. Finally, and perhaps most important, the pilot sample was generated from church groups meeting separately from primary church worship services. It is possible that the people in these groups are more biblically motivated than the more typical church-goer that attends primary services but not auxiliary Sunday school classes or small groups. Because impacting Bible engagement is a general goal of the current line of research, the SEBLS should be tested with a broader sample of church attendees who may be less affiliated with church identity.

Micro-teaching and the Primary Intervention

A strong theory of change grounded in social cognitive theory drove the primary study, and participant interview data supported the quantitative changes. Ultimately, however, claims about the causal effect of the intervention and micro-teaching are tentative until research can include a control or comparison group as a counterfactual. Future research should test the causal assumptions offered here by replicating the process without micro-teaching and potentially controlling for or examining impact of other study factors that may play a role (e.g., motivation level of participants, type of Bible study method). Furthermore, longitudinal and follow-up research is warranted to evaluate persistence of the short-term changes. If stability is observed, these studies could also help evaluate whether there are other related impacts (e.g., increased Bible study, content depth, spiritual maturity).

The limited diversity of the sample places also boundaries on the generalization of these findings. More diversity is needed on several fronts, including evaluating the SEBLS instrument and micro-teaching process in a sample reflecting broader racial and ethnic backgrounds, although there is no known reason why the outcomes might vary. The current study was conducted with churches espousing a largely conservative, evangelical position of faith, and therefore caution should be exercised when extending findings to other denominational or faith backgrounds. Results may vary depending on assumptions made about the truth of the Bible and its applicability for life until additional work can be done to explore those possibilities.

Finally, the samples in both the SEBLS pilot and primary study generally lacked individuals with more limited spiritual depth and experience, and thus care should be taken not to overextend current results to this broader group. This latter point is perhaps the most important given the interest in promoting biblical literacy among those less engaged with Scripture. To what extent, for example, would the intervention process be applicable and helpful for people who are more tangentially connected to church culture? How might revisions to the intervention make the process useful for those that are new to faith or new to learning from Scripture?

An additional line of inquiry that arose from the current study was the possible interaction between the hermeneutical structure used and the micro-teaching mechanism. The interview data seemed to point to impact from both factors working together. Would results vary if a simpler, perhaps more linear, Bible study method were employed? Or, if micro-teaching was replaced with a share-back experience that is less demanding on participants, would noteworthy changes in self-efficacy and doctrinal awareness still be observed while using the current hermeneutical method? At a minimum, future research could be designed to specifically explore this possible interaction.

Finally, research is needed to explore the balance between the accountability and depth of experience that micro-teaching brings and the collateral anxiety levels that can arise as a result. It is not likely that the average church person would tolerate heightened anxiety, which defeats the purpose expanding deeper study to those that might benefit the most. Can the course be reframed in ways to reduce intensity or use more supports? One possibility includes stretching the course across more time to allow greater flexibility in preparing for the micro-teaching. In addition, more explicit models of what a micro-teaching experience looks like could be provided. The current study modeled the Bible study process via teaching and discussion during the course and used the same Bible passage to example the hermeneutic approach for consistency. However, an exact model of the five-minute teach-back experience was not provided. Future research should explore different instructional frames.

The risk of such anxiety notwithstanding, it did not appear sufficient to dramatically attenuate the change in self-efficacy for biblical learning that was observed on both the SEBLS and in other post-interview data. In fact, as noted above, all participants also stated that the micro-teaching process was critical for the depth of their experience. Nevertheless, the stress level observed for several participants exceeded expectations, and thus it is an important outcome to consider for future research.

Conclusion

The knowledge and application of Scripture is a matter of extreme importance in the life of a believer, as argued above and reflected in Scripture itself. Therefore, a key function of the church is to disciple its members in the Bible which reflects worship to God. The combination of this role and the apparent decline in biblical literacy in society, in general, and in the church,

specifically, begs questions about methods that can help increase people's engagement with Scripture. It was argued here, both theoretically and empirically, that impacting one's self-efficacy for biblical learning has potential to increase engagement, and that teaching Bible study methods using a micro-teaching mechanism can impact self-efficacy and doctrinal awareness.

The current study presents strong evidence for this thesis. It also presents a new instrument to assess self-efficacy for biblical learning. Of course, future research is needed to replicate and expand on this line of inquiry, but the study provides a promising foundation for a ministry practice to promote biblical engagement. Such engagement, in turn, can change people's lives, "For the word of God is living and active, sharper than any two-edged sword, piercing to the division of soul and of spirit, of joints and of marrow, and discerning the thoughts and intentions of the heart" (Heb 4:12).

Appendix A

Initial developmental items of the Self-efficacy for Biblical Learning Scale.

Please rate your confidence that you can do the following when studying the Bible.

0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
cannot do at all					moderately certain can do					absolutely certain can do

When studying the Bible, I can:
                                                           Rating (0 – 10)

1. Realize how a passage fits in the overall story of the Bible. _____

2. Understand what biblical or doctrinal positions apply to a passage. _____

3. See how a passage fits with the text around it. _____

4. Apply a passage to my life in a clear way. _____

5. Remember a Bible passage after reading it. _____

6. Relate a passage to both the Old and New Testaments. _____

7. Explain how a passage relates to a statement of faith. _____

8. Understand the historical context of the whole book or letter a passage is in. _____

9. Understand how a passage matters for me. _____

10. Explain how God's plan for the world informs a passage. _____

11. Apply a passage to a core message of the Bible. _____

12. Know how history helps inform understanding of a passage. _____

13. Explain how a passage is relevant to the modern world. _____

Appendix B

Impression Management subscale of the Balanced Inventory of Desirable Responding Short Form (BIDR-16).

Subsequent to thesis completion, the subscale was blocked here for online publication. However, the subscale can be found in Hart, Ritchie, Hepper, and Gebauer, "The Balanced Inventory of Desirable Responding Short Form (BIDR-16)."

Appendix C

Permission to use the Balanced Inventory of Desirable Responding-16 (Short Form).

From: Hart C.M.
Sent: Friday, April 26, 2019 4:26 AM
To: Henson, Robin
Subject: [EXT] RE: BIDR-16

Dear Robin,

Please find attached the BIDR-16. I hope you find it useful. If you have any questions, please don't hesitate to get in touch.
Best wishes,
Claire

Dr Claire Hart
Undergraduate Programme Director
School of Psychology
University of Southampton

From: Henson, Robin
Sent: 25 April 2019 21:13
To: Hart C.M.
Subject: BIDR-16

Hello Dr. Hart,
Thank you for your 2015 article regarding shortening the BIDR. I'm looking to maybe use your short version in a study. Would you be able to share the exact items in your final version with me? Or, are these somehow protected from prior versions that I might not be aware of, etc.?
Thanks,
Robin

****
Robin K. Henson, PhD
Chair and Professor
Department of Educational Psychology
University of North Texas

The Ten-Item Personality Inventory.

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to *you agree or disagree with that statement*. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
1	**2**	**3**	**4**	**5**	**6**	**7**

I see myself as:

1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

Appendix E

Permission to use the Ten-Item Personality Inventory. Permission is granted for open use per the author's open webpage at: https://gosling.psy.utexas.edu/scales-weve-developed/ten-item-personality-measure-tipi/.

GOZ LAB

GozLab Home

Current Research

People of the Gosling Lab

Publications

Scales We've Developed

Join The Lab!

Pics

Email
gosling@psy.utexas.edu

Telephone
512-471-1628
(but I don't check messages so email me)

FAX
512-471-5935

Postal Address
Department of Psychology
University of Texas
1 University Station
Austin, TX 78712
USA

[Department of Psychology]   *[University of Texas]*

TEN ITEM PERSONALITY MEASURE (TIPI)

The TIPI is a 10-item measure of the Big Five (or Five-Factor Model) dimensions. Before you use this instrument, please read this **note on alpha reliability and factor structure**.

WANT TO USE THE TIPI? GO AHEAD. ANYONE CAN USE IT FOR ANY PURPOSE. NO NEED TO ASK ME FOR PERMISSION.

Original reference:

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality, 37, 504-528.*

Abstract

When time is limited, researchers may be faced with the choice of using an extremely brief measure of the Big-Five personality dimensions or using no measure at all. To meet the need for a very brief measure, 5 and 10-item inventories were developed and evaluated. Although somewhat inferior to standard multi-item instruments, the instruments reached adequate levels in terms of (a) convergence with widely used Big-Five measures in self, observer, and peer reports, (b) test-retest reliability, (c) patterns of predicted external correlates, and (d) convergence between self and observer ratings. On the basis of these tests, a 10-item measure of the Big Five dimensions is offered for situations when very short measures are needed, personality is not the primary

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Appendix F

Permission to use the Single-Item Self-Esteem Scale.

From: Richard W. Robins
Sent: Thursday, May 30, 2019 7:15 PM
To: Henson, Robin
Subject: [EXT] Re: permission for SISE use

Hi Robin, thanks for asking but you don't need my permission to use the single item scale. Good luck with your research. Regards, Rick
Sent from my iPhone

On May 30, 2019, at 1:26 PM, Henson, Robin wrote:

Hello Dr. Robins,
I am planning a study related to self-efficacy beliefs and I would like to include your Single-Item Self-Esteem Scale (Robins, Hendin, & Trzesniewski, 2001) as a measure. You may address this somewhere and I missed it, but I'm requesting your permission to use the measure, please. Freedom to use seems fairly implied in the article, but I wanted to ask to make sure.

If you have any thoughts on better direction/measure to use, I'm open to suggestions. I'm looking for something ultra-brief due to time.

Thanks,
Robin

****
Robin K. Henson, PhD
Chair and Professor
University Distinguished Teaching Professor
Dept of Educational Psychology

Appendix G

Guiding questions for semi-structured pre-interviews.

1. Tell me why you want to be a part of this course on how to study the Bible? What do you hope to get out of it?

2. Does anything about the process excite you? Does anything make you nervous?

3. As honestly as you can, tell me about your own Bible study activities. What? How? How often?

4. What helps your study? What are barriers to your study?

5. What do you think about *your ability* to study the Bible on your own in a meaningful way and learn from it?

Guiding questions for semi-structured post-interviews.

1. Tell me about your experience in the course? What, if anything did you get out of it?

2. What about the process was exciting for you? Did anything create challenges for you?

3. As honestly as you can, do you think the things you have learned and practiced will have any impact on your Bible study activities? How so?

4. What do you think about *your ability* to study the Bible on your own in a meaningful way and learn from it?

Appendix H

Rubric for assessment of teaching confidence.

Description	Rating
Very hesitant, unsure/nervous presence, poor eye contact, disjointed communication and tone	1
	2
Average hesitation and confidence, good presence, eye contact, reasonable communication and tone	3
	4
No hesitation, strong presence and highly engaged, excellent eye contact, strong communication tone.	5

Rubric for assessment of teaching accuracy.

Description	Rating
Many errors, weak depth of content, no or few connections with related concepts	1
	2
Several errors, average depth of content, some connections with related concepts	3
	4
No errors, strong depth of content, excellent connections with related concepts	5

Approval from Liberty University's Institutional Review Board.

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

July 23, 2019

Robin K. Henson
IRB Exemption 3855.072319: Fostering Biblical Learning in a Brief Course on Bible Study

Dear Robin K. Henson,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
>
> > (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

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Appendix J

Instructional worksheet for the first micro-teaching lesson on understanding the historical and textual context for a passage. The worksheet is condensed here, but space was provided after questions in the original to allow for written responses. CQ = critical question.

Week 1
Principle 1: Understanding the Context - Worksheet 1

How should we approach Bible study?

Observe ⟶ Interpret ⟶ Apply
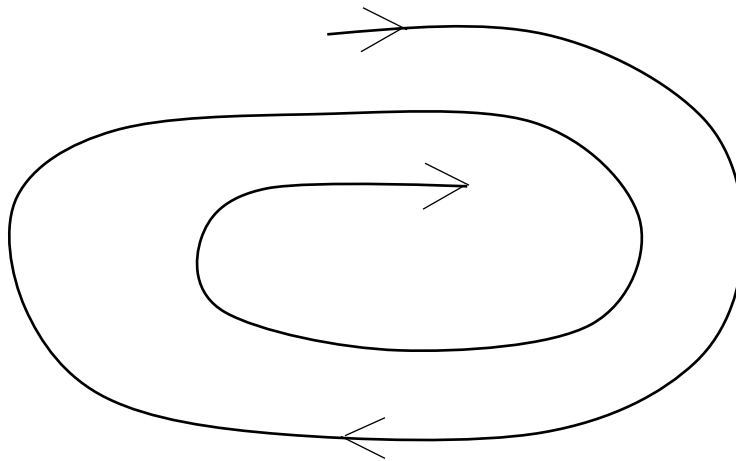
Ex: James 1:12 – Blessed is the man who perseveres under trial, because when he has stood the test, he will receive the crown of life that God has promised to those who love him.

1. Inspection of the Parts

    Strategies

        Read slow. Re-read.

        OBSERVE! Carefully. Be curious! Take notes and mark-up.

        Read multiple versions – at least one relatively literal version.

        Seek literal meaning.

        Seek single meaning of the passage.

CQ**: What is the single meaning of the passage?**

2. Inspection of the Whole

    Text and story context
    CQ: **What is the main idea of the broader text unit?** (chapter, near chapters, etc.)

    CQ: **What is the main idea of the entire book/letter?**

    Historical and cultural

    CQs: **Who wrote it?**

    When was it written?

    Who is the audience?

    Where was it written?

    Why was the book/letter written?

    What is going on in the historical/social/cultural setting?

    CQ: **Are there any <u>implications</u> from this historical/cultural context for what this passage means?**

3. Spiral   Re-read passage in light of the historical/cultural context.

    Re-consider context again after re-reading the passage.

4. Put the time in.

IMPORTANT - Write at least one open-ended question below (which you will ask us in your "share-back" time) that will make us <u>think</u> about the implications of context.

Appendix K

Instructional worksheet for the second micro-teaching lesson on understanding how a passage fits in God's grand plan of redemptive history. The worksheet is condensed here, but space was provided after questions in the original to allow for written responses. CQ = critical question.

Week 3
Principle 2: Understanding the Grand Story of the Bible – Worksheet 2

CQ: **How would you summarize the Bible's big story in a couple of sentences?**

When studying Scripture, we need to consider how our passage fits in this grand story. Why?

> Two key questions:
> 1. Where is my passage in the grand story?
> 2. Where am I in the grand story?

1. Expand your Vision (or, Inspection of the Whole, again)

> Strategies

>> Cross-references from Bible, commentaries, memory, other sources?
>>> NT
>>> OT – especially

>> Prioritize cross-references – are they relevant?

>> Explore Israel's history of faith and/or rebellion.

>> CQ: **Where are my cross-references connected to God's story?**

>> CQ: **Are there any OT or NT stories, traditions, or historical issues that I need to explore to understand them better?**

>> CQ: **Is there anything in Israel's history that is relevant?**

2. Consider Meta-themes (still Inspection of the Whole, but even broader)

> Strategies

>> Explore possible connections to God's covenant with humankind through history.

>> Explore possible connections to God establishing his kingdom in the world through history.

CQ: **Does my passage have any links to the meta-themes of <u>covenant</u> and/or <u>kingdom</u>?**

CQ: **What specific examples of those themes speak to my passage?**

3. Put it Together

Strategies

Focus on the main issues/themes.

Be cautious about making small things into big things. Remember our "triangulation" principle for helping judge reliability of information.

CQ: **Does the grand story shed light on my passage in any way?**

"Teach-back" (not, "share-back")

NOTE: Your goal is no longer just telling us what you have learned. Instead, think through what you've learned, and then do the following:

- Try to find 1 or 2 principles/concepts related to the grand story that illuminate your passage.
- Teach us about those concepts given the time that you have. <u>Do not</u> assume that we already know much about it.
- Explain how your passage is connected.

IMPORTANT - Write at least one open-ended question below that will make us <u>think</u> about how your passage is connected to God's grand story. Ask us this question in your "teach-back" time.

Appendix L

Instructional worksheet for the third micro-teaching lesson on the doctrinal relevance of a passage. The worksheet is condensed here, but space was provided after questions in the original to allow for written responses. CQ = critical question.

Week 5
Principle 3: Understanding how a Bible position relates to a passage – Worksheet 3

What is doctrine (a Bible position)?
Why do Bible positions matter?   See Ephesians 4:11-14

All people have doctrinal beliefs – both secular and religious. All have things that are outside the bounds of what they think is right and good.

Think about the things that challenge us. As we reflect on these, where is our attention and focus?

        Our problems are often related to doctrine. How?
        Do we belief rightly (understand truth) about God?
        Do we apply right belief to our lives?

        See Philippians 4:8-9   Thinking about what?
                                  Practicing what?
                                    Leading to what?

<u>So, how does my passage relate to a Bible position?</u>

1. Examine your passage for "big ideas". Strategies:

        Go back to Worksheet 1 – Look again at your single meaning. Has your understanding changed at all?

        Read passage again – reflect on whether the meaning speaks to the nature of God or his purpose in the world.

        CQ: **What "big ideas" about God, the church, or humanity does your passage seem to speak to? Look for themes, not just singular ideas.**

        Example: James 1:12 (ESV) - Blessed is the man who remains steadfast under trial, for when he has stood the test he will receive the crown of life, which God has promised to those who love him.

2. Press into the "big idea". Strategies:

        Cross-references related to the idea? (Bible, commentary, etc.)

Topical and keyword searches for cross-references
>> Caution: Keep an eye on the context in all cross-references (e.g., words are not always used the same way in different passages)

CQ: How is the "big idea" addressed in other parts of the Bible? Do you see consistency or differences across passages?

James 1:12 example: Process of suffering – 2 Cor 4:8-9, Gal 6:2, 2 Cor 1:4, Job

3. Go big picture. Strategies:

Examine the church's doctrinal statement.

Any church history around the "big idea" that might be informative? (e.g., understanding of grace in the Reformation)

Cross-references from the doctrinal statement.

Topical search based on the doctrinal statement.

CQ: Are there connections between any of the doctrinal statements and your "big idea" and passage? What are they? (Focus on the main ones.)

James 1:12 example: not much in statement on process/role of suffering, maybe explore impact of sin in the world (cf. "Man"), look elsewhere/topical.

CQ: What do the cross-references provided in the doctrinal statement say? Do these relate to your passage, or help inform its meaning?

Teach-back
- Try to find 1 or 2 principles/concepts about your Bible position.
- Teach us something about what the Bible position means and why it is important. <u>Do not</u> assume that we already know much about it.
- Explain how your passage is related to the doctrine.

IMPORTANT – Come up with one open-ended question below that will make us <u>think</u> about how your passage is related to the Bible position. Ask us this question in your "teach-back" time.

Try to work this question into your teach-back, not just tag it on at the end.

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