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FACTORS IN EXPOSITORY PREACHING THAT INFLUENCE
ATTENTION COMPREHENSION AND RETENTION LEVELS

A Dissertation
Presented to
the Faculty of
The Southern Baptist Theological Seminary

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Ricky Keith Blackwood

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FACTORS IN EXPOSITORY PREACHING THAT INFLUENCE
ATTENTION COMPREHENSION AND RETENTION LEVELS

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To Rhonda,

Thanks for being the sunshine of my earthly life.

You are truly a gift from God.

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PREFACE

Although this dissertation bears my name as the author, any work of this magnitude cannot be completed without the help of other people. Therefore, I wish to express my heartfelt gratitude to the following:

To the Holy Spirit, who has given me the passion to preach the Word of God in an expositional form. It was He who impressed upon me the need to teach the Word in a multi-sensory fashion whereby all could grasp the wonders of the Holy Scriptures.

To Rhonda, my wife and friend. She has been my constant support and my best friend. I thank her for seeing me through another dissertation. I promise this is my last.

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To my church, Christ Fellowship, which allows me to do what I love to do the most – teach the Word of God. Without their cooperation, their diversity, and their love for the Word of God this experiment would not have been possible.

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Rick Blackwood

Miami, Florida

CHAPTER 1

RESEARCH CONCERN

Some educators define quality education in terms of a standardized presentation of educational content. They dispatch this philosophy of a “one size fits all presentation” in our educational institutions and ignore the fact that each student is unique and brings to the learning environment a unique set of learning characteristics (Kalin 1972, 1). Traditional education has often ignored the learning preferences, learning styles, and sensory preferences through which a student maximizes learning and accelerates learning rates. Failure to recognize individual learning styles has promoted a standard lecture format for teaching in public schools and has potentially restricted the learning of many.

Sooner or later, however, something happens that forces the teacher to confront the possibility that they may be working with assumptions that don't really fit their situations. Recognizing the discrepancy between *what is* and what *should be* is often the beginning of the critical journey. (Brookfield 1995, 29)

Ultimately, education must come to grips with the different learning needs of the individual learner. The learning differences flow from variations in individual intelligence, drive, skills, and accomplishments as well as personal and family predispositions and the cultural influences of the wider society. In spite of considerable dialogue, there is still considerable discontinuity between theory and practice in identifying and meeting those needs. (Kefee 1982, 43)

The same lecture methodology that dominates public education is also pervasive in the evangelical church. The monologue-lecture format of teaching the Bible pervades the evangelical pulpit and promotes a “one size fits all” sermon delivery. This

researcher thinks such a lecture format may curtail the full impact of the expository sermon, to which this researcher is committed.

Educational Objectives of Expository Preaching

Expository preaching is preaching that is guided by God's Word in its origin, production, and proclamation. Haddon Robinson provides a succinct definition of expository preaching: "Expository preaching is the communication of a biblical concept derived from and transmitted through a historical, grammatical, and literary study of the passage in its scriptural context" (Robinson 1980, 19).

This researcher is committed to expository preaching, because it is latent with the power of the Word of God. The Word of God says of itself: "For the Word of God is living, and powerful, and sharper than any two-edged sword, piercing even to the dividing asunder of soul and spirit, and of the joints and marrow, and is a discerner of the thoughts and intents of the heart" (Heb 4:12). The great expository preacher William M. Taylor insisted:

The preacher's special power is that he has God's Word behind him, and if through the neglect of expounding God's Word he fails to use this power with effect, he is like Samson shorn of his locks, and will be sure to be made sport of by the Philistines of his generation. Hence as an engine of power, I advocate most earnestly the systematic pulpit exposition of the scriptures. (Doe 1876, 17)

F.B. Meyer argued for the essential need for expository preaching by explaining "the expository preacher has a better chance of appealing successfully to the conscience and capturing and compelling the will, because his appeals are based more on Scripture, have a broader basis of truth, and are likely to have more of the empowerment

of the Holy Spirit” (Meyer 1912, 103). Expository preaching is a biblical model for fulfilling the biblical mandate given to the pastor, which is to *teach* the Word.

As *teachers* of the Word, expository preachers have *educational* objectives. The consummate objective of the expositor’s biblical teaching is to impact the student’s learning in such a way that the student becomes a doer of the Word. “A pupil’s growth is determined not by what he hears, but by what he does about what he hears” (Lebar 1995, 166). This is what James had in mind when he wrote, “Be ye doers of the Word, and not hearers only” (Jas 1:22). The idea is that learning has not fully occurred until the disciple-learner applies the learned content to the context of his or her life. Benjamin Bloom had this objective in mind when he wrote his *Taxonomy of Educational Objectives*. Bloom broke cognitive learning objectives down into sequential levels with the third level being the application level (Anderson and Sosniak 1994, 13). The idea again is that cognitive learning has not occurred until the student makes an application of the information received. As this relates to the expositor, Whitesell, in his work *Power in Expository Preaching*, warns, “A discourse without application would not be a sermon, but only a declamation – a monologue. ‘Where application begins, there the sermon begins,’ said Spurgeon. We are not merely to speak before people but to them. (Whitesell 1953, 91) He continues the line of thought:

Application means to put to use, to bring to bear upon, or to bring into contact with, as in the application of poultice. It includes the idea of relevancy, which is prominent in preaching theory today. Application brings the hearer under the claims of the gospel; it searches his heart and reins; it brings into divine encounter. (Whitesell 1953, 91)

Therefore, as pastors teach the Word of God, the content, structure, and delivery of the sermon must have application outcomes in mind. Application, which transforms lives, must constantly be viewed as the finish line.

Preaching to convey information is predictable and unthreatening. Preaching to effect transformation is hard work and risky business. Yet that is the whole point of preaching. An effective sermon is measured not by its polished technique but by the ability of the preacher to connect the Word to the reality of the listener's life. Preachers and sermons can be funny, entertaining, enthralling, intriguing, intellectually stimulating, controversial, full of impressive theological and doctrinal footpaths, and authoritative. But if ultimately the outcome does not result in a changed life because of an encounter with truth then it has not been what God intended preaching to be. (Stowell 1999, 125)

If *application* is viewed as “the finish line” of cognitive objectives, then there are several cognitive lines that must be crossed before the application line. The first line in the cognitive sequence is the line of *attention*. *Webster's Third New International Dictionary of the English Language* (1995) defines *attention* as “the application of the mind to any object of sense or thought.” A student who is mentally disengaged from the teacher and teaching will be hard pressed to act on the information. Precedent literature emphasizes that attention is crucial to the learning process.

The next cognitive line that must be crossed in the learning process is the line of comprehension. Comprehension asks, “Did the student understand what was being taught?” It is not enough for the student to be mentally engaged to the teacher; the student must mentally grasp the meaning of what has been presented. “Comprehension is when students are confronted with a communication, they are expected to know what is being communicated and to be able to make some use of the materials or ideas contained in it” (Anderson and Sosniak 1994, 19). It will be difficult for students to act on what they do not mentally understand.

The final line that must be crossed in the cognitive learning process is the line of *retention*, i.e., memory. Bloom referred to this as knowledge. “Knowledge is defined as those behaviors and test situations which emphasize the remembering, either by recognition or recall, of ideas, material or phenomena” (Anderson and Sosniak 1994, 18). The goal of every teacher should be to impact the student in such a way that he or she retains the information that was imparted. Teachers should not expect learners to consciously act on what they do not remember.

Backing up in the learning sequence, it becomes clear that achieving the goal of application *begins* with hooking the student’s *attention* (Richards and Bredfeldt 1998, 154-55). Failure at the line of *attention* will have a domino effect on the learner: If the student stumbles at the line of attention, he will never cross the lines of comprehension, retention, and application. Put another way, if the teacher loses the battle for attention, he or she will lose the war for comprehension, retention, and application.

Potential Weaknesses of Expository Preaching

Hooking and keeping the student’s attention takes the teacher into the disciplines of teaching style, teaching methodology, and teaching delivery. The concern at hand has to do with effective expository preaching, and the question is this: Is the traditional lecture delivery of expository sermons always the most effective method for hooking and keeping the *attention* of the student, and is it the most effective for impacting Bloom’s Taxonomy, particularly in terms of *comprehension* and *retention*?

Having acknowledged the power of the Word of God in expository preaching, this researcher observes a potential weakness in expository preaching. The potential

weakness lies not in the biblical content of expository preaching, but rather in the lecture style delivery by the pastor-teacher. Due to the didactic nature of expository preaching, the lecture style delivery may have the tendency to disconnect from the congregation's attention. Few people embrace and promote expository preaching any more than biblical scholar Walter Kaiser, and yet, after presenting a passionate call for expository preaching, he gives this clear warning to the expository preacher: "On the other hand, let it also be acknowledged just as quickly that nothing can be more dreary and grind the soul and spirit of the Church more than the dry recounting of Biblical episodes apparently unrelated to the present" (Kaiser 1981, 81).

Calvin Miller expresses utter bewilderment over the failure of some preachers to communicate the Word of God.

Living in the communication age, we cannot help but be bewildered that so many sermons are muddled and unclear. Sermons often seem to be the least communicative form of contemporary speech. How did this happen? Considering the sheer intensity of their importance, it is odd that sermons seem impotent. (Miller 1994, 4)

As far back as 1857, Anthony Trollope wrote in *Barchester Towers*, "There is, perhaps no greater hardship at present inflicted on mankind in civilized and free countries than the necessity of listening to sermons" (Nouwen 1978, 23). Trollope's indictment on nineteenth-century preaching still rings true. People often languish through a sermon simply because it fails to connect and, frankly, is boring. Again, because of the voluminous informational content of expository sermons, they of all sermons, have the potential to come across as boring. Haddon Robinson says, "More people have been bored out of the Christian faith than have been reasoned out of it" (Robinson and Robinson 2003, 9). In the same book, he tells of counseling a pastor who was bored with

his *own* biblical preaching. One can only imagine the boredom and inattention in the pew! Robinson recounts the episode:

The pastor slumped down in his seat opposite me in the restaurant and played with the water glass. Then he made a comment that sounded like a confession. "I am bored, very bored with my own preaching." What surprised me though was how he put it. He wasn't saying, "I'm afraid I'm boring my congregation." He was admitting something even more deadening: "I am boring myself with my own preaching."

He had good reason to be concerned. Boredom is like anthrax. It can kill. More people have been bored out of the Christian faith than have been reasoned out of it. Dull, insipid sermons not only cause drooping eyes and nodding heads, they also destroy life and hope. What greater damage can we do to people's faith than to make them feel like God and Jesus and the Bible are as boring as the want adds in the Sunday paper? Boredom can dull the life of the listener in the pew, but in this case it had infected the preacher. (Robinson and Robinson 2003, 9-10)

It is clear that certain styles of delivery can thwart the power of the expository sermon, and come across as dull, boring, and non-attracting. In such instances, the sermon may fail to hook the *attention* of the congregation, and when the pastor teacher fails hook the *attention* of the congregation, the educational objectives of preaching-teaching are lost.

George Bernard Shaw said rather cruelly of the poet, W.E. Henley, that he was a tragic example of a man with imposing powers of expression and nothing important to express. There are preachers of the same kind. There are others who have a great deal worth expressing, but they cannot 'get it over.' They have never mastered the art of communication. (Tizard 1959, 49)

What a picture of so many expository preachers. They have so much to say. They have the very Word of God to communicate. They have the gospel of Jesus Christ to teach to the world, but for some reason, they cannot "get it over" to the people. There is a huge gap of communication between the pulpit and the pew for many "would be expository preachers." As far back as 1959, Leslie Tizard made this telling statement:

The preacher must hold the attention of the congregation. Obvious again, yet how often we fail to do it. And let us be under no illusions. The preacher has to hold it.

People attend to a thing voluntarily only while they are so interested that they cannot take their minds of it. Other wise they have to make themselves listen, and most people are not prepared to exercise the will very much in this matter unless they can see a good reason for the effort. And when it comes to listening to sermons, most people can't. Nothing seems to hang on it. They won't have to pass an examination on the subject matter. And let us be fair – for the great majority sustained attention over long period is difficult The cardinal rule then, is that the preacher must be interesting. The sad fact is that often he is not. (Tizard 1959, 62)

Tizard concluded his “indictment” on preachers who cannot hold the people’s attention by saying this: “Monotony in all its forms is, of course, the chief enemy of attention. Dullness is a sin in the pulpit because it is avoidable” (Tizard 1959, 63).

Rationale for Current Study

As educators, *pastor-teachers* would do well to understand that the people in their congregation have different styles in which they prefer to learn, and one style of teaching- preaching may not fit all. “One may analyze a learning situation with the alternative assumption that a student’s uniqueness in perseverance, aptitude, and ability to understand instruction demands very different modes of instruction that vary in degree of presentation, explanation, and ordering of elements (Bloom 1968b, 4). Jenson and Gange assert that the key to effective learning is to match the teaching style of the teacher with the learning style of the learner (Jenson 1966, 117; Gange 1996, 295-96). In addition to learning preferences, recent research has revealed that people have *sensory preferences* by which they prefer to learn and by which they learn best. These sensory preferences are sometimes called sensory channels through which individuals receive and retain information. These would include auditory preference, visual preference, and kinesthetic preference (Springer and Deutsch 1993, 18-19). The counsel from this

research is that a student learns best when information is presented in a sensory form that matches his or her sensory preference.

If this research is accurate, then pastors must search for communication channels, presentation modes, and instructional techniques that match the learning needs of individuals in the educational environment of the church. Pastors must also be aware that lecture preaching is *mono-sensory* and therefore connects primarily to the auditory learner, i.e., those who learn best through hearing. People in the congregation who prefer to learn through the other senses are somewhat ignored by lecture expository preaching. Consequently, the range of people in the congregation who are impacted in a maximum way is limited to those who are auditory learners.

Multi-sensory teaching, on the other hand is said to connect to multiple senses, i.e., hearing, seeing, and touching (Caine and Caine 1991, 84). Because multi-sensory expository preaching connects to multiple senses, it readily connects to the multiple learning preferences in the church congregation. Consequently, the range of people that can be impacted is increased.

Research Purpose

In light of pastoral educational objectives and in light of the concept of learning preferences, the intent of this research is to determine the relationship of multi-sensory expository preaching to three areas in the learning process: (1) attention (2) comprehension (3) retention. Stated another way, the goal of this research is to explore the relationship between three expository preaching methodologies and student attention, comprehension, and retention. Those different teaching methods are

1. Mono-sensory Teaching: Auditory delivery
2. Multi-sensory Teaching: Auditory + visual delivery
3. Advanced Multi-sensory Teaching: Auditory + visual + tactile delivery

The research of this study could be of value to the academic community, Christian educators, and pastors who seek to communicate biblical truth. If the researcher can demonstrate that interventions such as multi-sensory delivery can significantly increase learning capacity, it would seem that teachers of all disciplines would be interested. This would help facilitate educational objectives and design of teaching methodologies.

Delimitations of the Study

Certain delimitations were necessary to ensure the feasibility of carrying out the research investigation and subsequent experiment.

1. Bloom's taxonomy divides learning into multiple categories and levels within those categories. This research was delimited to the cognitive level of Bloom's Taxonomy, specifically to attention, comprehension, and retention.
2. This research was delimited to auditory, visual, and tactile learning preferences.
3. A final delimitation regards the issue of testing the sample populations. The experiment was a *Post-test – Only Control Group Design*. It was assumed that in all three-test groups, there would be a diverse range of intellectual levels, Bible knowledge levels, and attention span levels. Therefore, this research did not seek to measure improved knowledge about a given subject, but rather, it sought to determine the impact of the independent variable [methodologies of preaching delivery] on the dependent variables [attention, comprehension, and retention]. These were subsequently compared and contrasted to the control group.

Research Questions

In the exploration of multi-sensory expository preaching and its impact on student learning, the following questions served as the focus of the research:

1. In expository preaching, what is the relationship between multi-sensory delivery and the attention of the student?
2. In expository preaching, what is the relationship between multi-sensory delivery and the comprehension of the student?
3. In expository preaching, what is the relationship between multi-sensory delivery and the retention of the student?
4. In expository preaching, what is the relationship between advanced multi-sensory delivery and the comprehension of the student?
5. In expository preaching, what is the relationship between advanced multi-sensory delivery and the retention of the student?

Terminology

An understanding of specific words and phrases in this dissertation is necessary for interpreting the writing and subsequent research related to the impact of multi-sensory preaching on student learning. The following definition of words and phrases are the specific ones to be referred to when those words are used in the context of this dissertation.

Active attention. This level of attention requires effort on the part of the will.

Advanced Multi-sensory Teaching. Teaching that combines auditory, visual, and tactile delivery methods, and thereby connects to the auditory, visual, and touch senses of the learner.

Auditory learner. Learners who prefer to learn and who learn best when information is received through the sense of hearing (Barbee and Swassing 1979, 58).

Automatic processing. The processing of information *without attention*.

Kinesthetic learner. Learners who learn best when they are allowed to use the sense of touch, feel, and experience in the learning process (Barbee and Swassing 1979, 44-45).

Effortful processing. In effortful processing, the inputs include some type of information and effort.

Learning. The process of change in knowledge, beliefs, values, attitudes, feelings, skills, or behaviors as a result of experience with the natural or supernatural environment (Pazmiño 1997, 219).

Learning styles. The different ways in which individuals prefer to receive, retain, and process information (Issler and Habermas 1994, 114).

Modality. Modalities are the sensory channels through which people receive and retain information (Barbe and Swassing 1979, 5).

Mono-sensory teaching. Traditional teaching that is limited primarily to auditory delivery methodology, and therefore connects primarily to the auditory sense of the learner.

Passive attention. A kind of attention that involves no effort of the thinker's will.

Multi-sensory teaching. Teaching that employs auditory + visual delivery methods, and thereby connects to the auditory and visual senses of the learner.

Secondary passive attention. This kind of attention is best described by the word *absorption*. The student is totally absorbed in the information being presented.

Visual learner. Learners who prefer to learn and who learn best when information is received through the sense of sight (Barbee and Swassing 1979, 44-45).

Procedural Overview

Precedents in the literature appropriate to the study are reviewed in chapter two. This includes a survey of literature that analyzes and interprets the *theological* and *neurological -physiological* implications of multi-sensory teaching.

In chapter 3, the methodological design is presented that describes the collection and analysis of data that attempt to answer the five research questions gathered by means of three *quasi-experimental posttest-only control group designs* (Leedy and Ormrod 2001, 237). The goal was to determine the relationship of the three teaching methodologies to student attention, comprehension, and retention. The three teaching methodologies were:

1. *Mono-sensory delivery*, i.e., audio delivery
2. *Multi-sensory delivery*, i.e., audio + visuals
3. *Advanced multi-sensory delivery*, i.e., audio + visuals + tactile delivery.

Student *attention* was measured by observing a sample of individuals from each service during the mono-sensory and multi-sensory deliveries. Observation was accomplished by use of camera viewing and video recordings. Post treatment observations from the videotapes marked the number of student distractions during the mono-sensory deliveries and in the multi-sensory deliveries. Data was subsequently gathered to determine the relationship of the teaching methodologies to student attention.

To measure *comprehension* and *retention* a fill-in-the-blank test was given at the conclusion of the final week of treatment. Questions were designed to determine student comprehension and retention of material taught during the mono-sensory treatments, multi-sensory treatments, and advanced multi-sensory treatments. Data was

subsequently gathered to determine the relationship of the teaching methodologies to student comprehension and retention. In all tests, the independent variable was the teaching methodology and the dependent variables were attention, comprehension, and retention. The experiment unfolded over three weekends of teaching.

Chapter 4 presents the analysis of the data collected.

Chapter 5 summarizes the data, findings, conclusions, and recommendations for further study.

Research Assumptions

The assumptions influencing this research and study are as follows:

1. There are a variety of preaching methodologies throughout evangelical Christianity. Further it is assumed that many pastors have not fully evaluated the linkage between preaching methodologies and the resulting impact on attention, comprehension, and retention in the student.
2. The prevailing methodologies promoted in public education, i.e. the lecture format for teaching has been adopted by preachers and is pervasive in most evangelical churches and this deserves consideration.
3. God is the ultimate source of power behind the teaching of the pastor-teacher. However, God has chosen to accomplish his goals through man's skills and techniques. Therefore, pastors must search for communication channels, presentation modes, and instructional techniques that match the leaning needs of individuals in the educational environment of the church.
4. Bloom's Taxonomy is recognized as a solid theoretical foundation for cognitive objectives and is therefore credible for this research.
5. It is assumed that in the three samples, some people may have pretest knowledge of the subject matter. The researcher was forced not to pretest the group, because such a pretest would alert the people that a posttest was going to be given in the future. This would sabotage the experiment. Two factors help in overcoming this dilemma. First, the sample is very large and the pretest knowledge should be random in each sample. Secondly, the researcher asked questions that were not well known facts. This was the strategy used by Thraikill and cited as a valid procedure by Leedy and Ormrod in their work "Practical Research: Planning and Design." (Leedy and Ormrod, 232-34).

CHAPTER 2

PRECEDENT LITERATURE

This work attempts to identify learning preferences of students, the role of the senses in learning, the role of the brain in learning, teaching-preaching styles, and how best to impact student attention, comprehension, and retention. These issues will not get separated from the heart of this research, which is the expository preaching of the pastor-teacher. Any discussion of these issues therefore, must begin with the biblical role of the pastor as *teacher*.

The Mandate of the Pastor to Teach

When it comes to the role and responsibility of the pastor, Scripture posits a job title, job objectives, and job qualifications. All three of these indicate the pastor's duty to teach:

1. *Pastoral Job Title*: In Ephesians 4:11, the pastor is called "pastor-teacher." The term "pastor" comes from the Greek word ποιμαινοσ, which means "to tend a flock" (Thayer 1896, 527). The word "pastor" then, obviously has leadership implications and objectives. The term "teacher" comes from the Greek word διδασκω. Kittel says διδωσκω has the unambiguous sense of "to teach," "to instruct" (Kittel 1967, 138). From this job title, it is clear that the pastor has a dual role: He is both a leader and a teacher. The Greek construction of the phrase *pastor-teacher* [ποιμαινοσ και διδασκαλουσ] emphasizes a dual role combined in one office, namely the pastor-teacher (Reinecker and Rodgers 1976, 531). Eldridge remarks, "The construction of the phrase pastor-teacher with one definite article covering both words suggests two functions shared by the same individual" (Eldridge 1996, 126).
2. *Pastoral Job Objectives*: The objectives of the pastor are stated very succinctly in Ephesians 4:11-14. Simply put, he is to *equip the saints to do the work of the ministry*. The word "equip" comes from the Greek word καρταρισμοσ, which

basically refers to that which is fit or complete. The term was often used in medical arenas to refer to the setting of bones. The idea is that the pastor is to use his spiritual gifts and his spiritual equipment to equip the church to do the work of the ministry. God has given the pastor two great tools for executing these objectives. They are the Word of God and prayer. That is why the apostles told the church that they would “give their attention to prayer and the ministry of the word” (Acts 6:4). *Equipping the saints* clearly has educational objectives. The objectives of such teaching should seek to impact the cognitive domain, affective domain, and behavioral domain. MacArthur asserts: “Even the most biblical and efficient of church organizations will not produce spiritual maturity without the leadership of God’s gifted ministers who are continually in prayer and in His word. Administration and structure has its place but this is far from the heart of spiritual growth. The great need of the church has always been spiritual maturity rather than organizational restructuring” (MacArthur 1986, 152).

3. *Pastoral Job Qualifications*: 1 Timothy 3 posits the job qualifications for the επισκοπος, i.e., pastor. “Now the overseer must be . . . able to teach” (1 Tim 3:3). The phrase “able to teach” translates the Greek word διδακτικος, which means “able to teach” (Kittel 1967, 165), “skilled at teaching” (Thayer 1896, 144)). The calling and responsibility of the pastor to *teach* is bound up in his job title, job objectives, and his job qualifications. Today, much attention given to the leadership half of the pastor’s job. It is the casual observation of this researcher that books are being written in an endless chain regarding the leadership role of the pastor. What seems to be de-emphasized however is the second half of the pastor’s calling, which is to *teach* the flock. MacArthur sees the trend when he writes, “The past decade or so has witnessed the development of what is called the church growth movement. Seminars, conferences, books, programs, and even special organizations are devoted exclusively to teaching and discussing principles and methods for church growth. Many of the efforts are helpful, but only to the extent they are consistent with the principles Paul teaches in Ephesians 4:12-16” (MacArthur 1986, 151). The pastor must be first and foremost a teacher of the Word. The biblical term “teacher,” διδασκω means, “to hold discourse with others, to deliver didactic discourses” (Thayer 1896, 144). A man may be a great leader, but if he cannot teach, he is disqualified from being a pastor.

Teaching versus Preaching

There seems to be an artificial distinction regarding preaching and teaching when it comes to the task of the pastor. This artificial distinction is seen, for example, in the way seminaries structure themselves: There is the *educational division* of the seminary and the *preaching-theological section* of the seminary, as if the two are distinct.

The idea appears to be that educators are called to *teach* and pastors are called to *preach*. Nothing could be further from the truth. The pastor is first and foremost a *teacher* of the flock. Indeed, teaching is bound up in his very title.

Perhaps some clarity on the two terms *teach* and *preach* would be helpful. The word “teach” (διδασκω) means “to instruct.” It means “to deliver didactic discourses with the idea of building up the one who is being taught” (Thayer 1896, 144). The word “preach” (καρυσσω) means to proclaim a message with conviction and authority (Kittel 1967, 697). When the Bible tells the pastor to *preach* the Word, it is simply telling him *how* to teach the Word. When we teach God’s Word, we should *articulate it with authority*. When we *teach*, we should *preach*. When we *preach*, we should *teach*. The point is that preaching and teaching cannot be divorced from one another. The pastor must be able to combine the teaching and preaching mandates of the Word.

Jesus is a wonderful example of blending preaching and teaching: He publicly demonstrated how to mix didactic communication with divine authority. Mark writes, “The people were amazed that they asked each other, what is this? A new *teaching* and with *authority*” (Mark 1:27). It is clear from this passage that Jesus did not separate preaching and teaching. He combined them! His goal was to teach, but he did so with conviction and authority. The Scriptures are the very Words of God, and when the pastor teaches them, he must articulate them with the authority they deserve.

The Content of the Pastor’s Teaching

Scripture is crystal clear: The pastor is to be an *educator* of the flock. But that raises a question: What is to be the *content* of the pastor’s teaching? What is to be the source and authority of his educational instruction? Scripture is clear on this as well. Paul

gave the following charge to Timothy: “In the presence of God and of Christ Jesus who will judge the living and the dead, and in view of his appearance and his kingdom, I give you this charge: Preach the Word . . . ” (2 Tim 4:1-2a). Paul inserts a great amount of intimidation in that charge. Get the picture: He calls God and Jesus to his side as it were, and then, with those two members of the Godhead present, he gives this charge to every pastor: “Preach the Word.” It is his Word that God has promised to bless. “So shall my word be that goeth forth out of my mouth; it shall not return unto me void, but it shall accomplish that which I please, and it shall prosper in the thing whereunto I sent it” (Isa 55:11). The ministry of the Word in the church is not secondary to the church’s success; it is at the very core of it.

In spite of God’s promise to bless his word, and in spite of the command to “preach it,” many evangelicals have made a conscious decision to jettison exposition and biblical preaching from the pulpit. For example, Rick Warren, in his landmark book *The Purpose Driven Church*, rejects exposition, especially when it is directed to the unchurched:

I do not believe verse-by-verse preaching through the Bible is the most effective way to evangelize the unchurched. Instead, you must start on common ground, just as Paul did with his pagan audience at the Areopagus in Athens. Each week I begin with a need, hurt, or interest and then move to what God has to say about it in his Word. Rather than concentrating on a single passage, I will use many verses from many passages that speak to the topic. (Warren 1995, 294-95)

Rick Warren is one of the most successful pastors in the world in terms of ministry size, ministry impact, and intelligent strategies for growing a strong and healthy church. This researcher has tremendous respect for him and has even taken his entire staff to several “Purpose Driven Conferences” at Saddleback Church in California. It seems a bit odd to this researcher that Warren is so opposed to exposition when one considers that

Warren's hero in the faith, W.A. Criswell, was one of the greatest expositional preachers in modern days. Warren says, "I believe W.A. Criswell was the greatest American pastor of the 20th century" (Warren 2002, 1). Criswell built a tremendous church at First Baptist Church of Dallas, Texas, and the staple for preaching was exposition. Granted, Criswell was a great communicator, and he was able to take biblical content and relate to current living. Could it be, however, that the average communicator could better communicate biblical truths in an expositional format if they employed multi-sensory delivery techniques? Could it be that Warren's dislike for expository preaching could be altered if he were exposed to expository preaching that is captivating, multi-sensory, creative, and life changing? That, of course, is the issue to be researched in this dissertation.

No matter the cost, pastors must be committed to the exposition of the texts of Scripture. The health of our own churches and the health of the church at large depends on our commitment to the Word of God. As far back as 1742, John Albert Bengal offered this challenge to the church regarding its fidelity and commitment to the Scriptures:

Scripture is the foundation of the Church: the Church is the guardian of the Scripture. When the Church is in strong health, the light of Scripture shines bright; when the Church is sick, Scripture is corroded by neglect; and thus it happens, that the outward form of Scripture and that of the Church, usually seem to exhibit simultaneously either health or sickness; and as a rule the way in which Scripture is treated is in exact correspondence with the condition of the Church. (Kaiser 1981, 7)

Many pastors give lip service to the power and authority of God's Word, but relegate it to second class when it comes to their preaching. Noted expository preacher, John MacArthur laments this trend, which pervades so many evangelical churches.

The theological highlight of recent years has without question been evangelicalism's intense focus on biblical inerrancy. Much of what has been written defending inerrancy represents the most accurate theological reasoning our generation has produced. Yet it seems our commitment to inerrancy is somewhat lacking in the way it fleshes out in practical ministry. Specifically, evangelical preaching ought to

reflect our conviction that God's Word is infallible and inerrant. Too often it does not. In fact there is a discernable trend in contemporary evangelicalism away from biblical preaching and a drift toward experience-centered, pragmatic, topical approach in the pulpit. (MacArthur 1992, 22-23)

Walter Kaiser joins the lament when he writes:

It is no secret that the Christ's church is not at all in good health in many places in the world. She has been languishing because she has been fed, as the current line has it, "junk food"; all kinds of artificial preservatives and all sorts of unnatural substitutes have been served up to her. As a result, theological and biblical malnutrition has afflicted the very generation that has taken such giant steps to make sure its physical health is not damaged by using foods or products that are carcinogenic or otherwise harmful to their physical bodies. Simultaneously a worldwide famine resulting from the absence of any genuine publication of the Word of God (Amos 8:11) continues to run wild and almost unabated in most quarters of the church. (Kaiser 1981, 7-8)

Many in the modern church have jettisoned expository preaching because they think it fails to connect to the individual in the pew, especially to the lost. It seems to this author, that many of those who castigate expository preaching do not really understand the nature of expository preaching – that it is both *biblical* and *relevant*. Some seem to believe that the words *expository* and *relevant* cannot coexist. This is a complete misunderstanding of the nature and goals of expository preaching. The following concise definitions represent the stated goals of expository preaching:

The expository preacher proposes above everything else to make clear the teaching and content of the Bible. The preacher seeks to bring the message of definite units of God's word to his people. He discovers the main theme or constituent parts of a book's message as they were in the mind of the writer. These he unfolds step-by-step until he reaches the ultimate goal. He discovers the universal organizing of thought in the book, and strives to set forth their essential relationship to contemporary life. (Montgomery 1939, 42)

Expository preaching is the communication of a biblical concept, derived from and transmitted through a historical, grammatical, and literary study of the passage in its context, which the Holy Spirit first applies to the personality and experience of the preacher, and then through him to his listeners. (Robinson and Robinson 2003, 19)
Expository preaching is the contemporization of the central proposition of a biblical text that is derived from popular methods of interpretation and declared through

effective means of communication to inform minds, instruct hearts, and influence behavior towards godliness. (Richard 1995, 17)

Still some evangelicals reject exposition, because they imagine the people are not interested in theological matters. They contend that this is particularly true of the unchurched. For the moment, let the reader lay aside the fact that the Bible *commands* the pastor to “preach the Word.” The question for the moment is one of pragmatism. Pragmatism should never guide what the pastor-teacher is commanded to do, but let’s examine the pragmatic question: Does the unchurched community feel uncomfortable with deep and complex theological preaching. Thom Rainer asserts that such thinking is simply one of the many myths held by some “church growth experts.”

Myth #6: We must be careful in our preaching and teaching so that we do not communicate deep and complex biblical truths that will confuse the unchurched. ‘You know what frustrated me the most when I started visiting churches?’ Susan M. asked us. Susan was a lifelong unchurched person living in the Cleveland area until a crisis prompted her to seek God. She tried to find him and his truth in the churches she visited. ‘What really frustrated me was that I had a deep desire to understand the Bible, to hear in-depth preaching and teaching,’ she continued. ‘But most of the preaching was so watered down that it was insulting to my intelligence. I went to one church where the message was on fear. I was eager to hear what the Bible had to say about a subject that described my state of mind.’ But Susan was sorely disappointed with what she heard. ‘It was more of a pop-psychology message. The biblical view was never explained. Bible texts were hardly mentioned,’ she explained. One important lesson we learned from the unchurched is that we should never dilute biblical teachings for the sake of the unchurched. (Rainer 2001, 45)

Bob Russell, pastor of one of America’s largest churches, has not capitulated to the pressure to tone down the Word. Though not necessarily an expositor, he confirms that biblical preaching is both relevant and even desired by church attenders.

Have you ever been invited to someone’s home for an evening party thinking that dinner was going to be served and you were mistaken? You arrive early only to realize it’s an open house with only a few finger foods or desserts on the table. You try to fill up on the finger foods, but they don’t satisfy. You walk away hungry and say to yourself, *I need to stop by a fast-food restaurant and get a hamburger or something!*

Many people leave church feeling empty every week. They come hungry for the Word of God, but when they aren't fed, they leave empty, frustrated, and hungry. Eventually, unless all they want out of church is the security of some tradition or entertainment fix; they will drift away in an effort to find a place that offers some substance.

I've noticed a disturbing trend among our churches and Christian colleges. We have discovered worship, and that is good, but some leaders are so enthusiastic about praise and worship that they want to omit the preaching all together! A Bible college professor recently told me that almost all of their student led chapels, about four out of five, had no preaching at all. An "all singing" service is certainly appropriate occasionally, but to rarely be exposed to preaching – especially on a campus that is supposed to be training preachers of the next generation – seems way out of balance. (Russell 2000, 23-24)

This author is a pastor and has witnessed the blessing of biblical preaching in his own ministry in Miami, Florida. Miami is an area known for unbelief. Yet, the author's church has grown to over 2700 in attendance and often is a leader in the state of Florida for baptisms. This researcher is convinced the transformation comes not through the pastor-teacher's cleverness, but through the power of the Word of God. Those who imagine expository preaching is not effective should examine their own delivery style. Perhaps the problem is not with the model, but with the delivery methodology.

A Biblical Model for the Pastor's Preaching

God has promised to bless his Word, and God has commanded the pastor to preach the Word – period! This, however, raises another question: *How* do we execute that command? If the pastor is called to preach the Word, what is the most effective method for executing that charge? This researcher is convinced from the text of scripture and from experience that exposition, i.e., expository preaching is the best method to accomplish the goal of preaching the Word. Through expository preaching the pastor is guided by both the text and the Spirit. Robinson comments on this dual control when he

writes, “At its best, expository preaching is the communication of a biblical concept derived from and transmitted through a historical, grammatical, spirit guided study of the passage in its context, which the Holy Spirit applies first to the personality and experience of the preacher, then through him to his congregation” (Robinson 1974, 57). Expository preaching may best be understood by understanding its antithetical counterpart – topical preaching.

Topical Preaching

Bryson defines topical preaching as “a sermon built around an idea taken from the Bible or a subject outside the Bible taken to the Bible” (Bryson 1995, 18). The topical preacher begins his teaching with an idea or a concept, and from there, he moves to the text of Scripture to validate his often already preconceived notions. For the topical preacher, it all begins in his mind, and Scripture is subordinated to his thoughts and ideas. The danger of topical preaching, when carried to the extreme, is eisegetical interpretation. The term εἰς in the Greek means “into.” Eisegetical interpretation, then, means “to read into the text” one’s own preconceived ideas and notions. In other words, the pastor faces the temptation of adjusting the meaning of the text to accommodate his preconceived ideas. Bryson clearly defines the objectives of the expository preacher, and also defines the risks of eisegetical interpretation:

The primary purpose of the expositor is to explain as clearly as possible the author’s meaning. The interpreter must represent the text, not his or her own prejudices, feelings, judgments, or concerns. To indulge in personal projection on the text means to engage in eisegesis, “reading into” a text what the interpreter wants to say. Eisegesis is the opposite of exegesis. Exegesis is bringing the truth of the text out of its life situation. Eisegesis is the interpreter’s projection of ideas into the text. Separating one’s self-imposed idea from biblical interpretation is one of the greatest complexities of exegesis. (Bryson 1995, 144)

Joel Osteen, a popular pastor, motivational speaker, author, and television evangelist, is a classic example of those who take eisegetical liberties with the biblical text to make a philosophical point. He frequently reads into the text of Scripture an unintended meaning in order to bolster his philosophical views on positive attitude and success. This researcher believes very strongly in having a positive attitude for life, but we should not twist the Scripture to make the point. Osteen, for example quotes Colossians 3:2, which says, “Set your mind and keep it set on the higher things.” Just a casual exegesis of that text reveals the phrase ‘higher things’ is a reference to heaven. “Higher things” translates the Greek word *ανω*, which stands in contrast to *επι γη*, which refers to “things on earth.” The command is to set your affection on things in heaven not on things in earth.

Osteen completely reverses the meaning to imply that we are to set our minds on expecting success. In his best selling book *Your Best Life Now*, he writes:

It is important that you program your mind for success. That won't happen automatically. Each day, you must choose to live with an attitude that expects good things to happen to you. The Bible says, “Set your mind and keep it set on the higher things.” When you get up in the morning, the first thing you should do is set your mind in the right direction. Say some thing such as ‘This is going to be a great day.’ Expect circumstances to change in your favor. Expect people to go out of their way to help you. Expect to be at the right place at the right time. (Osteen 2004, 13)

Notice the complete disregard for the intended meaning of the text. This convenient eisegetical approach to Scripture seems to be typical of much contemporary preaching. The trend is becoming more and more pervasive in the modern church growth movement, and pastors will need to be very discerning as we move forward.

Discernment is a must for leaders as they evaluate and develop models of ministry. This writer fears that pragmatism will soon take priority and authority over the

Scriptures, and at that point we will be no different than the Catholics who place tradition over the Scriptures or the Pentecostals who place experience over Scripture. In all that we do, the Bible must be the foundation of all that we teach. We must start and finish with the authority of the Holy Scriptures. Expository preaching aims to do just that.

Expository Preaching

The expository preacher begins his sermon with the text of Scripture and then subordinates his ideas and philosophies to the authority of the text. For the expository preacher, everything begins and ends with the text. John A. Broadus wrote in the first edition of his famous textbook, “An expository sermon discourse may be defined as one which is occupied mainly, or at any rate very largely, with the exposition of Scripture” (Broadus 1876, 303). William M. Taylor explained, “By expository preaching, I mean that method of preaching which consists in the consecutive interpretation, and practical enforcement of a book of the sacred canon” (Taylor 1996, 155). Harry Jeffs defined expository preaching in these terms: “Exposition is the art of opening up the Scriptures, laying them out, reproducing their matter and their spirit in forms vitalized by the personality of the expositor. The main purpose of the exposition is to apply the knowledge of Scripture to serviceable uses” (Jeffs 1910, 9). Donald Grey Barnhouse stated expository preaching in these terms: “Expository preaching is the art of explaining the text of the Word of God, using all the experience of life and learning to illuminate the exposition” (Whitesell 1953, xi). David Breed set forth this view:

The expository sermon is the product of exegesis, but it is in no sense an exhibition. It is not a running commentary upon some passage of Scripture in which its separate parts are taken up seriatim and explained, but, as its name implies, it is a piece of rhetoric: a sermon. It differs from the topical sermon in that it is derived directly from the Scripture. (Breed 1911, 387)

Jeff D. Ray asserted that in preaching,

Exposition is the detailed interpretation, logical amplification, and the practical application of a passage of Scripture. Exegesis draws out the hidden meaning; exposition places that meaning out in logical appropriate, effective order. Exegesis is the task of the commentator; exposition is the task of the preacher. (Ray 1940, 71-72)

G. Campbell Morgan had this to say:

Being sure that our text is in the Bible, we proceed to find out the actual meaning, and then to elaborate its message. Elaboration is far more than simple statement. The extrapolates, postulates, implicates, deductions, applications . . . the sermon is the text repeated more fully in that these things – postulates, implicates, deductions, applications – are discovered and declared, or at least recognized. (Morgan 1937, 56-57)

Merrill F. Unger posited this description:

However a clear and unconfused definition is to be arrived at, the valid criterion, it would seem, is not the length of the portion treated, whether a single verse or a larger unit, but the manner of treatment. Expository preaching must be biblical, biblically instructive, challenging, consistent with the whole of biblical truth, and must come to grips with the human will and conscience. (Unger 1955, 33)

Expository preaching releases the power of the Word of God and allows the pastor to speak from an authority greater than himself. The great expository preacher

William M. Taylor insisted:

The preacher's special power is that he has God's Word behind him, and if through the neglect of expounding God's Word he fails to use this power with effect, he is like Samson shorn of his locks, and will be sure to be made sport of by the Philistines of his generation. Hence as an engine of power, I advocate most earnestly the systematic pulpit exposition of the Scriptures. (Doe 1876, 17)

F.B. Meyer claims the expository preacher has a better chance of appealing successfully to the conscience and capturing and compelling the will, because his appeals are based more on Scripture, have a broader basis of truth, and are likely to have more of the empowerment of the Holy Spirit (Meyer 1912, 29). Biblical scholar Walter Kaiser comments:

So strong is this writer's aversion to the methodological abuse he has repeatedly witnessed – especially in topical messages – that he has been advising his students for some years now to preach a topical sermon only once every five years – and then to immediately repent and ask God's forgiveness!

In case the reader doesn't recognize the hyperbole in that statement, then let me plainly acknowledge it as such. However, the serious note that lies behind this playfulness is a loud call for preaching that is totally biblical in that it is guided by God's Word in its origins, production, and proclamation. (Kaiser 1981, 19)

Paul gave a crude outline regarding the process of expository preaching. Εως ερχομαι τν αναγνωσει τν προσεκε παρακλασει τν διδασκαλια. Translation: "Until I come, give attendance to reading, to exhortation, to doctrine" (1 Tim 4:13). There is a three-part sequence to this injunction: The pastor-teacher is to read the text, explain the text, and apply the text. It is a great definition of expository preaching!

The reading of the Scriptures was accompanied by an exposition of the passage read so that the hearers could understand it (cf. Neh. 8:1-8; Luke 4:16ff). Anything that needed to be clarified would be explained. In our day, when we are culturally, geographically, linguistically, philosophically, and historically removed from biblical times, exposition is essential.

Exhortation challenges people to apply the truths they have been taught. It warns people to obey in light of blessing to come on them if they do, and the judgment if they do not. Exhortation may take the form of rebuke, warning, counsel, or comfort, but always involves a binding of the conscious.

Didaskalia (teaching) appears fifteen times in the Pastoral Epistles. It involves the systematic explanation of the Word of God. The point is that an excellent minister is to disseminate sound teaching to all people at all times through all means. This is the heart and soul of the ministry, since the Word is the only source of truth and life. It is no surprise then that an elder was required to be able to teach. (MacArthur 1995, 176)

This researcher has presented somewhat of a defense of expository preaching for four reasons: (1) God promises to bless his Word. (2) The pastor-teacher is commanded to preach the Word. (3) It is effective. (4) It is the heart and soul of this dissertation. This is not merely a paper on teaching techniques and methodologies. It is first and foremost a research project to analyze delivery methodologies of expository preaching. Getting the message of God's Word across is the point of multi-sensory

expository preaching. Pastor Ed Young has been a pioneer in multi-sensory preaching. In his book coauthored with Pastor Andy, *Can We Do That? Innovative Practices that Will Change the Way You Do Church*, Young makes a crucial point. In a subsection, “The Centrality of Scripture,” he writes:

This brings us to an important reason for careful planning: ensuring that the message of the Bible is the central focus of the weekend services. Visuals can be illuminating. Videos can move and inspire. Lights and props and drama can keep people interested. But too much of a good thing can quickly distract from the very reason people need to be there, which is to apply the Word of God to their lives. (Stanley and Young 2002, 155)

Educational Objectives of the Pastor-Teacher

As a teacher of the Word, the pastor has educational objectives. R. Albert Mohler, Jr. has this to say about the necessity of education within the church.

Sometimes in our ordering of congregational life, we deal with education as if it’s important, perhaps even essential, but not most urgent. I have to tell you: I believe unless we retrieve and rescue this generation from Christian immaturity and Christian ignorance, we’re in grave danger of having no generation of faithful Christians to make any impact in this nation in a very short amount of time. (Mohler, 2004)

The pastor can be guided in realizing educational objectives by an examination of Bloom’s Taxonomy. Benjamin Bloom developed a taxonomy of learning objectives by dividing learning into three simple categories:

1. *The Cognitive Domain*: This domain of learning focuses on the brain and concerns itself primarily with comprehension and retention of material taught.
2. *The Affective Domain*: This domain focuses on the affect of the material on the student’s thinking and values.
3. *The Behavioral Domain*: This area concerns itself with the behavioral reaction of the material taught (Richards and Bredfeldt 1998, 136).

On Pentecost, Peter preached a sermon that impacted all three domains.

Notice that each of Bloom's domains of learning was affected by Peter's teaching ministry. First the listeners heard his message. Peter's teaching provided content that had to be mentally processed and considered by his audience. Peter taught in such a way as to motivate cognitive learning. Second, we read they were "cut to the heart." This phrase refers to a change in attitudes and values. Peter's listeners were emotionally affected by his teaching. Finally we read that in response to what was taught, the learners in Acts 2:37 asked, "Brothers, what shall we do?" Not only did Peter's teaching affect learning on the cognitive and affective domains, but it also motivated a behavioral response. So, we have in this verse all three kinds of potential learning – cognitive, affective, and behavioral. (Richards and Bredfeldt 1998, 136)

The Cognitive Priority of the Pastor's Teaching

The cognitive domain of learning includes the learning processes that "deal with the recall or recognition of knowledge and the development of intellectual abilities and skills" (Bloom 1956a, 7). The six major classes in the cognitive domain are knowledge, comprehension, application, analysis, synthesis, and evaluation. In 2001 these categories were refined in the following sequence.

1. *Remembering*: The ability to recall facts and information. The student recalls and is able to recognize information.
2. *Understanding*: In this second level of learning the student changes information into a different symbolic form or language.
3. *Applying*: The student solves a lifelike problem that requires the identification of the issue and the selection and use of appropriate generalizations and skills
4. *Analyzing*: The student solves a problem in the light of conscious knowledge of the parts and forms of thinking (relationships among facts, generalizations, definitions, values, and skills).
5. *Evaluating*. The student makes a judgment of good or bad, right or wrong, according to standards he or she designates. This level is reached when the student has grasped material and concepts in such a way that the student can now judge the value of something based on a standard (Ford 1991, 81, 100).
6. *Creating*: The student solves a problem that requires original creative thinking (Anderson and Krathwohl 2001, 67-68).

As a teacher of the Word and as one who has educational objectives in mind, the pastor must first concern himself with the *cognitive domain*. This researcher concurs that all three levels of Bloom's Taxonomy are essential to full learning. Having concurred however, he is convinced that the cognitive domain must be the *starting* point. Teachers cannot by-pass the brain of the student and go straight to issues of the affective and psychomotor results. The cognitive domain must be engaged first in the learning process. Simpson points out that there is a progressive sequence in the levels of Bloom's taxonomy with each level being more complex than the one that preceded it (Simpson 1992, 2). This sequence however, must start with the cognitive domain, because failure at the cognitive level has a domino effect. If the teacher desires to impact the affective and behavioral domain of the student, he must first capture the cognitive domain. Learning must not consummate at the cognitive domain, but it must surely begin there. A student will be hard pressed to act on what he does not understand and does not remember.

Pastoral Objectives in the Cognitive Domain

As the pastor-teacher focuses on the cognitive domain, there are at least three objectives and issues he must address as priorities: (1) He must evaluate the issue of gaining the *attention* of the student. (2) He must assess the issue of *comprehension* of his teaching. (3) He must assess the issue of *retention* of his teaching. Of interest to this researcher will be the impact of teaching styles on attention, comprehension, and retention. Specifically, the experimental portion of this research will measure mono-sensory teaching against multi-sensory and advanced multi-sensory delivery exposition. Therefore, an overview of these three cognitive categories is needed.

Attention

Attention must constantly be the concern of the teacher. The attention of the student and the attention span of the student determine in large measure how well the student is able to learn from the teacher. Research continues to demonstrate the importance of attention in the learning process.

The role of attention in memory is essential to the subsequent comprehension and retention of material. As early as 1960, Ausubel proposed that attracting the student's attention served as a type of advanced organizer, to create a mindset for listening which may prime the learner to focus on the task. This focus of attention may in turn allow the learner to process the information longer or at a deeper cognitive level. (Thailkill 1996, 3)

To understand how attention works within the cognitive system, Professor Mark Grabe of the Department of Psychology at the University of North Dakota breaks attention down into three stages:

The model contains three stages: a perceptual stage, a comprehension stage, and an elaboration stage. The perceptual stage involves the recognition of information collected from the environment by the sensory receptors. The comprehension stage results in the attachment of meaning to the recognized input. Stored information, rules, and experiences are matched to the perceptual input to provide meaning. The elaborative stage was included to indicate that the system has the capacity to go beyond the information provided by the environment. (Phye and Andre 1986, 51)

Simply put, "Attention means the direction of the mind upon some object. The object may be external, as when one watches carefully the operation of a machine or listens intently to a piece of music, or it may be mental as when one 'calls to mind' some past experience or reflects upon the meaning of some idea" (Gregory 1989, 37-38). The intensity, or lack of intensity, with which a person focuses on an object must also be of concern to those who teach. Such a consideration takes us into the study of attention levels.

Levels of Attention

Research indicates and experience confirms that individuals engage in different levels of attention. Attention is not a static condition that is unchanging. People will say an individual was *absorbed* in something. That means the object had his full attention and was occupying the whole of the consciousness. Even at that, a person may attend to the object with varying degrees of concentration. The individual may allow his or her attention to flit from one object to another, focusing on that stimulus until another stimulus captures the attention. On the other hand, the individual may hold himself or herself resolutely to an object, but still be aware that other objects are tempting for attention. Still yet, a person can be so completely distracted by an object that all other objects are almost not existent so far as the consciousness of the person is concerned (Gregory 1989, 38). Describing the manifestations of the student's attention, Gregory points out:

His intent look and absorbed manner are signs of his interest and attention. Interest and attention characterize the mental state of the true learner, and constitute the essential basis on which the process of learning rests. The law of the learner may be stated as follows: the learner must attend with interest to the material being taught. (Gregory 1989, 37)

Some refer to these levels as *automatic processing* and *effortful processing*. The student who exhibits *automatic processing* can be somewhat engaged in the learning process, but appear to exert no attentive effort. He or she is taking in information, they are somewhat mentally engaged, but the attention system is on "autopilot."

The processing of information *without attention* is referred to here as automatic processing. Kahnemen suggests that the difference between automatic and effortful processing can be understood by considering what must be fed into the system to trigger a particular information-processing activity. In effortful processing, the inputs include some type of information and effort. Automatic processing activities are triggered solely by an input of information. (Phye and Andre 1986, 52)

Schneider and Shiffrin add these observations:

Automatic process is activation of a learned sequence of elements in long-term memory that is initiated by appropriate inputs and then proceeds automatically – without subject control, without stressing the capacity limitations of the system, and *without necessarily demanding attention*. Controlled processing is a temporary activation of a sequence of elements that can be set up quickly and easily *but requires attention*, is capacity limited, and is controlled by the subject. (Schneider and Shiffrin 1977, 1)

William Yount refers to such cognitive actions in the Information Processing Theory.

IPT is a cognitive theory because it defines learning as the result of interaction between learners and their environments. Theorists have found that we operate in two different modes as we process information. The first is called automatic or incidental processing. This unconscious process records every experience in our lives without intentional attention. The second is intentional processing, which is the result of attention and study. (Yount 1999, 210)

In the mind of this researcher, Gregory provides the greatest clarity when it comes to understanding attention levels. He breaks attention down into three different categories: First, there is attention of the “flitting kind.” He refers to this as *passive attention*, because it involves no effort of the will. The individual simply is focused on whatever attracts his or her attention for the moment. Again, the attention of the individual is flitting from one stimulus to another with little or no effort of the will. The second type of attention mentioned by Gregory is what he terms *active attention*. This level of attention does require effort on the part of the will. The individual makes a conscious decision to focus on an object in spite of the other allurements that may compete for attention. The third type of attention defined by Gregory is what he terms *secondary passive attention*. This kind of attention is best described by the word *absorption*. “Generally speaking we learn most easily and most economically when we are absorbed in our work, when the objects that we are trying to fix in mind and

remember permanently really attract us in their own right, so to speak – when our learning is so fascinating that it simply carries us with it” (Gregory 1989, 40).

It seems obvious that secondary passive is the best kind of learning for any student. This is the student who is sitting on the edge of his or her seat as it were when we teach. This is the person in the pew whose thoughts are not flitting around the room or to other thoughts as we are teaching. Such learning is a pleasant experience for the student, and such learning likely increases retention and comprehension of the material taught. What teacher himself has not read a whole page of material with the eyes only to get to the end of the page and realize he or she has not absorbed a single thought from the page? The student who is truly interested and absorbed with the teaching-learning experience will not experience such mental dead spots.

Those who teach the Word of God should seek to evoke *secondary passive attention*, i.e., *effortful processing* as opposed to *automatic processing*. Pastors do not want students to be disengaged from the message of Christ. We want them to be actively, passionately, and fully engaged in the learning process. We do not want our parishioners minds to be drifting and flitting all over the place as we are teaching the Holy Word of God to them. We want to present the material to them so that the material itself “carries the student along.” We want them to be absorbed in the Word of God, drinking in every word.

Unfortunately, in many churches the people are bored, distracted, and engaged in low levels of attention. Gregory says, “It is obvious that attention of the secondary passive type is, from this learner’s point of view, the most desirable to cultivate. It means an economy of learning; it means pleasant learning; and it means effective learning. But

the general verdict of human experience is that these most desirable conditions are not easily fulfilled” (Gregory 1989, 40).

In recent years, researchers have developed methods of measuring and determining attention levels. “Many studies have employed the recall of subjects as evidence for the ability to attend to selectively or to provide an indication of what has been attended to. Dichotic listening (e.g., Bryden 1971) represents one of the classical experimental methods for studying selective attention” (Phye and Andre 1986, 56). A test of retention and comprehension could measure the presence of selected attention.

Measuring *levels* of attention however, requires observation. These include attention observations, which could include pupil dilation, eye fixations, and viewing times (Phye and Andre 1986, 58). This researcher will use one of these techniques, eye fixations, to measure attention levels in the experiment portion of this research.

Biblical Calls for Attention

It is extremely interesting to this researcher that the scriptures recognizes different levels of attention. The writer of Hebrews writes explicitly about the issue of attention levels as it relates to Jesus and the necessity of embracing him as savior. In Hebrews 2:1 the author of Hebrews implores the unsaved listener by saying: “We must pay more careful attention to what we have heard so that we do not drift away” (Heb 2:1). The phrase “pay more careful attention” translates two very graphic Greek terms that have to do with one’s level of attention. The primary word is προσεξω, which is a compound word. The word, εξω means “to hold something in ones mind” (Kittel 1964, 2:816). The prefix προσ generally means “before” (Kittel 1968, 6:720). Προσεξω then means, “to hold something before one’s mind.” It is the antithesis of a drifting mind. In

fact, προσεξω was actually a nautical term in the Greek. The word was used of a helmsman bringing a ship to land (Thayer 1896, 546). The idea is that the helmsman cannot have a mind that is casually attending to the steering of the ship. He must be absorbed in what he is doing. He must be totally focused on the task at hand. Distraction is not an option. The connection is then brought over to the issues of Christ. When it comes to hearing the message of Christ, the writer of Hebrews is saying, “We must pay careful attention. We cannot be flippantly paying attention, but rather our minds must be holding onto what is being taught.”

The same idea is captured with the word κατανεωω in chapter 3. “Therefore, holy brothers, who share in the heavenly calling, fix your thoughts on Jesus” (Heb 3:1). The phrase “fix your thoughts” translates the Greek word κατανοεω, which means to direct one’s whole mind to an object” (Kittel 1967, 4:973). The word is actually an intensified form of διανοια, which carries “the basic sense of thought and pondering something” (Kittel 1967, 4:963). It seems to this writer that the author of Hebrews is calling the learner to a heightened level of attention. This appears to be congruent with what Gregory calls *secondary passive attention*.

The Bible stresses the idea of *paying attention* to biblical teaching and uses a number of words to talk about giving attention to some teaching. Jesus was a master teacher, and he constantly raised the issue of attention to those he taught. When he spoke he often prefaced his teaching with a call to *pay attention*. In other words, *before* he began the teaching process, he made sure he had the eyes, ears, and full focus of those he sought to teach. For example, “Again, Jesus called the crowd to him and said, “Listen to me, everyone and understand this” (Mark 7:14). The word “listen” translates the Greek

word ακουστος, which means, “to attend to, to consider what is or has been said” (Thayer 1896, 22). Jesus was calling his learners to give him their full attention so that they could learn. He wanted to impact the comprehension level of their learning. He wanted to impact the application level of their learning, but he knew that it *began* with the issue of attention, and he went after their full attention. Roy Zuck makes these observations:

As Barlow wrote, ‘to motivate, be sure you capture the student’s attention at the very outset.’ Jesus did this effectively in several ways. First, he asked for attention. He challenged his audience to hear. Second, Jesus made startling statements. For example, as he began his Sermon on the Mount, he no doubt captured the attention of his hearers immediately by his assertions that the poor in spirit, the mourners, and the meek are blessed (Matt. 5:3-5). Usually those individuals would not have a sense of being blessed. His authoritative words to the paralytic, ‘Son, your sins are forgiven’ (Mark 2:5) no doubt startled those who heard him.

Third, Jesus engaged people’s attention by telling stories, asking questions, using visuals, and by his miracles. Fourth, he captured attention by requests, such as his word to the Samaritan woman, ‘Will you give me to drink?’ (John 4:7). Fifth, he gained attention by addressing individuals by name. (Zuck 1998, 159)

Jesus often used extraordinary methods to capture people’s attention. He made drastic statements to seize the attention of his listeners. For example, he said, “If your right eye causes you to sin, gouge it out and throw it away. It is better for you to lose one part of your body than your whole body to be thrown into hell. And if your right hand causes you to sin, cut it off and throw it away. It is better for you to lose one part of your body than for your whole body to be thrown into hell” (Matt 5: 29-30). Jesus was using a grammatical device we know as hyperbole to arrest the attention of his audience and to reinforce the importance of what he was saying. He was not advocating bodily dismemberment, but he was saying, “Deal drastically with your sins.”

On another occasion Jesus had lost the attention of the crowd and resorted to an attention getting strategy to recapture the crowd’s attention. In John 8, Jesus was

teaching in the temple courts. Like most rabbis, he would have chosen a pillar of the temple, sat down, crossed his legs, and begun to teach the Word of God. But right in the midst of his teaching, the Pharisees burst into the circle of people and flung a woman at Jesus' feet. Then they challenged Jesus: 'Teacher, this woman was caught in the act of adultery. In the Law Moses commanded us to stone such women. Now what do you say?' (John 8:5).

The Pharisees thought they had Jesus between a rock and a hard place. Moses' Law did command that such a woman should be stoned. However, Israel was an occupied country at this time in history and was under the authority of Rome. Roman law forbade the Jews from stoning people. The dilemma pitted Jesus between Moses and Rome. If Jesus had said, "Don't stone her," he would have spoken against Moses. On the other hand, had he given the command to stone her, he would have broken the Roman law and the Romans would have executed him prematurely.

At any rate, by this time, Jesus had lost the attention of the crowd to the Pharisees. In verse 5 the Pharisees said to Jesus, "Now what do you say?" Verse 7 reads, "When they kept on questioning him" ("ὅσ ἐπεμνον ἐροτοντες) imperfect active indicative of ἐπιμεινω" (Robertson 1932, 139), which means they continued to ask him the question. The idea is that they were seeking to racehorse Jesus into a hasty decision. It seems obvious that by this time all the attention had gone from Jesus to the Pharisees who had disrupted the teaching. Notice how Jesus recaptured the attention of the people. "They were using the question as a trap, in order to have a basis for accusing him. But Jesus bent down and started to write on the ground with his finger" (John 8:6). Many suggestions have been made regarding what Jesus wrote in the dirt. This researcher

believes he did not write anything. He was merely doodling in the dirt, and waiting for the people's eyes to move from the Pharisees back to him. Once he had regained everyone's attention, he dropped the bombshell: "When they kept on questioning him, he straightened up and said to them, If anyone of you is without sin, let him be the first to throw a stone at her" (John 8:7).

Why did Jesus doodle in the sand? It is likely he stooped down and doodled in the sand for the express purpose of regaining attention. He knew the importance of gaining attention, and he used auditory techniques, visual techniques, and kinesthetic techniques to do so. We will examine some of those methodologies later in this work.

The disciples called for the same level of attention in their teaching. For example, on the Day of Pentecost, before Peter gave his infamous teaching on the Messiah, Christ Jesus, Scripture says, "Then Peter stood up with the Eleven; raised his voice and addressed the crowd: 'Fellow Jews, and all of you who live in Jerusalem, let me explain this to you; listen carefully to what I say'" (Acts 2:14). The phrase "listen carefully" translates the Greek phrase *ενωτισασθε τα ρηματα μου*. The word *ενωτισασθε* means "to give ear to" (Rienecker 1976, 266). The phrase means *τα ρηματα μου* means "to the words of me." Peter was about to deliver a crucial teaching to the Jewish people, and like any good teacher he knew the importance of attracting attention at the beginning of the teaching. Stephen also understood the principle of hooking attention at the beginning of a sermon. In his great sermon to the Sanhedrin we read, "To this he replied: Brothers *listen* to me" (Acts 7:2). James also understood the concept. He said, "When they finished, James spoke up: Brothers listen to me" (Acts 15:13).

Like Jesus, the disciples resorted to drastic measures to grasp people's attention. The prophets of the Old Testament demonstrated the same emphasis on attention. They engaged in some strange and often bizarre tactics to get people's attention. We will examine some of those techniques later in this research.

As pastors who teach the most life changing information in the world, we can take a lesson from Jesus and the apostles. If we fail to connect people's attention, especially at the beginning of our teaching, we will never impact their learning. Pastors have the greatest message in the world to teach, and we don't want our congregation to be on *autopilot* when it comes to attention. We want them fully engaged in mind, body, soul, and spirit. We want our people to be on the edge of their seats, not gazing off to the side, but engaged with full eye contact.

Unfortunately, attention is the initial battle where the war of learning is often lost. It is a logical downward spiral. Failure to grasp the attention of the student will result in a failure to communicate and teach the student. Again Barlow, in his work, *Educational Psychology: The Teaching Learning Process*, wrote, "Be sure you capture the student's attention at the outset" (Barlow 1985, 366). During this researcher's training for pulpit ministry, he can recall his teachers emphasizing the need to attract the attention of the congregation at the outset of the sermon. Again, for reemphasis, the domain of attention is where the battle for the mind is won or lost.

Tizard insisted,

The preacher must gain the attention of his audience. Forgive me for saying a thing so obvious. I mean he must gain it at once or he may not gain it at all. For this reason, the beginning of a sermon is of utmost importance; it is even more important than the end. If people have not been made to listen at the beginning, it is unlikely they will be doing so twenty minutes or half an hour later. (Tizard 1959, 58)

Comprehension

After a teacher hooks the attention of the people, he must next concern himself with the issue of *comprehension*. Comprehension asks, “Does the student understand the content of the teaching?” Again, students will be hard pressed to act on what they do not understand. Comprehension of information demonstrates basic knowledge about a subject and the ability to integrate new data with existing information. Relevant words to comprehension would be terms like interpret, paraphrase, translate, or illustrate (Issler and Habermas 1994, 32-34). Comprehension demonstrates personal understanding.

Jesus often brought up the issue of comprehension in his teaching. For example, if we go back to Mark 7:14 where Jesus spoke about the issue of *attention*, we see he also brought up this issue of *comprehension*. “Again, Jesus called the crowd to him and said, ‘Listen to me, everyone and understand this’” (Mark 7:14). The word “understand” translates a graphic Greek term. It is the word συνεξω, which literally means “to hold together, so that something is maintained in good order. To hold something together so that it doesn’t fall apart” (Kittel 1971, 877). Thayer gives these meanings: “put (as it were) the perception with the thing perceived, to set or join together in the mind, the perception of the thing perceived” (Thayer 1896, 604). The idea is one of taking information that is presented and holding it together so that it makes sense, so that there is understanding.

The Word of God uses several other words to convey the concept of comprehension and understanding. The word μανθάνω carries a wide range of meanings, all which have to do with the concept of comprehension. It can involve coming to know the facts intellectually, gaining insight from certain facts; studying or seeking

instruction from another, gaining experience in something, acquiring a skill, or being committed to something (Kittel 1967, 391-96).

Another New Testament word that carries the idea of understanding and comprehension is the word γνῶσκω. Jesus and the disciples referred to this word often when talking about comprehension. *Kittel's Theological Dictionary* provides this helpful insight:

Γνῶσκω denotes in ordinary Greek the intelligent comprehension of an object or matter, whether this comes for the first time, or comes afresh into the consideration of the one who grasps it (“to come to know,” “to experience,” “to perceive [again]”) or whether it is already present (“to perceive”). The inchoative construction shows that, while the ingressive aspect of comprehension is originally emphasized, this can fade into the background, and the meaning can be simply “to know or to understand.” This is shown on the one hand by the common use of οἶδα for the perf. Εγνώκα, and on the other by the almost exclusive use of γνῶμην for the subst. εἰδησις.

The basic meaning of γνῶσκειν, and specifically Greek understanding of the phenomenon of knowledge, are best shown by the two-fold differentiation. The term is to be distinguished from αἰσθάνεσθαι, which denotes perception with no emphasis on the element of understanding. Since some degree of understanding is in all perception, too sharp a distinction is not made between γνῶσκειν and αἰσθάνεσθαι. Indeed αἰσθάνεσθαι can describe understanding perception in so far as it is unreflective and instinctive. Yet in the discussion of knowledge we must insist on the difference between αἰσθνσις as sensual perception and γνῶσκειν, or ἐπιστημῆν, which is acquired through γνῶσκειν as knowledge deriving from the νοῦσος or λογος. (Kittel 1964, 2:689-90)

The New International Dictionary of New Testament Theology adds an interesting insight to the word γνῶσκω that has to do with the issues of sensory learning. “Basically it means to notice, to perceive, or to recognize a thing, person, or situation through the senses, particularly the sight. (Seeing and γνῶσκω are linked in Homer, *Od.* 15, 532 and 24, 217). This leads to an intelligent ordering in the mind of what has been so perceived in the world of experience. Thus the vb. means to experience, learn, get to know: what has been experienced becomes known to the one who has experienced it”

(Brown 1967, 392). It becomes clear from this nuance of meaning, that the Greeks understood the concept of leaning through the senses.

One final biblical word that must be considered is the Greek word οἶδα. Kittel recognizes some subtle, yet profound distinctions between οἶδα and γινώσκω. “Οἶδα is an Indo-Eur. Perf. Of the root eid-, id (εἶδω, εἶδεναι, ἰδεῖν), though always used in the pres.: ‘to have realized, perceived’ = ‘to know.’ It often replaces the perf. ‘εἰδωκα’” (Kittel 1964, 1:689), “to have experienced, learned to know” (Kittel 1967, 5:138). Οἶδα means to know or comprehend by experience. It means to know something, because the senses have encountered it and transmitted those facts and information to the brain. Understanding which kind of comprehension is most powerful is one of the concerns of this research. Multi-sensory communication is more experiential in terms of engaging the senses.

Retention

Memory is essential to learning and behavioral modification. In the spiritual realm, the ability to recall the truths of God’s Word is what feeds our soul. If those we teach cannot recall the information we teach, the information then fails to feed the soul and can fail to impact behavior. This is why David said, “Thy word have I hid in my heart that I might not sin against thee (Ps 119:111). David knew that controlling his sinful nature depended in large measure on his ability to recall God’s Word. Again, in Psalm 119:99 he said, “I have more understanding than all my teachers; for thy testimonies are my meditation.” David knew his understanding of life was dependent upon his ability to meditate on the Word, i.e., recall and think about it.

If the congregational members fail to retain in their memory the content of the pastor's teaching, educational objectives will fail. This is why the teacher must teach in a form that the student can recall. We must teach in a form that ingrains the information into the mind of the student.

There is almost universal agreement among psychologists that memory consists of at least two components, one of which deals with information on a short-term basis, and another, which handles memory on a long-term basis (Yount 1999, 211-19). Klatzky gives a wonderful picture of how individuals retain short-term and long-term memory:

A carpenter's workshop is likely to have at least one table with several shelves upon which to store tools and materials. On it, a small number of items for immediate use can be stored. If the items are not in use at once, and additional items are placed on the table, then something must give and several items will fall from the table. Much the same can be said about short-term memory. Items such as a telephone number retrieved from the directory must be used at once. If not, they will be lost, as other numbers are needed. It is comparatively easy to remember one telephone number at a time. When we attempt to go to the directory and memorize more than one number at a time, the task becomes more difficult.

The carpenter's shelves, on the other hand, can be used to store the items that are not of immediate use. By shifting tools or materials from the table to the shelves, additional workspace on the table can be provided, and the items on the table can be spared possible damage by dropping them. Thus, long-term memory serves as a receptacle for those images that need to be preserved in an undamaged state, and a storehouse for some of the items that are cluttering up the short-term memory. (Barbee and Swassing 1979, 2)

The goal of the pastor-teacher is to teach in such a way that the student can recall spiritual information on a long-term basis. The crucial issues we teach this year and that we have taught in the past need to be presented in a form that promotes long-term storage and easy retrieval, especially when a situation arises in which the individual will need that spiritual information. The question in this researcher's mind is this: What

teaching style best promotes long-term storage of expositional sermons and triggers easy retrieval?

The student's cognitive needs of attention, comprehension, and retention are essential, and they are closely related to one another. The teacher must conquer the preceding domains to be effective in the following domains. For example, if the teacher fails to impact the attention of the student, he will likely fail to impact the comprehension of the student. If he fails to impact the comprehension of the student, he will likely not impact the retention of the student. Tharilkil writes:

The role of attention in memory and learning has long been central to classroom-based research. As early as 1960, Auubel proposed that attracting students' attention to important information served as a type of advance organizer, to create a mind set for listening which may prime the learner to focus on the task. This focus of attention may in turn allow the learner to process the incoming information longer or at a deeper cognitive level. (Thrailkill 1996, 3)

Attention, comprehension, and memory go hand and hand. They are very close neighbors. The teacher must strive to connect to all three domains.

Teaching Styles and Learning Preferences

Teachers must never underestimate the capacity of individuals to learn. R.N.

Cain and Geoffrey Cain comment on this fact:

We underrate our brains and our intelligence. Formal education has become such a complicated, self-conscious and over regulated activity that learning is widely regarded as something difficult that the brain would rather not do. But reluctance to learn cannot be attributed to the brain. Learning is the brain's primary function, its constant concern, and we become restless and frustrated if there is no learning to be done. We are all capable of huge and unsuspected learning accomplishments without effort. (Cain 1991, 79)

This researcher subscribes to the above philosophical statement. Unless there are neurological-physiological problems, the brain *does* have a great capacity to learn.

However, that learning can be helped or hindered by the influence of the teacher and the teacher's teaching style and methodologies. One of America's leading psychologists and educational experts, Paul Witty, related a story about an educational encounter he experienced with an elementary school child. He had worked with the child for several hours, but to his frustration, the child was not learning the task Witty was seeking to impart. In exasperation, he said to the child, "What's wrong with you?" Without a moment's hesitation the child blurted back to him, "What's wrong with *me*? What's wrong with *you*? *You* what's wrong?" (Barbee and Swassing 1997, vii).

It is clear that learning is a two-way street between the teacher and the pupil, but sometimes the roadblock in the learning process is in the lane of the teacher. This is glaring when the teacher fails to teach in a form that connects to the student's learning style. "If students have difficulty learning the way we teach, perhaps we should teach the way they learn" (Yount 1996, 240). As was stated in the introduction of this dissertation, traditional education has often ignored the learning preferences, the learning styles, and the sensory preferences through which a student maximizes learning and accelerates learning rates. Failure to recognize individual learning styles has promoted a standard lecture format for teaching in public schools and has potentially restricted the learning of many.

Understanding individual learning styles emphasizes the fact that individuals receive and process information in very different ways. Samuel Messick describes learning styles as "information processing habits representing the learner's typical mode of perceiving, thinking, problem solving, and remembering" (Messick 1976, 44-45).

Bernice McCarthy describes learning styles as “an individual’s most comfortable and effective way to learn” (McCarthy 1987, 25). Rita Dunn defines learning preferences as “a biologically and developmentally imposed set of personal characteristics that make the same teaching method effective for some and ineffective for others” (Dunn, Beaudry, and Klavis 1978, 50). Cranton says a learning style is “an individual’s preference for a particular way of learning” (Cranton, 1992, 40).

The concept of learning styles is rooted in the classification of psychological types. The learning styles theory is based on research demonstrating that, as the result of heredity, upbringing, and current environmental demands, different individuals have a tendency to both perceive and process information differently.

Anthony F. Gregorc has defined learning styles as ‘the distinctive behaviors, which serve as indicators of a person’s mediation abilities and capacities.’ Using phenomenological research methodology – an approach which considers the individual’s reality reflected through the person’s awareness, consciousness, and perception – Gregorc found that stylistic traits were best defined as external attributes that reflected the mind’s natural abilities, capacities, and preferences for channeling data. (Butler 1982, 61)

The *learning styles theory* implies that how much individuals learn has more to do with whether the educational experience is geared toward their particular *style of learning* than whether or not they are *smart*. In fact, educators should not ask, “*Is this student smart?*” But rather “*How is this student smart?*” In his classic work *Teaching for Results*, Findley Edge wrote, “Learning must start where the student is” (Edge 1956, 42). Unfortunately, because many educators do not understand the concept of student learning styles, teaching does not begin with where the *student* is, but with where the *teacher* is.

Maria Harris provides these insightful words: “The extraordinary differences in a person’s modes and ways of learning demand this repertoire: some are auditory, others tactical, some imaginative or physical in our approach to appropriating new material. Some of us come to know best through active experimentation, while the rest of

us are more comfortable with concrete experience, reflective observation, or abstract conceptualization” (Harris 1989, 120).

Research to understanding the connection between teaching style and learning style began in the mid -1970s. In 1976, G. Pask wrote an article in *the British Journal of Educational Psychology* in which he hypothesized that maximum learning capacity could be increased when the teaching style of the teacher matches the learning style of the student (Pask 1976, 13-25). Subsequent to Pask’s article, he conducted an experiment matching teaching styles with student learning styles, and the experiment confirmed his hypothesis: Matching teaching styles with student learning styles improves learning (Morton 1999, 26).

Researcher Howard Gardner of Harvard University has written extensively on what he calls *Multiple Intelligences*. The theory of Multiple Intelligences concluded that human thought was broader and fuller than the Piagean ideal of scientific thinking, which had dominated the educational landscape for years (Gardner 1993, xi). The theory of Multiple Intelligences proposes, “Students possess different kinds of minds and therefore learn, remember, perform, and understand in different ways” (Gardner 1991, 11). Kefee admonishes the teacher to come to grips with learning styles with this challenge:

Ultimately, education must come to grips with the different learning needs of the individual learner. The learning differences flow from variations in individual intelligence, drive, skills, and accomplishments as well as personal and family predispositions and the cultural influences of the wider society. In spite of considerable dialogue, there is still considerable discontinuity between theory and practice in identifying and meeting those needs.

Today, some educators have intentionally departed form the traditional discussion of classroom materials and pupil teacher ratios and are raising critical questions about *the ways in which students learn*. These efforts and related research focus on student learning skills and learning styles. (Kefee 1982, 43)

A word of caution seems wise at this juncture of this research. As research into learning preferences continues to unfold, educators must be guarded about findings.

Anthony Gregorc provides five reasons why learning styles could become a fad:

1. *The nature of the present system*—the current teaching system is so entrenched in its current ways that it cannot tolerate dissenting views, except possibly for use in non-mainstream or alternative teaching opportunities.
2. *Superficial and excessively simple or complex presentations*—the advancement of learning styles research can be undermined by the way ideas related to this subject are presented; that is, learning style information may be explained as excessively too simple or be interpreted as being too complex.
3. *The emergence of “snake oil peddlers”*—the advancement of learning styles theory could be hampered by self-made consultants who have picked up a little information here and a little information there and have formed a personal theory about this subject to the extent that they erroneously sell themselves as experts in the field.
4. *The illusion of a panacea*—although learning styles research can provide valuable tools for understanding students and improving teaching, there are obviously many more elements that enter into the teaching/learning process; more should not be promised than can actually be delivered in this area by teachers, researchers, consultants, or theorists.
5. *Scholastic arrogance*—instructors may appear enthusiastic about learning styles information, but never actually use it because they feel it lacks academic integrity; teachers may also feel that this type of teaching/learning is inferior because it is different from the way(s) in which they have always taught. (Gregorc 1982, 8-10)

Miller cautions that learning styles should never be viewed as the solution that will solve all the problems associated with teaching and learning (Miller 1991, 9). With those cautions clearly in mind, precedent literature continues to demonstrate that students do have unique learning styles through which they prefer to learn and by which they learn the best. Precedent literature indicates:

1. Individuals think in different ways and thus learn in different ways.
2. Individuals can strengthen their learning capabilities by using a learning style that is most comfortable for them. (Miller 1991, 4-5)

The pastor-teacher who wishes to impact the learners in his congregation must understand there is a connection between his style of teaching and the learning styles of the people in his congregation. Research also validates and literature confirms that an understanding of student learning preferences directly impacts learning outcomes. Yount observes, “Schools employing learning style principles produce high academic achievement along with positive attitudes toward school” (Yount 1996, 241). As pastors with educational objectives, we must not turn a deaf ear to the matter of learning styles and learning preferences.

As discoveries about learning styles have continued to unfold, researchers have discovered links between learning style preference and sensory preferences. In other words, students prefer to receive information through a dominant sensory channel, and that sensory channel preference determines learning style preference. Research has also discovered links between learning style preference and brain hemisphere dominance. The idea here is that, once a student receives information from the senses, he or she has a stronger – more dominate side of the brain in which they prefer to process the information. To better grasp these concepts of receiving information and processing mental information, we need to examine the role of the senses and the role of the brain in the learning process.

The Role of the Senses in Learning

As those who concern themselves with learning objectives, pastors, teachers, and educators might be inclined to think that learning begins with the brain. This, however, is not the case. Though learning does *occur* within the brain and though information is processed there, it must be understood that learning does not *begin* there.

Learning *begins* at the level of the senses. Professor Mark Grabe breaks learning down into three levels. They are the perceptual stage, the comprehension stage, and the elaboration stage. Perception paves the way to comprehension and elaboration in the learning process; but how is perception initiated? He says it begins by receiving information from the environment through the senses. He explains:

The perceptual stage involves the recognition of information collected from the environment by the *sensory receptors*. The comprehension stage results in the attachment of meaning to the recognized input. Stored information, rules, and experiences are matched to the perceptual input to provide meaning. The elaborative stage was included to indicate that the system has the capacity to go beyond the information provided by the environment. (Grabe 1986, 51)

Speaking of the sense of seeing and the phenomenon of thought, Sless argues,

Vision and thinking are one process; they cannot be separated, either logically or physiologically. What is wrong, then with the traditional approach? First the eye is not biologically separate from the brain. It is actually a part of the same organ; or more accurately, the brain is a part of the eye. (Sless 1981, 16)

Sless presses the thought even further when he says,

In the development of the embryo . . . the eyes are the first to appear, the brain being the subsequent outgrowth. In structural terms, the eyes have not grown out of the brain; the brain has receded from the eyes. Vision is the instigator of thought, not its handmaiden. Neural tissue developed in order to make use of the incoming visual information. (Sless 1981, 16)

This researcher sees Sless' arguments as an exaggeration, but his point is well taken. The senses cannot be separated from thinking. The senses and the brain are inextricably linked.

That the senses are directly involved in the learning process dates all the way back to the beginning of pre-Christian Greece.

Before the advent of writing, the spoken word was the principle means by which information was transmitted from person to person and generation to generation. Young Romans were taught to read through the visual-auditory method. They said

the words or letters aloud while looking at a printed copy of the words or letters. (Barbee and Swassing 1979, 18)

That the Greeks understood the concept of sensory learning is also seen in the lexical meanings of the word γινωσκω, i.e., to know. Again, *The New International Dictionary of New Testament Theology* remarks on γινωσκω,

Basically it means to notice, to perceive, or to recognize a thing, person, or situation *through the senses, particularly the sight* (Seeing and γινωσκω are linked in Homer, *Od.* 15, 532 and 24, 217). This leads to an intelligent ordering in the mind of what has been so perceived in the world of experience. Thus the vb. means to experience, learn, get to know: what has been experienced becomes known to the one who has experienced it. (Brown 1967, 392)

It is extremely interesting to this researcher that Scripture makes the connection between the senses and the brain. Referring back to Hebrews 3. “Therefore, holy brothers, who share in the heavenly calling, fix your thoughts on Jesus” (Heb 3:1). The word “fix” translates the Greek word κατανοεω, which means to direct one’s whole mind to an object” (Kittel 1967, 4:973). Kittel explains the emphasis:

Since there is no clear distinction between apprehending something with the *senses* and with the *mind*, this can involve sensual perception, as in the case of νοεω The emphasis in the NT usage lies in the *visual* sphere. As a verb of seeing . . . where it commonly denotes perception by the eyes (Kittel 1967, 4:974-75).

This is amazing! The Holy Scriptures, which were given by inspiration of God himself, sees the connection between *learning* and *sensory perception*. Perhaps its time for teachers to make the same connection. The God who designed our brain and sensory system clearly tells us that sensing and thinking cannot be divorced from one another.

Sensory Learning: Function and Physiology.

The senses receive stimuli from the environment and then transfer that information to the brain (Hayek and Kluver 1952, 8). The five senses of hearing, seeing,

touching, tasting, and smelling function like intakes through which information is transmitted to the brain. Williams compares the senses to an antenna on a television. They receive the information from the environment and transmit the data to the brain for processing (Williams 1983, 114).

Barbee and Swassing also compare the sensory system to channels or modes through which an individual receives and retains information (Barbee and Swassing 1979, 1). The senses function like receptors from the environment in that information from the environment is received by the senses and the transduced to the brain for processing. In his text *The Biochemistry of Memory: With an Inquiry into the Function of Brain Mucoids*, Samuel Bogoch, MD, PhD, observes:

Sensory transduction is the process by which the information from the environment, received by specialized peripheral sensory receptors appropriated to pressure, light, odor, etc., is converted to the language of the nerve cell for transmission, abstraction, storage, and other operations of the central nervous system. Since transduction represents the first coding of experiential information, it may be that it is the definitive coding, which persists, perhaps with further modification, throughout the nervous system. (Bogoch 1968, 47)

Bogoch continues by explaining the chemical implications of sensory transduction:

The phase of the chemistry of memory that deals with transduction in sensory receptors has been *almost completely ignored* by workers on memory. There are several good reasons for paying attention to this aspect of molecular events. First, this is the initial event in the chronology of *reception* and *recording* of information by the nervous system, at least as far as experiential information is concerned. Second, since we are totally ignorant of the chemical basis of all non-genetic encoding mechanisms in the nervous system, we cannot rule out the possibility that the chemical coding for experiential information is largely if not entirely accomplished at the input end in the process of sensory transduction. (Bogoch 1968, 39)

Bogoch's point is that the neurological chemistry between the senses and the brain determines reception function and retention function. If memory is crucial to the

learning process, then educators should understand the neurological connection from sensory transductions to the brain. Barbee and Swassing make a connection between learning modalities (senses) and the concerns of this study, which are attention, comprehension, and retention. They comment:

A modality is any sensory channel through which an individual receives and retains information. A critical component of this definition is the phrase '*receives and retains*,' since it implies that sensation, perception, and memory constitute what we are calling modality. Because these three processes are the essence of learning, the modalities can be called keys to learning. (Barbee and Swassing 1979, 1)

What Barbee and Swassing refer to, as *sensation* is what we are calling *attention*. The idea is that some sensation-stimuli from the environment attract the attention of the learner through one of the five senses. What Barbee and Swassing refer to, as *perception* is what we are calling *comprehension*. Perception is when there is an understanding or comprehension from the sensory stimuli. What they call *memory* is what we are calling *retention*. Their point is well taken. One key to understanding the learning process is to understand the influence of the senses on attention, comprehension, and retention.

Individual Sensory Preferences for Learning.

Though there are five senses, there are three primary senses for cognitive learning. They are hearing (audio), seeing (visual), and touching-doing (tactical). The audio, visual, and tactical senses form the major modalities, i.e., channels for sensory learning. These are the major pathways through which information is taken in. Scripture recognizes each of these learning channels in 1 John. The apostle John writes, "That which was from the beginning, which we have heard, which we have seen with our eyes, which we have looked upon, and our hands have touched" (1 John 1:1). In that text, John

brings to the surface the three channels through which individuals learn: (1) hearing, (2) seeing, (3) touching.

The subject of the text is, of course, Jesus, “that which was from the beginning.” John points out that he and the others learned from Jesus by hearing him, seeing him, and handling him with their hands. As far back as 1933, A.T Robertson understood this when he wrote, “Three senses are here appealed to (hearing, sight, touch) as combining to show the reality of Christ’s humanity against the Docetic Gnostics and the qualification of John by experience to speak” (Robertson 1932, 6:205). As will be seen in this section, those venues constitute the three primary channels or modes by which individuals receive and process information from the environment. Individuals learn by hearing (auditory learning), seeing (visual learning), and touching-doing (tactical-kinesthetic learning).

A review of the precedent literature indicates that individuals have a dominant sense, i.e., channel through which they prefer to receive information and through which they best receive information. Pickard observes:

It is understood that we use our senses to explore the world around us and take on broad new information. Our senses of taste and smell are not often used in the classroom, but sight, hearing and touching are. Some educationists, such as Dr. Jeanette Vos, have termed these visual, audible and kinesthetic learning. Such theories go on to explore the fact that, for some children, a perceptual strength may be so strong that new information can only be explored through this style. It must be understood that any one perceptual strength is not ‘better’ than another, it is just different. As we are all different in terms of height, hair color, and so on, so are our perceptual learning needs. For some of us there is no great distinction and we can engage whichever perceptual style is most appropriate. For a small minority of people, however, one style could be more dominant and effective than the other, indicating that any new knowledge or information would be best received initially through that perceptual strength. (Pickard 1998, 84)

Several studies were located in which the method of presentation of material was the independent variable and learning effectiveness was the dependent variable (Kalin 1972, 5). For example, Thallberb reviewed forty-four experiments, which compared a visual mode of presentation with an auditory form of presentation. He found twenty-one findings favoring the visual presentation, sixteen favoring the auditory delivery, and seven showing no difference (Thallberg 1964, 32). The literature strongly suggests that individuals have a preferred learning channel so to speak. It is much like a television channel that comes in stronger than the others. That particular channel receives a stronger more dominant signal. So it is with sensory perception (Barbee and Swassing, 1979). Educators place sensory preferences into three primary categories.

Auditory Learners

This learner prefers to learn and learns best through the sense of listening: He is concerned with the logical flow of information and comprehends and understands best when the information is auditory. “An Auditory Learner *usually* comprehends and processes information better when it is presented verbally” (Willis, and Hodson 1999, 144).

Auditory learners learn best through verbal lectures, discussions, talking things through and listening to what others have to say. They interpret the underlying meanings of speech through listening to tone of voice, pitch, speed and other nuances. Written information may have little meaning until it is heard. Some people are so proficient at learning through the auditory mode that incoming information which is not auditory might actually interfere with their learning. For example, if a speaker is referring to charts and graphic illustrations, this learner might need to ignore that part of the presentation

(even closing his eyes) in order to focus on the auditory information. For Auditory Learners, sounds can be the source of ideas (Willis and Hodson 1999, 145).

Visual Learners

This learner prefers to learn and learns best through seeing the material or concept being taught. The visual learner needs to *see* the image of what is being taught. The visual learner may struggle to understand the information and remember unless he can see it or visualize it.

In the visual system, nerve cells look out at the world through their connections from the one hundred million or more receptors in each eye. When physiologists turned their recording microelectrodes on these visual neurons, the results were a revelation. For each cell seemed not to be passively signaling the brightness or darkness of the retina, as we might expect, but to be *searching for meaningful combinations of features*, for the boundaries and shapes in the image that define the edges of objects. (Blakemore 1977, 86-87)

Mueller writes, “One of the most important problems in sensory psychology is the specification of the stimuli we study. Visual stimuli come from a narrow band in the electromagnetic spectrum, a band that covers wavelengths of radiation ranging from 400 millimicrons to 700 millimicrons” (Lazarus 1965, 7).

From these environmental stimuli the dominant sense of sight is stimulated. “According to Rudolf Arnheim, professor emeritus of the psychology of art at Harvard University, practically all thinking—even the most theoretical and abstract—is visual in nature” (Armstrong 1994, 55).

If the visual way of learning is particularly strong for you, you may often try to picture in your mind what you are learning. You may even be accused of daydreaming or being lost in thought. The visual learner usually learns best by associating pictures with the words or concepts being used. When reading or remembering, the visual learner may constantly be imagining what things look like and may sometimes be picturing something very different than the actual facts! (Ulrich 1965, 93)

Tactile Learners

These individuals learn through moving, doing, and touching.

Tactile/Kinesthetic persons learn best through a hands-on approach. They have a desire to explore actively the physical world around them. They may find it hard to sit still for long periods and may become distracted by their need for activity and exploration. This person needs to touch, handle, and do something with the information being taught. For example, if this person were being taught the mechanics of typing, he or she would need the keyboard, and they would need to actually do some typing. Aircraft pilots know about this kind of learning. Their auditory learning comes through listening to flight instructors and reading flight instruction books. Their tactical-kinesthetic learning comes through actually flying the plane or through the flight simulator. Lectures may be helpful, but pilots will tell you they really learned how to fly the plane when they put their hands to the steering and instruments (Schultz 1993, 106). “Tactile refers to touch and Kinesthetic refers to movement. Touch and movement keep tactile-kinesthetic children most alert in the learning situation” (Willis, and Hodson 1999, 149). Peter Kline points out:

You were born to learn with your whole body and all your senses. You were not born to sit in a chair eight hours a day and listen to someone talk, or to pour over books year in and year out. Until recently (only minutes on the evolutionary scale) there were no books, no classrooms and no lecturers. If we pay attention to the learning of babies and young children, we can see how similar it is to the way our ancestors learned throughout their lives. (Willis and Hodson 1999, 153)

The traditional school model not only short-changes Tactile-Kinesthetic Learners, it also short-changes all the other learners, because lessons that incorporate moving and doing are helpful for everyone. (Willis and Hodson 1999, 155)

An individual’s dominant modality is that channel through which information is processed most efficiently. It should be noted that many people manifest a secondary modality channel through which they can rely upon when a situation demands it.

Secondary sensory modalities are crucial, because the learning context does not always favor an individual's dominant modality channel. It should be noted that a secondary channel or sensory preference is not as strong as the dominant channel. The secondary channel does, however, complement the major channel and even enhances the learning potential (Williams 1983, 143). Educators advise that teachers should not only focus on the dominant learning preferences, but also evaluate dominant and secondary preferences as a whole package.

Some closing notes on the importance of the senses in learning come from G.C. Myers and Conrad Mueller. More than seventy-five years ago, Myers wrote these poignant words:

We saw the rose, smelled the rose, felt ourselves plucking it, handling it, or tasting it in an attempt to recall that particular rose. Consequently the notion grew up of types, such as visilies, audiles, and motiles, or those who recalled in terms of how the thing looks or sounds or in terms of their feelings and moving in relation to it and handling it. (Myers 1925, 197-98).

Sensory Preference Awareness

As teachers, our goal is to gain the attention of the student and then to impact comprehension and retention. That goal begins at the level of the student's senses. Those who wish to apply Bloom's Taxonomy of learning must have some understanding of the sensory functions and how those senses influence individual learning. In addition to this knowledge, research has demonstrated that the teacher's own personal sensory preference tends to influence the method and style by which he or she teaches. Barbee warns the teacher of sensory preference awareness:

Most adults are vaguely aware of the modalities through which they learn best. Such a vague awareness is not sufficient for teachers, however, since they tend to project their own modality strengths into their selection of materials, teaching strategies,

and procedures, and methods of reinforcement. In other words we teach as we learn best, not as we have been taught.

Consider for instance the primary grade teacher who is highly auditory. The natural tendency of this teacher is to stress phonics as best, and perhaps the only way to attack new words. What could be more natural than teaching a sound-symbol relationship as a means of learning reading? The method worked for the teacher when he or she learned to read, has strong support in the professional literature, and provides the teacher with an opportunity to organize a lesson around his or her area of strength. As the teacher expected, most of the class (those who were auditory or auditory in combination with one of the other modalities) learned the skills associated with the phonics method. The remainder of the class had more difficulty using phonics to learn new words, but the teacher continues to hope that with more practice, they will indeed learn appropriate word attack skills.

Obviously, the auditory teacher will lean heavily on the phonics approach, and the auditory child will benefit. Conversely, the non-auditory teacher, one who is primarily visual or kinesthetic, will minimize the importance of sound-symbol relationship, and the auditory child will receive fewer benefits from the phonics approach. (Barbee and Swassing 1979, 14)

In other words, the teacher must be aware of sensory bias, because he or she will tend to teach in a style that matches his or her own learning preferences (Morton 1999, 108). Pazmiño concurs when he says, “Insights from a style inventory or description can help in the effort to individualize learning, but the greater challenge is to incorporate a variety of styles or to teach in one’s dominant style, while allowing for a degree of flexibility to accommodate the learning styles that are generally represented in any group of learners” (Pazmiño 1992, 108). Appendix 5 contains a sensory inventory, which can help the reader understand his or her own learning sensory preferences. We conclude this section with insightful words from Conrad Mueller:

Our senses are sometimes referred to as our “avenues to the world.” Although this statement does not tell us much about the senses, it does remind us that the only way we have of responding to the outside world is on the basis of information received, and operated on, by our sensory systems. This fact puts sensory psychology in a unique place in the history of science. As man began to formulate laws about the physical events he could observe, it was natural that he would begin to worry about how he knows what goes on in the world. We see evidence of this concern when we probe into the history of sensory psychology, for we find there the names of many scientists typically associated with the subject of physics. In the field of vision, for

example, we encounter such names as Thomas Young, Clerk Maxwell, Isaac Newton, and Ernest Mach. Thomas Young is known to the physicists for his statement of the principle of interference, which provided the impetus for reviving Huygen's wave theory of light. Ernest Mach, who is well known for his classic work on mechanics, also wrote a book entitled *The Analysis of Sensation* and made many contributions to the study of contrast phenomena in vision. It was not easy for early scientists to separate the disciplines we now call physics and sensory psychology; it was the things man saw that first set the problems of optics, it was the things man heard that first set the problems for acoustics. Only with an appropriate historical perspective can we appreciate man's early struggles to organize the data of both physics and sensory psychology. (Lazarus 1965, 3)

The Role of the Brain in Learning

An understanding of the human brain and how it functions is crucial to the teaching-learning process. Such research takes us into the world of brain physiology and brain psychology, and the teacher who wishes to understand the learning process of students would do well to understand this science. "To know thyself may be one of the most difficult of lessons; to know the brain is surely one of the most challenging of sciences, one that does not lend itself to easy labels (Calvin 1991, 6). In his work *Mechanics of the Mind*, Colin Blakemore comments:

There are more than ten thousand million nerve cells in the human brain. Each cubic inch of the cerebral cortex probably contains more than ten thousand miles of nerve fibers, connecting the cells together. If the cells and fibers in one human brain were all stretched out end-to-end they would certainly reach to the moon and back. Yet the fact that they are *not* arranged end-to-end enabled man to go there himself. The astonishing *tangle* within our heads makes us what we are. Every cell in the cortex receives on its surface an average of several thousand terminals from the fibers of other cells. The richness of interconnection makes each neuron a Cartesian soul. (Blakemore 1977, 86)

Brain Function

The role of the brain in the learning process has long been a mystery and a source of interest to researchers. For years scientists, physicians and educators have

sought to understand brain function and brain psychology as it relates to learning. Much more is understood today through the advances of modern science and modern technology. Neurological surgery, the MRI, and other advances now allow scientists to view the brain as it receives information from the senses. For example, recently scientists in Toronto have captured images of the brain *in the very act of learning*. Remember the comic strip analogy of a light bulb coming on in the brain to depict a person who learns and becomes aware of something? It is really a “pattern of light bulbs” according to a study conducted by the Rotman Research Institute at Baycrest Centre for Geriatric Care. The study, which was published in the May 28, 1999 issue of *The International Journal of Science*, has captured the interest of neuroscientists and is being touted as a significant contribution to understanding *how the brain works when conscious learning is taking place*.

Scientists already know that ‘learning’ and ‘awareness’ is a function of the prefrontal cortex of the brain, part of the higher thinking region. Now the Rotman study has confirmed that it’s actually several regions acting in concert. ‘We found that learning and awareness involves a cohesive network of brain activity,’ says Rotman scientist Dr. Randy McIntosh, who led the study using brain-imaging technology along with co investigators Dr. Natasha Rajah and Nancy Lobaugh”

The article continues,

This study actually catches the brain “in the act of becoming aware and learning” says Dr. Sandra Black, Head of Neurology and Senior Scientist in the Aging Research Program at Sunnybrook and Women’s College Health Sciences. (Melo, Winocur, and Moscovitch 1999, 343-59)

This amazing research is allowing researchers to actually see the physiological phenomenon that leads to thinking and learning! Springer and Deutch, in their research have concluded that the brain is a physical organ that functions according to physical rules (Springer and Deutch 1993, 12). Consequently, those who will seek to understand

the phenomenon of thought must engage in the understanding of brain function. It can truly be said that the advances in the understanding of brain function and brain physiology has literally grown exponentially in the past century.

Brain Hemispheres

Recent research indicates that the brain is divided into two hemispheres and each one is unique from the other in terms of function and concentration. The two halves are simply referred to as right-brain and left-brain. Both hemispheres process information-received from the senses, but what the reader may not be aware of is that people tend to be stronger on one side than they are on the other.

Brain Hemisphere Theory

This theory was developed in the early 1970s by University of California professor Roger Sperry. Sperry discovered that the lateral lobes of the cerebral cortex function differently from each other. Both sides of the brain are involved in the process of human learning, and the more connected the two halves are, the greater the potential for learning. Sperry discovered that the human brain processes *words on one side and images on the other side*, leading to a right brain-left brain distinction.

The distinction between brain hemispheres actually dates back to times when physicians noticed appreciable reactions to human behavior when certain sides of the brain were damaged. The advent of modern neurological surgeries also contributed to the understanding of brain hemispherical uniqueness. For example, psychiatrist Fredric Schiffer has uncovered evidence to support a striking thesis that illnesses, such as depression, are associated with one half of the brain and that one approach to treating

depressed patients is to activate the healthier hemisphere. Schiffer reports, “If you activate the healthier hemisphere, you may help the person” (Schiffer, Stinchfield, and Pascual-Leone 2002, 18-27). Working with researchers at other institutions, Schiffer reports in the March *Neuropsychiatry, and Behavioral Neurology* that severely depressed patients whose spirits were lifted when receiving visual stimuli primarily to the left side of the brain also experienced significant improvements in mood when their left hemispheres were treated with a more powerful form of stimulation, involving electromagnetic fields. Schiffer contends that each half of the healthy human brain houses a separate emotional mind. In a healthy person, the two halves work in harmony, but in people with illnesses such as depression, one hemisphere may sabotage or dominate the other. Schiffer found that a slight majority of depressed patients felt better when visual stimuli were directed primarily to their left hemispheres, suggesting their right hemispheres were functioning abnormally. Wanting a stronger way to stimulate the presumably healthier left hemisphere, Schiffer approached Alvaro Pascual-Leone, MD, PhD, a researcher at Boston’s Beth Israel Deaconess Medical Center, who helped develop a method of stimulating the brain by using electromagnetic fields, called transcranial magnetic stimulation (TMS). The study makes two points. “On the one hand, it can be used to fortify current TMS procedures by predicting which individuals with depression will most benefit,” said Schiffer. “In addition, it bolsters my *dual-brain hypothesis* (Schiffer, Stinchfield, and Pascual-Leone 2002, 18-27). “How can you know what the right brain is capable of by itself? Simple: As every reader of pop psychology now knows, just cut the corpus callosum, which connects the left and right cerebral cortex”

(Calvin 1991, 4). Brain hemisphere theory is deserving of careful consideration especially as it applies to the dynamics of learning.

Brain Hemisphere Physiology

The Journal of the American Medical Association lists several archived studies, which indicate the physiological distinctions of Brain Hemispherical reality.

Differential Patterns of language and Motor Following Early Left Hemisphere Lesion

(Joseph 2002, 1).

The human brain is divided into two main sections – called “hemispheres”. These contain complementary abilities – broadly referred to as “left-brain” and “right-brain.”

The way you use the abilities of these hemispheres determines much of your personality and behavior. The most significant determinate is which hemisphere you *prefer* to use in responding to sensory input and external stimuli. We’ll call this preference “dominance” – someone who predominantly reacts to life using their left hemisphere abilities we’ll call ‘left brain dominant’. This doesn’t mean that the right-brain is atrophied or disabled in any way – merely that the left hemisphere is that person’s preferred response hemisphere. (Reilly 2004, 2)

This dominance tends to fluctuate throughout a person’s life, but typically the pattern is determined in childhood. Researchers say your eyes and other body signs indicate the pattern of switching hemispheres. For example, one may observe that some people fold their arms in different ways – left over right or vice versa. Trying to change the way one folds the arms will quickly demonstrate how comfortable one is with the way he or she has learned to do it, and any other way feels strange.

What does this demonstrate? It is an indication of one’s pattern of hemispheric dominance at the time the person learned to fold his or her arms. For most of us, this occurred at an age between 2 and 3. The feeling of strangeness when we try to change the

pattern demonstrates how comfortable we have become with the choice we made way back then and how infrequently we have ever challenged that choice.

As you look in pairs of eyes, you will notice that people's left and right eyes are rarely the same – it is this difference that reflects differences in the way they use their hemispheres. You are constructed in a cross-linked fashion – your left eye is connected to your right brain hemisphere and vice-versa. This means that the left eye indicates your right-hemisphere activity and your right-eye indicates your left-brain activity. You can generally estimate how strongly people use their hemispheres by the “strength of their gaze” when they look into your eyes. Please note that some cultures regard looking directly into an individual's eyes as a confronting and aggressive act, so please make sure you are welcome before peering through the windows of another's soul. (Reilly 2004, 3-4)

Brain Hemisphere Differences

The conclusion of many researchers is that the left-brain dominant person is strong in verbal learning, while the right brain dominant person is strong in visual learning.

The left-brain does not have trouble processing symbols. Many academic pursuits deal with symbols – such as letters, words, and mathematical equations. The left brained person tends to be comfortable with linguistic and mathematical endeavors. The right brain on the other hand wants things to be concrete. The right brain person wants to see, feel, or touch the real object. (Springer and Deutsch 1993, 56-57)

Brain Hemisphere Dominance and Learning Preferences

An understanding of brain hemispheres becomes essential to teaching strategies when we understand that brain hemisphere dominance may be responsible for certain learning preferences. In the context of teaching, the left-brain dominant learner can learn *easily* through a lecture format and probably learns *best* through a lecture format. The left side of their brain is the dominant side, so they process information without the need of visual aids or tactical involvement. The advantage to this learner is

that most teaching institutions, grade school, colleges, churches cater to their learning style, because most teaching institutions teach in a mono-sensory format (Sousa 2001, 31).

The right-brain dominant learner is attracted to the visual side of learning. This person is typically a visual learner and needs to see information to grasp and retain it in long and short-term memory. Because the right side of the brain is the dominant hemisphere, seeing becomes the dominant sense for receiving information. Unfortunately for this kind of learner, most of our teaching institutions, including the church are auditory and mono-sensory in delivery methodology. In 1980, Bernice McCarthy, a former classroom teacher, developed an open-ended, holistic teaching model that took into consideration individual learning styles, in particular those characteristics associated with right and left hemisphere dominance. This pedagogical framework became known as the left and right brain 4MAT-teaching mode. The purpose of the model, according to McCarthy, was simply to “raise teacher awareness as to why some things work with some learners and other things do not” (McCarthy and Morris, 1987, 7).

It is difficult to sort through all the information offered by brain and mind research and make wise choices for the classroom. Caine and Caine offer this helpful grid for applying brain-based learning to teaching strategies: “Recent research suggests that the brain performs many functions simultaneously. Learning is enhanced by a rich environment with a variety of stimuli” (Caine and Caine 1990, 66). Transferring this to teaching instruction they write:

The teacher should present content through a variety of teaching strategies, such as physical activities, individual learning times, group interactions, artistic variations. Each brain is unique. The brain’s structure is actually changed by learning. Use multifaceted teaching strategies to attract individual interests and let students

express their auditory, visual, tactile, or emotional preferences. (Caine and Caine 1990, 69-70)

Let the researcher hasten to add that this same kind of variation of teaching style can be transported to the teaching of the Word of God.

The Relationship between Sensory Preferences and Brain Hemisphere Dominance

As this researcher has examined the literature on brain hemisphere dominance and sensory preferences, he has noticed a connection between them. Those who are right brain dominant seem to prefer multi-sensory teaching while those who are left-brain dominant seem to desire auditory teaching. David Sousa has observed this connection.

When teaching the right brain dominant learner, the teacher should present materials in both verbal and visual forms, and use visual aids. Why is this? Because the right-brain dominant learner prefers to learn through a combination of auditory and visual senses. When teaching the left-brain dominant person, the teacher should *discuss* concepts logically and intuitively. Why, because this is the sensory preference desired by the left-brain dominant learner. He concludes by saying the teacher should combine teaching styles so as to connect to as many students as possible. (Sousa 2001, 190-91)

Models of Multi-sensory Preaching

A review of the literature supports the theological presuppositions of the researcher, namely that the pastor has the God-given calling and responsibility to teach the flock of God. The precedent literature also reinforces the educational assumptions of the researcher. Those assumptions include the priority of the cognitive domain in teaching with the educational objectives of attention, comprehension and, retention. The literature also suggests that people have learning preferences by which they prefer to learn and through which they learn best. These preferences stem from sensory

preferences and brain hemisphere dominance. In light of these findings, the next issue that must be examined is the literature's take on the advantages of multi-sensory teaching.

Multi-sensory Dissenters

Before we launch into an examination of multi-sensory teaching, particularly as it relates to the preacher and the teaching of the Word, the writer must acknowledge that there are those who view multi-sensory as unnecessary, compromising, and even unbiblical. The only acceptable means of biblical teaching for them is lecture, i.e. mono-sensory preaching.

Let the researcher say this up front: If the Bible prohibits multi-sensory preaching then it should be avoided regardless of what the research may find. The Bible is the standard, not only for *what* we preach, but *how* we preach. If on the other hand, Scripture gives the green light to multi-sensory preaching then let us proceed with confidence. Two multi-sensory dissenter viewpoints will be considered.

Arthur Hunt

Arthur Hunt proposes that multi-sensory teaching dumbs down the church and leads us to follow in the path of the pagans. He contrasts our Judeo-Christian heritage, which he posits is “word dependent,” with paganism, which he says is “image dependent.” He warns that by exalting visual imagery we risk becoming mindless pagans and that we are open to abuse by those who exploit image, but neglect the Word (Hunt 2003, 190). Commenting on Hunt's book in the PCA NEWS, Bryon Snapp argues:

As technology has continued to advance, pictures have become more prominent and words less so. This should be a great cause of concern for Christians. It is difficult to

communicate a word-based religion to an image oriented society. Alarming, rather than leading the culture, the church has succumbed to this trend. Worship services in many churches have become mindless. The Word of God has been dumbed down. Focus and reading and exposition of the Word have been replaced by entertainment such as monologue jokes, dramatic presentations, and even dance performances. This has resulted in congregants seeking little importance in learning or knowing God's Word or teaching the Word of God to the next generation. This opens the door for the rise of paganism and, as Hunt contends, the rule not by the word-based Constitution but by a dictator who is able to rise through creating an acceptable campaign image. (Snapp 2004, PCANews.comhttp)

This seems incredible! Hunt connects the use of multi-sensory teaching to the rise of the Anti-Christ! What a leap! This is so typical. What Hunt fails to recognize is that people have different preferences by which they prefer to learn and by which they learn best. Jesus recognized this truth and combined the spoken word with imagery, visuals, and multi-sensory teaching. Communication and mission expert David Hesselgrave brings some balance to these differing viewpoints:

It is not just *who* says *what* to *whom*, but *how* the message is channeled to the respondent that determines how the message will be decoded. Language is basic to communication, but language does not stand-alone. As we have said, words are augmented by pictures, actions, sounds, silence, smells, and objects. Words can be spoken or written; pictures can be drawn on canvas or projected on a screen; and actions can be part of sign language for the deaf or part of a stage play. (Hesselgrave 1991, 537)

John MacArthur

John MacArthur seems to take a similar position to Author Hunt. In his work, *Ashamed of the Gospel*, he seems to view any kind of preaching other than lecture as compromising the Word. He complains,

Some will maintain that if biblical principles are presented, the medium doesn't matter. That is nonsense. If an entertaining medium is the key to winning people, why not go all out? Why not have a real carnival? A tattooed acrobat on a high wire could juggle chain saws and shout Bible verses while a trick dog is balanced on his head. That would draw a crowd. And the content of the message would still be

biblical. It's a bizarre scenario, but one that illustrates the median can cheapen the message. (MacArthur 1993, 69)

Like Hunt, MacArthur makes a major leap from multi-sensory preaching to a “real carnival with a tattooed acrobat on a high wire juggling a chain saw and shouting Bible verses.” John MacArthur is one of the greatest expository preachers of all times. Few people have a love for and a commitment to the power of the Word, as does John MacArthur. He has demonstrated that successful churches and successful ministries can be built upon the expository preaching of the Word. This writer understands his complaint. There are times when certain methodologies of delivery can cheapen the sacredness of the Scriptures. Anyone who has a love for the Word of God feels the shame when that occurs. That, however, does not disqualify creative Bible teaching.

What MacArthur may fail to realize is that he is an extremely effective communicator. This pastor has observed his preaching style, and it is pure lecture. When speaking, MacArthur rarely moves from behind the pulpit. He is pervasively a stationary figure, delivering a monologue, mono-sensory message, and yet he does it with extreme effectiveness. Many pastors, however, do not possess the speaking capacities of MacArthur, and when they attempt to follow his verse-by-verse, monologue, stationary delivery, they cannot do it as effectively.

Perhaps these average speakers could be more effective in exposition if they employed a multi-sensory delivery methodology. Another element MacArthur may be failing to understand is that people have different learning styles by which they prefer to learn and by which they learn best. MacArthur seems to reject any form of delivery other than lecture and sees it as entertainment. He condemns non-lecture preaching with these words:

There seems almost no limit to what modern church leaders will do to entice people who aren't interested in worship and preaching. Too many have bought the notion that the church must win the people by offering them alternative entertainment. Just how far will the church go in competing with Hollywood? A large church in the Southwestern United States has installed a half-million-dollar special-effects system that can produce smoke, fire, sparks, and laser lights in the auditorium. The church sent staff members to study live special effects at Bally's Casino in Las Vegas.

Modern church buildings are constructed like theaters ("playhouses," Spurgeon called them). Instead of a pulpit, the focus is a stage. Churches are hiring fulltime media specialists, programming consultants, stage directors, drama coaches, special effect experts, and choreographers.

Feeding people's appetite for entertainment only exacerbates the problems of mindless emotion, apathy, and materialism. Quite frankly, it is difficult to conceive of a ministry philosophy more contradictory to the pattern the Lord gave us. (MacArthur 1993, 69-70)

It is clear that MacArthur does not acknowledge the visual – multi-sensory teaching of Jesus. He also fails to acknowledge God's creative methods of communicating through the prophets of old. Had he lived in those days, he may have been shocked at the communication style God gave to Hosea. God commanded Hosea to marry a harlot and to make his life a visual sermon through that marriage. We will address Hosea's communication style later. MacArthur rails against preaching that entertains, but is entertainment a necessary element of teaching? Calvin Miller makes a revealing contrast between entertainment and interest:

Entertainment and interest pass very close. It's difficult to tell if a sermon has interested or entertained the audience. Craig Loscalzo says the categories do not have to be separate. "People do not, or at least should not, come to church to be entertained; yet that doesn't mean that what they hear in our sermons need not be interesting. People pay attention when what they hear is interesting to them, when they sense that the sermon has import for their lives. I also want to make a case for not working too hard to separate these two values. We should never become a grandstander with a performer's need to be applauded. But in our entertainment age, people will welcome a bit of lighthearted logic.

In some sense then, I believe that all can experiment with how to hold an audiences attention. To entertain means to occupy time engagingly. Every time I am prone to doubt the value of this engagement, I turn again to the arts for the best demonstration of this. Movies, plays, novel, paintings all have the same glorious virtue: the arts intrigue us as they teach us.

Not only do the arts teach us *entertainingly*, they also have for their most descriptive word *creative*. To pull that word into the preparation and delivery of sermons is the most grueling of considerations. For creativity is an awesome task. (Miller 1994, 152-53).

Again this researcher recognizes John MacArthur's heart. He simply wishes to protect the integrity of the Word, and this pastor is with him. Even professor Mark Simpson expresses concern over multi-sensory teaching techniques in an online post to Doctor of Education students: He writes,

The postmodern emphasis on multi-sensory instruction is interesting, but troublesome. There is no way an instructor can create multi-sensory experiences for most course sessions let alone all of them. There just isn't time! My concern with multi-sensory is that we are moving education into being entertaining rather than instructive. (Simpson, online post, 26 November 2003)

Let the reader understand: The pastor must never compromise the integrity of Scripture, but he must expose the Scriptures in the most strategic manner possible. As expositors of the Word, we do not have to take an "either or" position. When we read the writings of Hunt and MacArthur, it seems as if exposition and multi-sensory delivery are diametrically opposed to one another. Their words imply that expositors cannot mix exposition with multi-sensory delivery without undermining the purity of the Word of God. Is this the case? This researcher believes it is not the case. Our Lord Jesus used both the spoken word and imagery to communicate the text of Scripture. The words of Andy Stanley surface again in the mind of this writer:

This brings us to an important reason for careful planning: ensuring that the message of the Bible is the central focus of the weekend services. Visuals can be illuminating. Videos can move and inspire. Lights and props and drama can keep people interested. But too much of a good thing can quickly distract from the very reason people need to be there, which is to apply the Word of God to their lives. (Stanley and Young 2002, 155)

It seems profitable at this juncture to present some examples of those who employ multi-sensory teaching as well as some models of their multi-sensory styles of teaching. For this we will examine the multi-sensory teachings of Jesus, the prophets, and some contemporary multi-sensory pastor-teachers.

Jesus Model of Multi-sensory Teaching

Few teachers relied on the impact and strategy of multi-sensory teaching any more than Jesus himself. Ed Young, a creative, multi-sensory teacher, comments on the creativity of God as it relates to being creative in teaching methodologies:

Did we just dream up this kind of creative communication? No. Creativity is biblical. After all, it's the fifth word in the Bible. "In the beginning, God created." I laugh when the media suddenly highlights a church that is creative. It's a big deal: "Wow, look at what that church is doing! They're being creative! I can't believe it! I've never seen anything like it!" Creativity should be the norm. People should expect churches to be creative – and be surprised when they're boring. (Stanley and Young 2002, 150)

Jesus was God, and he demonstrated that fact in his creativity, especially when it came to his teaching. Few teachers were more creative and more multi-sensory than Jesus. Speaking of his use of object lessons, Reg Grant of Dallas Theological Seminary comments on how Jesus used them frequently and effectively for teaching and communication:

Object lessons are God's own idea. Jesus used the pots and pans of life to illustrate principles that other wise would have remained abstract and muddled. Flowers, birds, water, and children provided more than just fodder for sermon illustrations. They *were* the sermons. Lilies growing in a field were creations of God's apparel in regal splendor that outclassed Solomon himself. If God clothes the flowers of the field so wonderfully, says Jesus, then why worry about what you will wear? Likewise birds have nests and food, both signs of God's providential care, so why fret over what we, who are worth more than many sparrows, will eat tomorrow? One day at the end of a long hot walk, Jesus came to a well in Samaria. The water at the bottom of that well became a symbol for the water of life that he had come to

offer the world. Jesus was a great observer of the world around him. (Grant 1993, 120)

Those words seem so accurate when we look closely at the teaching strategy and methodologies of Jesus. He always seems to grab a slice of life right out of the physical world and make eternal analogies to it. He taught in ways that impacted people's sense of hearing, seeing, and doing. Roy Zuck of Dallas Theological Seminary discusses the teaching methods of Jesus:

Were people in Jesus' day interested in what he taught? Indeed they were! They were curious, intrigued, even captivated. How did Jesus engage such attention and demand such respect? His teaching competence is seen in his profound abilities as a motivator, his creative use of variation in teaching patterns, the way he involved his learners, and his appeal to the visual. Teachers today do well to learn from Jesus' teaching by stimulating and motivating their students, varying their methods, encouraging learners to participate, and visualizing what they verbalize. (Zuck 1998, 178)

There are many examples of Jesus' multi-sensory approach to teaching. The following are some examples of those types of teachings and a brief explanation for each.

The Vine and the Branches

Just before his arrest, Jesus spoke to his disciples about the need to stay connected to him spiritually. This truth was so essential that Jesus took the time to etch it into the disciple's minds with a multi-sensory analogy. To make the point, he compared being connected to him with a branch staying connected to the vine in order to sustain its life. The analogy is one of a vine and branches, but many scholars think the analogy was made visually as well. In other words, as Jesus spoke of the vine and the branches, he was actually pointing to the visual counterpart of the verbal illustration. For example, Westcott observes:

The first two verses present the elements of symbolic teaching without any direct interpretation, the vine, the branches, the husbandman, the dressing. The whole usage of the Lord leads to the belief that the image of the vine was suggested by some external object. Those who think that the discourses were spoken in the chamber suppose that the symbol was supplied by a vine growing on the walls of the house and hanging over the window; or by “the fruit of the vine” (Matt. xxvi, 29).

If the discourses were spoken on the way to the Mount of Olives, the vineyards on the hillsides, or, more specially, the fires of the vine-prunings by Kidron, may have furnished the image. If however the discourses and the High Priestly prayer (ch. Xvii,) were spoken in the court of the temple (xvii,I, mote), then it is most natural to believe that the Lord interpreted the real significance of the golden vine upon the gates, which was at once the glory and the type of Israel. (Westcott 1881, 216)

Michael Card obviously thinks the illustration was given on the way to the Garden of Gethsemane. Describing the scene in story form, Card paints a poignant picture of the teaching of the vine and the branches:

He was quiet during the first part of the walk that night to the Garden of Gethsemane. As we passed the temple, Jesus looked over at the large sculpted vine on one of the outer walls, and He began to speak. He pointed toward the temple and told us that He was the true vine, using the object to help make His point. He was telling a parable, like in the old days. It was good to hear one of His stories again. He said we were the branches of the vine. The only way for us branches to be fruitful would be to stay connected to the vine. It all made perfect sense to us except why, all of a sudden, would He be so concerned about our remaining in Him? What could possibly happen that would cause us to be cut off? (Card 1995, 27)

Bruce Wilkerson also describes the scene in the most vivid terms. Wilkerson, however, sees the teaching event happening closer in proximity to the Garden of Gethsemane, and he sees the visual counterpart as the actual grapes and vineyards that terraced the landscape on the way to Gethsemane.

Eleven dejected men follow Jesus down the stairs and out into the evening night. Some of the disciples carry lamps or burning torches to light the way. Perhaps Jesus tells them where he is heading – to a garden on the Mount of Olives where they often spent time. But I believe as their footsteps echo through the narrow streets, not a word is spoken.

The disciples follow Jesus down the hill, through the winding streets of Jerusalem. Avoiding the temple mount and its noisy, celebrating crowds, Jesus turns

right and leads them out of the city. Then they turn sharply left to follow the Kidron Valley up toward their destination.

Along the terraces that follow the curve of the valley, they pass through ancient vineyards. They walk in single file between the rows of neatly tended grapes, plants that have been bearing fruit for generations. To the left above them tower the city walls and the ramparts of the temple. Ahead and to the right rises the Mount of Olives, where Gethsemane and betrayal await.

Here Jesus stops. Hemmed in by rows of vines, the disciples gather around. Lamps and torches sputter in the night air and flicker in their eyes. Jesus reaches for a grape branch, its woody stems lie across his hands in the golden light. Now he begins. “I am the true vine, and my Father is the vinedresser”. (Wilkerson 2001, 12-13)

Wilkerson makes the point of Jesus’ use of multi-sensory teaching when he asks the reader, “Are pictures coming to your mind? Can you feel the ragged bark, the curl of the tendril, and the fuzzy surface of new leaves? Can you smell the spicy sweetness of the grapes? Jesus loved to convey the deepest truths with earthly examples” (Wilkerson 2001, 17).

It seems certain that as Jesus spoke of the vine and the branches, he was pointing his disciples to a three-dimensional picture of the object. We may not be certain where the visual took place, but we may be sure that there was a three-dimensional visual counterpart to the illustration. The sight of the vine, branches, and fruit connected to their sense of sight. They could visually see the illustration Jesus was making. If the disciples actually touched the bark and grapes as Wilkerson suggests, then Jesus also connected to the disciples’ sense of touch. Could it be that Jesus was teaching a profound truth and using a methodology that was auditory, visual, and tactile in its delivery?

The Wheat Field

In John 4, Jesus had an encounter with a Samaritan woman who was married to five different men. Some scholars think she was a “prostitute – mistress” to men of

Samaria. At any rate, after she recognized Jesus as Messiah, she left her water pot and went into to town and invited the men of Samaria to come see the Messiah. “Come see a man who told me everything I did. Could this be the Christ? They came out of the town and made their way toward him” (John 4:29-30). In the meanwhile, as the men of Samaria were making their way toward him, Jesus began to talk to the disciples about the need for workers to reach the unsaved.

Jesus compared the unsaved to a harvest of wheat. There is little doubt that there was a wheat field nearby as Jesus spoke to his disciples. “Say not ye, There are four months and then cometh harvest?” (John 4:35). When Jesus spoke this, it was December. In ancient Palestine, wheat was planted in November and harvested five months later in the spring. At this point, the wheat in the field would be about one foot high, green, and would be four months away from harvest. Jesus was saying to them, “Look out at that wheat field.” They looked out at the wheat in the field. Jesus says, “Don’t look at that wheat and say its four months till harvest.” “Lift up your eyes, and look on the fields; for they are white unto harvest” (John 4:35). The disciples were already looking out to the field. Jesus told them to “lift up their eyes.” Then he said to them, “The fields are white unto harvest.” Why would Jesus say, “The fields were *white* unto harvest”? Wheat is never white. It is either green or brown. The answer is simple. When the disciples “lifted up their eyes” and looked across that field, they would have seen all the Samaritan men that the woman from the well was bringing toward Jesus. They were coming across that field. It is extremely interesting to note that Samaritan men always wore *white robes*. Therefore, Jesus said, “The fields are white unto harvest.” What a visual picture for the disciples. It was one that was etched visually into their minds (Barclay 1975, 168).

The Water at the Well

Again, in John 4, Jesus used a visual to connect to the learning of the Samaritan woman. He compared her thirst and need for physical water to the thirst and need she had for spiritual water – spiritual water that he could supply. “Whosoever drinketh of this water shall thirst again; But whosoever drinketh of the water that I shall give him shall never thirst, but the water I shall give him shall be in him a well of water springing up into everlasting life” (John 4: 13-14). Max Lucado paints a compelling contrast between our need for physical water and our need for spiritual water.

You’re acquainted with physical thirst. Your body, according to some estimates is 80 percent fluid. That means a man my size lugs around 160 pounds of water. Apart from brains, bones, and a few organs, we’re walking water balloons.

We need to be. Stop drinking and see what happens. Coherent thoughts vanish, skin grows clammy, and vital organs wrinkle. Your eyes need fluid to cry, your mouth needs moisture to swallow; your glands need sweat to keep your body cool; your cells need blood to carry them; your joints need fluid to lubricate them. Your body needs water the same way a tire needs air.

In fact, your maker wired you with *thirst* – a “low fluid indicator.” Let your fluid level grow low, and watch the signals flare. Dry mouth. Thick tongue. Achy head. Weak knees. Deprive your body of necessary fluid, and your body will tell you.

Deprive your soul of spiritual water, and your soul will tell you. Dehydrated hearts send desperate messages. (Lucado 2004, 11)

Jesus grabbed an object lesson, a well and its water, a woman and her thirst. He used a slice of life right out of the context and used it to communicate divine truth.

The Lord’s Supper and Baptism

Both of these ordinances given by our Lord Jesus to the church are visual pictures of a theological reality. Baptism is a graphic picture of the death, burial, and resurrection of Christ from the dead. When the baptized person is leaned backward, that action pictures the death of Christ. When one is submerged beneath the waters, that

movement pictures his burial, and when one is raised from the waters, that step pictures Christ's resurrection. What an explicit depiction of the gospel message! Every time a person is baptized, he or she gives a multi-sensory image of the good news of Christ death, burial, and resurrection.

Then there is the Lord's Supper. On the night before his execution, Jesus gave the church a visual way to remember his sacrifice. He took bread and the fruit of the vine and connected them to the aspects of his gory sacrifice at Calvary. Every time the church takes the bread, we are reminded in a visual and tactile methodology of the sacrifice of Jesus body. Each occasion that the church partakes of the fruit of the vine at the Lord's Table, we are reminded of his bloody sacrifice in a colorful, sensory, and tactile form.

Jesus used many multi-sensory teaching methods: He used a child, a fish, a fig tree, and a number of other objects to communicate truth in a multi-sensory form. The words of Roy Zuck bear repeating: "Teachers today do well to learn from Jesus' teaching by stimulating and motivating their students, varying their methods, encouraging learners to participate, and visualizing what they verbalize" (Zuck 1998, 178).

Prophetic Models of Multi-sensory Teaching

The prophets of the Old Testament often resorted to extreme multi-sensory teaching methodologies and advanced multi-sensory teaching strategies in order to connect the message with the audience they wished to impact. Their use of auditory communication mixed with graphic visual elements and tactile elements give credence to multi-sensory preaching, teaching, and communication. In this section we will look at only two prophets: Hosea and Jeremiah.

Hosea

Hosea's very life became a living multi-sensory sermon. God himself set up this real life multi-sensory sermon by having Hosea marry an adulteress woman. "When the Lord began to speak through Hosea, the Lord said to him, 'Go take to yourself an adulteress wife and children of unfaithfulness, because the land is guilty of the vilest adultery in departing from the Lord'" (Hos 1:2).

The adulteress woman, whose name was Gomer, became representative of the spiritual adultery committed by Israel against God. By marrying an adulteress woman, Hosea was living a life that gave a visual picture of Israel's spiritual adultery. Every time Israel looked at the relationship between Hosea and Gomer, they saw a multi-sensory sermon of their own relationship with God. In the end, Gomer ended up on the auction block to be sold as a slave and Hosea purchased her off the block. Again, what a beautiful picture of God's unconditional love for his people!

Jeremiah

There is the graphic example of Jeremiah who carried an ox yoke on the nap of his neck. The image spoke to the people as graphically as possible: God was going to discipline Israel by putting a yoke around their necks. Jeremiah wrote of his visual object lesson to the nation of Israel, "This is what the Lord said to me: Make a yoke out of straps and crossbars and put it on your neck. Then send words to the kings of Edom, Moab, Ammon, Tyre and Sidon through the envoys who have come to Jerusalem to Zedekiah king of Judah" (Jer 27:2-3). He continues, "If, however, any nation or kingdom will not serve Nebuchadnezzar king of Babylon or bow its neck under his yoke, I will punish that nation with sword, famine, and plague declares the Lord, until I destroy it by

his hand” (Jer 27:8). God was using Jeremiah as a walking three-dimensional visual object lesson to teach Israel a truth. Later, God had the prophet Hananiah continue with this visual: “Then, the prophet Hananiah took the yoke off the prophet Jeremiah and broke it, and he said before all the people, this is what the Lord says, ‘In the same way will I break the yoke of Nebuchadnezzar king of Babylon off the neck of the nations within two years’” (Jer 28:10-11). Calvin Miller acknowledges this as he writes:

The prophets of the Old Testament often preached around the temple or in the center of the ancient city of Jerusalem. One can find in the object lesson sermons of Jeremiah or Isaiah an album of sociological picture. These prophets not only preached out of doors but made their sermons fit various object lessons! Jeremiah, for instance, once stumbled through the city under an ox yoke. This image was video ahead of its time. The stumbling icon spoke without words: God would soon put a yoke on the neck of Israel.

The impact on his culture would have been less dramatic if Jeremiah had only preached the sermon inside. The same thing may be said of Hosea. He challenged the city by calling his own grievous family life to witness. His miniskirted, go-go wife and ragamuffin children said it all. The judgment and retribution of God fell upon a rebellious culture. Hosea’s domestic homiletic would hardly have carried the same cultural force had it been preached inside as another ho-hum look at Christian Home Week. (Miller 1994, 15-16)

One could find other multi-sensory teaching examples in the Bible from God himself. The entire Tabernacle set up prescribed by God was a visual picture of the worship of heaven. The Passover drama played out in Egypt was a visual picture of the blood of the Lamb of God on the cross.

Those who oppose all forms of teaching other than lecture should take a close look at the teaching methods of Jesus, God, and the teaching methods of the Old Testament prophets. The example of Scripture clearly gives a green light to the pastor-teacher who would desire to use multi-sensory techniques in his teaching of the Word of God.

Contemporary Models of Multi-Sensory Teaching

In recent years multi-sensory preaching-teaching has made a comeback. Not only are public schools recognizing this strategy, but some in the church have recognized it as well. Three pastor-teachers who have led the way in multi-sensory communication are Ed Young, Andy Stanley, and Rob Bell. These men have realized very successful ministries, and they cite multi-sensory teaching as a key to effective communication to their individual contexts.

Pastor Ed Young, Jr.

Ed Young, Jr. is pastor of Fellowship Church in Dallas, Texas. Young has experienced such phenomenal impact from multi-sensory teaching that he has an entire staff dedicated to the strategic planning, development, and execution of multi-sensory teaching. Beyond that, his church hosts an annual conference on creativity in the church. He observes, “During the ten years of Fellowship Church’s life, we have learned that creativity is pivotal to building an exciting church that will make a difference in people’s lives. Creativity brings people in the front door, and creativity keeps them from going out the back door. It doesn’t matter the size of the church, its makeup, its budget, or the demographic: Creativity can be applied to all situations” (Stanley and Young 2002, 149).

Young argues for the advantages of creative multi-sensory preaching:

There are two elements to the practice of creativity: change and visuals. People get bored with seeing and hearing the same old thing week after week. When they know what’s coming; they tune it out; the higher the predictability, the lower the communication. Constant change gives a look of freshness and keeps people interested. The best compliment you can hear about your church is, “I never know what they’re going to do next.

Visuals are invaluable in this respect. Most people will remember something they’ve heard for a longer period of time if they see it demonstrated visually. Jesus

recognized this - that's why he spoke from the hillsides, beaches, and boat bows; its why he picked up a pebble, pointed to a sower, drew in the sand, and put a child in his lap. (Stanley and Young 2002, 152)

Young goes on to explain how he has driven a car on stage, led live sheep onto the stage, ridden a camel up to the church doors, had a car on the platform, and demonstrated the hook of sin with a fly rod, a fly, and a hook. He literally cast the fly into the congregation - not to worry; he removed the hook while people were not looking.

For a series for singles called The Ulti-Mate, I came up with the idea of comparing "that special someone" to a luxury car. Looking in the trunk was a parallel for finding out the other person's emotional baggage; looking behind the wheel symbolized finding out who's driving the relationship (Jesus, or someone else?); and taking the car off-road was a word picture for misusing God's gift of sexuality. To demonstrate these ideas, I wanted to drive a car across the stage - a Mercedes 500SL to be exact. A man who's been visiting our church for some time owns a car dealership, and he was able to set us up with one of these fantastic vehicles for the two weekends I needed it.

Another time I did a message called "Lifelines," which discussed how each of us might be the only eternal lifeline in an unbeliever's life. Not only did we put a boat up on stage and show a vignette from the television show Rescue 911 just before the message, we set bags of individually wrapped Lifesaver candies at the end of each row and had the audience pass them out during the service. I told the people to think of one person in their lives that they knew needed Christ - someone who was drowning - and to pray for them and invite them to church. When the person accepted Christ, they could eat the Lifesaver. (Stanley and Young 2002, 152)

Young concludes his comments by asserting, "All these things contribute to a total sensory communication - to reaching our audience through every avenue possible" (Stanley and Young 2002, 150). Remarking on creativity in worship, John Killinger writes, "Considering how many sermons most preachers deliver in a lifetime, it's easy to understand how sermons fall into formulas and patterns, and thus become predictable. But predictability kills interest. The anecdote to predictability is to preach on the growing edge of one's own awareness, always embodying the most recent insights in newly discovered images and metaphors" (Berkley 1992, 93).

Pastor Andy Stanley

Andy Stanley began North Point Community Church in Alpharetta, Georgia, in 1995. Prior to this he had served as Youth Pastor at First Baptist Church of Atlanta where his father, Charles Stanley, serves as senior pastor. As a youth pastor, Stanley was given the latitude to use many communication techniques in order to connect the youth of his context, i.e., visuals, multi-sensory methods, and creative communication techniques. Many view such tactics as acceptable for youth but unacceptable for teaching in an adult context, especially in the worship.

Stanley decided to break with that traditional view and utilize the same type multi-sensory teaching he had employed as a youth pastor in his new church start at North Point Community Church (Stanley 2001, 78). This researcher wonders why teachers of adults think it is childish and immature to bring such creativity to the adult learning context. Reg Grant writes, “Young children rely on anything that helps them communicate their ideas – stories, anecdotes, quotes, sticks, rocks – whatever lies at hand. As adults, now, we regard those natural elements of persuasions foreign matter, alien fragments of a world before formal education. What happened?” (Grant 1993, 114). Why is it that the great experiences of teaching and learning are relegated to childish and reserved only for small children in the Sunday school department?

Like Ed Young, Andy Stanley has experienced such success with his multi-sensory communication methods that he too has developed an entire full-time staff to assist in the development and strategic planning of his sermons. This group of people come together to help Stanley make his sermons more creative, graphic, explicit, and multi-sensory. He explains, “The creative quotient plays a huge part in how far advanced

we need to plan. Obviously, more elaborate visuals, videos, or dramas require more advanced planning. We have a full-time staff who oversee the stage management, lighting, props, and whatever else is needed to make the service happen” (Stanley and Young 2002, 154). Regarding the creative strategies of this team of workers, Pastor Stanley comments:

Typically they start by asking one simple question: “What haven’t we done in a while?” If we’ve used videos in the previous two services, they will try to avoid them for the upcoming weekend. If we haven’t done a drama in a while, then they’re likely to do one. They pick out all the music, trying to keep the atmosphere fresh. They might bring in a creative different instrument like a cello or bagpipes. They might use a dancer. If it’s for the glory of God, we say, go for it. (Stanley and Young 2002, 155)

Stanley goes on to explain how they have strategically planned the structure of their services, the design of the building, and the purchasing of technology to support this creativity and multi-sensory teaching.

Our worship center was specifically designed with this kind of flexibility in mind. The stage is huge and provides great flexibility. Two immense screens are on either side. We have the ability to do a lot with lighting, sound, and video. The facility is functional, not opulent, and everything focuses inward toward what’s happening on the stage. (Stanley and Young 2002, 155)

Later in this work, the researcher will discuss and present strategic planning for the execution of such multi-sensory teaching.

Pastor Rob Bell

Rob Bell is pastor of Mars Hill Bible Church in Grandville, Michigan. Bell started the church in 1999, and through his leadership and unique style of communicating the text of Scripture, the church has grown to 10,000 on most weekends. Bell describes his preaching style as unorthodox, biblical, and well informed by history. He uses a wide range of multi-sensory techniques to communicate to the context in which he serves.

Defending multi-sensory against attacks of being concerned only with entertainment, he writes, “Sometimes I hear people say, ‘The church isn’t here to entertain.’ To entertain means to hold attention, which is clearly something teachers throughout the Scriptures are doing. They engage and capture attention” (Bell 2004, 28). Bell goes on to distinguish entertainment from amusement when he says, “But we’re not here to amuse. To ‘a-muse’ means, ‘not to think.’ And it’s wrong to prevent people from pondering or distract them from thinking. I’m not here to amuse. But of course I want to engage people. I have something to say” (Bell 2004, 28). Bell responds to the question posed by leadership, “So what you say is important, but just as much the way you say it,” by asserting, “In class a history teacher can be lecturing, and it is just insanely boring. She plays a three-minute clip of *The Patriot* and every kid from the back row to the front is totally engaged. Then she hits stop and the screen goes blue and every kid in the class goes, ‘Oooooooaww ’” (Bell 2004, 28).

Describing his own personal multi-sensory style, Bell says, “I use a lot of props and visuals. People are like, ‘You use props and stuff. I’m just into *biblical* preaching.’ Well, find me a person in Scripture who doesn’t use visuals. Jesus said, ‘Look at those birds, look at the tree.’ ” *Leadership Magazine* posed the specific question of visuals to Bell by asking, “Why are visuals critical in preaching today?” (*Leadership*, Spring 2004, 29). He responded to the question with this answer:

The world of Scripture is full of pictures. Jesus says, “Spirit is like wind.” The Eastern mind thinks in terms of pictures, the Western mind in words. The Eastern thinks, “God is a rock.” The Western makes a statement of faith – more comfortable with definitions and precision. Those are food, but when you gain something, you also lose something.

Today you have a culture that thinks in images. I am a child of television, part of a whole generation that’s image based in its thinking. But props can never be a substitute for having something to say. It’s easy to become a prop guy or Video Clip

Woman, but not have said anything. It has to start with something to say. (Bell 2004, 29)

Leadership responded to a sermon Bell preached by saying, “At the end of the sermon, you laid the shawl out. People came and knelt and prayed. The use of props is tactical and memorable. But in this case it was also very spiritual” (Bell 2004, 28). Bell came back with this observation: “God is the God of props. The whole sacrificial system is props. That’s how God explains atonement, substitutionary sacrifice, reconciliation. These are abstract. So what does God say? ‘Take a goat. Slit its throat. See the blood? That’s your blood. Clear?’” (Bell 2004, 28). He continues the argument for the “God of props.”

The covenant. Okay, cut some animal in half. Walk down the middle. Say to the person, I’ll be like these animals if I don’t keep my end of the deal. God takes concepts and puts them in dirt and blood and flesh and bones and wood and steel. I would say the props are not just how you reach the kids. It’s a larger issue of the material of being spiritual. (Bell 2004, 28)

The Possible Advantages of Multi-sensory Teaching

If the precedent literature is correct in the assumption that people have learning preferences by which they prefer to learn, then we would do well as teachers to connect to those preferences. If our goal is to grasp people’s attention and then impact comprehension and retention, then perhaps we should teach in a form that connects to multiple learning styles as opposed to one learning style. If only one third of the congregation learns best through auditory learning, then the pastor-teacher would be ignoring the learning preferences of two-thirds of the people. That does not seem wise to this researcher. The author defers to the wisdom of missions expert David Hesselgrave again:

It is not just *who* says *what* to *whom*, but *how* the message is channeled to the respondent that determines how the message will be decoded. Language is basic to communication, but language does not stand-alone. As we have said, words are augmented by pictures, actions, sounds, silence, smells, and objects. Words can be spoken or written; pictures can be drawn on canvas or projected on a screen; and actions can be part of sign language for the deaf or part of a stage play.

One of the most exciting challenges facing missionary communicators is the challenge to use indigenous simple media such as dramas, diagrams, and drawings more imaginatively and more often. Simple media are especially important in cultures where concrete-relational thinking predominates and where mechanical and electronic media are more difficult to reproduce and comprehend. (Hesselgrave 1991, 537)

Dunn and Dunn echo the same sentiment:

Ask almost any educator whether people learn through different senses and the response is bound to be “Yes!” That knowledge, however, is rarely translated into classroom practice. It has been estimated that ninety percent of all instruction occurs through the lecture and question and answer methods, yet only between two and four students in each group of ten learn best by listening (Dunn and Dunn 1978, 13).

Reg Grant in his work, *Power Preaching* observes, “A power sermon does more than get people somewhere; it takes them in such a way that they want to go again. Support materials can make the trip delightful and beneficial. They tap into the right side of the brain, clarifying foggy associations and connections” (Grant 1993, 114). Grant’s point is well taken. When the pastor or teacher adds support elements to his teaching, it makes the learning more enjoyable and it connects better to those who are right brain learners and who learn best through multiple senses.

The words of Lawrence highlight the fact that many learning institutions are either ignorant of learning preferences and sensory preferences or they simply chose to ignore the facts:

The typical curriculum of American schools was not designed to address differences in the learning styles of the various personality types. Educators today have inherited a mindset of what schooling is and should be, and that mindset favors some types and handicaps others. Two such biases are evident. The first is organizational. Schools expect students to work quietly, sitting in their own seats

most of the time. School learning is regarded essentially as a private, interior mental effort. That expectation fits introverted types well, but neglects the extroverts who learn best when they can test ideas in talk and action. For extroverts, action is a prelude to reflection. They are not well served by typical classroom expectations and practices. This bias might be tolerable if extroverts were a small minority of the population; however, research reported in the MBTI [Myers-Briggs Type Indicator] Manual clearly shows that the typical school has seventy to seventy-five percent extroverts. (Lawrence 1982, 99-100)

Helen Hodges asserts:

Of all the elements of learning style, perceptual strengths and structure appeared to have the highest priorities in formulating appropriate prescriptions. In accordance with Dunn and Dunn, new material was presented through the strongest modality and reinforced through second strongest modality. For example:

1. Our auditory students learned best when they *listened* to the information, *read* about the subject, and then *took notes* on important items.
2. Our visual youngsters learned best when they *read* about the subject *before* the teacher discussed it; *looked* at illustrations, charts, and other visual aids; *took notes* on important items; and then *listened* to an explanation of new materials.
3. Most of our students who were tactual learners required manipulative materials to *feel* or *touch* and materials to *construct* "educational games." They were then guided to *write* and *read* about the subject and then *listen* to an explanation of the new material.
4. Our kinesthetic learners needed to become *fully involved* in "real life" situations, like taking field trips or building things. They *felt* or *touched* manipulatives, *wrote* and *read* about the subject, and, finally, *listened* to an explanation about the new material. (Hodges 1982, 30-31)

Hodges also makes this very telling observation:

In most cases, approximately 90 percent of traditional classroom instruction is geared to the auditory learner. Teachers talk to their students, ask questions, and discuss the facts. However we found that only 20 to 30 percent of any large group could remember as much as 75 percent of what was presented through discussion. By utilizing a multi-sensory approach to teaching, we assisted our students to overcome the difficulties with perception they had experienced in the traditional program that emphasize lecture and discussion. (Hodges 1982, 31)

Natter and Rollins conducted research that validates the concept of teaching style matching learning style. In this research, 1500 adults who did not finish eighth

grade were tested against 671 adults who were finalists for National Merit Scholarships using the Myers-Briggs Type Indicator. The results of the test were staggering and revealed that 99.60% of the eighth grade drop-outs were *sensing* dominant learners, while 83.01% of the National Merit Scholarship individuals were identified *intuitive* dominant learners. The research demonstrated that those who learned primarily through the senses, i.e., visual learners, tactual learners, and kinesthetic learners were penalized while those who were intuitive learners were rewarded by the very way in which they were taught and tested (Silver and Hanson 1996, 166).

Unfortunately, just as our educational systems are geared more to the sense of hearing in terms of teaching methodologies, could it be that they are also more in tuned with the person who is a left brained learner. Springer and Deutsch raise the question: “Does an elementary school program restricted to reading, writing, and arithmetic educate mainly one hemisphere and leave half of the individual’s potential unschooled? Is the entire educational system biased against developing right-hemisphere talents?” (Springer and Deutsch 1981, 282). It is a rhetorical question, but as pastors we might ask the same question of the church: Is the church with its lecture format biased against the right-hemisphere-learner?

Connects to the Auditory Learner

Though the precedent literature seems to indicate that most people prefer to learn through multiple senses, we must not forget that there are those in our congregation who learn intuitively, i.e., predominately through the sense of hearing. In their case, too much multi-sensory imagery in the teaching content may actually be a distraction. The teacher should also bear in mind that even though most of our congregation are sensory

dominant, they have been forced to learn in an intuitive form. The educational system in which they have *learned to learn* has forced them to be auditory learners, and they may view it as the only serious method of teaching and learning. Furthermore, those who have attended church in the past have likely been exposed expressly to auditory preaching-teaching.

Jesus did not ignore this learning style in his teaching and often taught in a lecture format. Even when using graphic attention attracting visuals, he always combined it with logic and the spoken word. “Lectures and analysis are not excluded, but they should be part of a larger experience” (Cain 1991, 84).

Connects to the Visual Learner

Unlike the lecture-oriented teacher, the multi-sensory teacher uses a variety of visual aids to connect to the student who needs to *see* the information being taught. In the movie *Open Range*, Robert Deniro describes a scene to Kevin Costner. They are cowboys living in the open range apparently close to the time when the camera had just been invented. Deniro says to Costner, “It kind of paints a picture in your mind, doesn’t it?” Costner says, “They say a picture is worth a thousand words.” That was the commentary on the new invention called a picture. One picture carried the descriptive power of a thousand words. How true that is: If a picture is worth a thousand words (and many believe it is) then why not use a picture (a visual image) instead of having to use a thousand words. The picture stimulates the senses of seeing and may be more attentive and retentive in the receiver. In fact research shows that people remember more of what they see than what they hear.

Think of something you learned recently, a lesson that profoundly influenced you in some way. Was it something you heard? Or was it something you both heard and saw? The possibilities run high that you well remembered lessons that involved your sight as well as your hearing. We tend to forget what we hear. But when seeing accompanies our hearing, we learn more and retain it longer.

Why is this? Because vision is our dominant sense. A report published by the Xerox Corporation years ago revealed that 83 % of what we learn comes through our sight. Hearing provides for 11 % of what we learn, compared with extremely small percentages from the other three senses: smell, 3.5 %; touch, 1.5%; and taste, 1 %.

No wonder Jesus used visuals! Of course he had no electrically or electronically powered media. He never used a chalkboard, but he did write on the ground. He did not show a film, but he did point to objects around him.

Why are visuals effective? They make learning more enjoyable, by capturing attention. They make learning more meaningful, by bridging time and distance gaps between today and what is being studied. They make learning more lasting, by enabling students to retain facts and ideas longer. (Zuck 1998,176)

Bruce Wilkerson, in his work, *Teaching with Style*, says this about Jesus' use of visuals:

Jesus didn't limit His teaching methods to either visual or auditory. On His final night with His disciples before His crucifixion, He passed through vineyards after leaving the upper room to go to the Mount of Olives. Stopping to use the elements of the vineyard – vines, branches, and fruit-as a visual aid, Jesus showed the disciples that they had to remain in Him if they were to bear spiritual fruit. (Wilkerson 1994, 89)

Speaking about the transforming capacity of visual teaching Wilkerson adds,

Just as a story is a verbal comparison or illustration of a truth, so a visual object or presentation is a physical comparison or illustration. When you show students something visually, you are saying, 'It's like this object you can see...' What physical or other visual illustrations or comparisons can you take to your next class? They are easy to discover. First, determine the point you are making. Next, ask yourself what the point is like in your own experience. Then find an object or other visual means to represent that point. Visual aids can come from any source. You can create an acetate visual for an overhead projector, or use a physical object. If you can see it, use it. Not only will your students see your point, they'll remember it too! (Wilkinson 1994, 89)

Roy Zuck in his work *Teaching as Jesus Taught* reemphasizes the importance of visual teaching by cataloging some of the instances in which Jesus used visual illustrations to communicate divine truth. Speaking of Jesus' teaching he observes:

He pointed to the harvest to illustrate the need for evangelism (John 4:35-39). How could the disciples ever forget this impressive image of the lost? As reapers, they were to harvest a crop, bringing people to himself. He had a little boy stand beside him to visualize humility and trust in answer to the disciples' arguing about greatness. (Matt. 18:2-5; Mark 9:36; Luke 9:46-48)

When the teachers of the law and the Pharisees tried to trap Jesus by their question about a woman caught in adultery, he wrote on the ground twice (John 8:1-8). A fig tree that withered overnight at Jesus' command became a potent lesson on the power of faith in his word and on the efficacy of prayer (Mark 11:12-14, 20-24). The partaking of the bread and cup at the Lord's Supper made a lasting visual impression on the disciples (Matt. 26:17-30; Mark 14:22-26; Luke 22:14-20). A towel and a washbasin of water were visuals Jesus used as he illustrated humility before his disciples. (John 13:4-17)

Jesus' many miracles were dynamic visual demonstrations to the crowds, his disciples, and the religious leaders of his power, authority, compassion, and deity. Jesus' words transmitted significant visual images. Jesus' very life was a visual, reinforcing what he taught. (Zuck 1998, 178).

Roy Zuck's observations of Jesus teaching should be taken seriously. If the greatest teacher mankind has ever known, made educational use of visual teaching, then maybe we should follow his model. Its also interesting that visual words are used more often in the Bible than are auditory words. The following is a count using the New International Version of the Bible: Eyes 435; See 630; Ears 94; Hear 373.

In Galatians 3:1 Paul said to the Galatians, "You foolish Galatians! Who has bewitched you? Before your very eyes Jesus Christ was clearly portrayed as crucified." The word "portrayed" translates the Greek word προγραψω. John Stott comments on this verse by saying:

Gospel preaching is proclaiming the cross *visually*. Paul uses a remarkable verb, prographo. Grapho can sometimes refer to draw or paint, rather than to write, and pro can mean "before" in space (before our eyes) rather than in time (previously). So Paul here likens his gospel preaching to a huge canvas painting or to a place card publicly exhibiting a notice or advertisement. The subject of his painting or place card was Jesus Christ on the cross. Of course it was not literally a painting; the picture was created by words. Yet, it was so visual, so vivid, in its appeal to their imagination, that the place card was presented before your very eyes. One of the greatest arts or gifts in gospel preaching is to turn people's ears into eyes, and make them *see* what we are talking about. (Stott 1982, 343-44)

This quotation does not tell us to use something that is physically visible, but it stands to reason that using visuals in our teaching can turn people's ears into eyes.

Thraikill, in her dissertation on the use of imagery in teaching, points out the difficulties in learning from a purely lecture driven teaching.

Lecture learning is difficult because the auditory information is presented almost continuously, and must be processed and encoded while more information is being presented. According to Kintsch and Van Dijk (1978), incoming information must be retained in chunks in order to be processed. (Thraikill 1996, 6)

“If attention and memory can be stimulated and recall enhanced by the addition of visual images within the lecture format, students may find the learning of lecture material easier and more lasting” (Thraikill 1996, 6). At the Department of Experimental Psychology, University of Oxford, researchers discovered:

The ventral prefrontal cortex plays a role in the learning of tasks in which subjects must learn to associate visual cues and responses. Imaging with both positron-emission tomography (PET) and functional magnetic-resonance imaging (MRI) reveals learning-related increases in activity when normal subjects learn visual associative tasks. (Rushworth, PubMed., Exp Brain Jul:133(1):103-13)

One would think that such factors would lead to an educational system that values the use of visual education. Sless argues that this is not the case:

Our educational culture has been dominated by the skills of literacy and numeracy. By contrast the overall culture in our societies is increasingly dominated by hybrid forms that use many visual forms of communication, which our educational system either ignores or simply takes for granted. (Sless 1981, 180)

Connects the Kinesthetic-Tactile Learner

An often neglected sensory channel preference is the sense of touch – doing. This is often referred to as kinesthetic learning and tactual learning. Jesus knew the

importance of appealing to this sense, and he often taught in forms that appealed to this kind of learner. Roy Zuck of Dallas Theological seminary observes:

People learn by doing. By means of activities, assignments, and projects students have opportunity to reinforce what is learned in the classroom, put into practice the truths taught, internalize the concepts studied, and develop initiative and responsibility. "Principles and skills can be presented, but it is the learner's performance in activities such as outlining, problem solving, discussing, and experimenting that internalizes the learning for them." As I wrote elsewhere, "The activity may be physical, mental, or emotional, but there must be activity if learning is to take place." Jesus believed in the importance of student participation; this fact is evidenced by the many ways (listed chronologically) in which He involved His disciples and others in the teaching-learning process:

1. Asked the disciples to get a boat for him to sit in while teaching the people (Mark 3:9)
2. Had his disciples baptize converts (John 4:2)
3. Sent his disciples to a nearby Samaritan town to buy food (John 4:8)
4. Told the demon-possessed man of the region of the Gerasenes, whom he healed, to go tell his family what the Lord had done for him (Mark 5:19; Luke 8:19). This shows the importance of personal witnessing.
5. Sent the Twelve in groups of twos to exorcise demons, heal the sick, preach, and teach (Matt. 10:1-4; Mark 6:7-13).
6. Had them report on their ministries (Mark 6:30; Luke 9:10).
7. Directed the disciples to have the five thousand men (with the women and children) seated in groups, to distribute the bread and fish, and to gather what was left (Matt. 14:19-20)
8. Took Peter, James, and John with him to the Mount of Transfiguration (Matt. 17:1; Mark 9:2; Luke 9:28)
9. Told Peter to catch a fish and take a coin out of its mouth (Matt. 17:27)
10. Sent messengers into a Samaritan village to prepare accommodations for him (Luke 9:52)
11. Commissioned seventy-two followers in groups of twos to heal the sick and preach (Luke 10:1-17)
12. Sent two disciples to Bethphage to get a colt for him to ride (Matt. 21:1-3; Mark 11:1-3; Luke 19:29-30). (Zuck, 174-75)

We have focused on three primary sensory channels, those being hearing, seeing, and touching. Linda Williams identifies additional channels for sensory reception:

The sensory system includes not only the five senses of sight, hearing, touch, smell, and taste through which we take in information about the world outside us, but also the proprioceptive senses - the kinesthetic, vestibular, and visceral systems which monitor internal sensations. The vestibular system, located in the inner ear, registers

body position, movement, direction, and speed; it also plays an important role in interpreting visual stimuli. The kinesthetic system is located in the muscles, joints, and tendons and gives us information on body movement. The visceral system provides sensations from internal organs. (Williams 1983, 144-45)

She continues her line of thinking by saying:

The kinesthetic sense provides the third major mode for learning (auditory and visual are the other two). Kinesthetic and tactile learning are sometimes linked together though they actually involve different systems. The tactile system involves receptors in the skin. When you run your fingers over a surface, your tactile system gives you information on texture, shape, and temperature. The kinesthetic system registers movement; its receptors in the muscles and tendons provide information on body movement. When you are typing and you realize you've made an error even before you check the page, it's your kinesthetic system recognizing that the movement sequence was wrong. Your body/mind knows how a word should feel as well as look.

Too often in school we overlook the kinesthetic component of learning, since it is usually outside of conscious awareness. When you are unsure of the spelling of a word and write it down, you are relying on your kinesthetic sense to guide your hand (though you probably also rely on a visual check to see if the word looks right). When you use your hands to gesture as you explain something, you are using both kinesthetic and verbal thinking. Try consciously to keep your hands still as you talk; you're likely to find that it interferes with your efforts to clarify your ideas. Though we are generally unaware of it, gesture not only helps communication but also facilitates thinking and expression.

The kinesthetic-tactile senses are the third major channel for taking in information and remembering it. When we tell students to copy a spelling word ten times, we're using both kinesthetic and visual pathways. While the majority of students prefer the auditory or visual channel, there are some who are primarily tactile-kinesthetic. These children are less able to learn by hearing and seeing than by touching and moving. For them information is taken in most easily through their hands and through movement. They like to handle things, to move them around, to move themselves around. (Williams 1983, 150-51)

Pastor Tony Palmisano, senior pastor of Living Word Fellowship in
Lauderhill, Florida understands the importance of tactile involvement by his
congregation. He has installed a computer system that allows his congregation to respond
by way of keypad to questions throughout his sermons. In a news article by *South Florida
Sun-Sentinel*, James Davis reported on the tactile phenomenon.

Its Sunday morning at the Living Word Fellowship, and Angela Franklin sits at the ready for the sermon. Her eyes are glued on Pastor Tony Palmisano. On her lap, an open Bible. On the Bible a keypad resembling a television remote control.

During the sermon, she and 69 other keypad holders will tap out answers to Palmisano's questions from the pulpit. Within seconds, their responses will appear on screens as red, blue, and green bar graphs.

Sunday worship meets "Who Wants To Be A Millionaire" at the Lauderhill church, via the keypads. With Pastor Palmisano asking pithy questions from the pulpit, the congregation offers instant feedback – and stays intent on the sermon theme.

"My grandparents listened to radio; I grew up on TV; our kids are into computers and videos," says Palmisano, 49. "And we all want input. I used to assume what my congregation was thinking. Now I know when I am engaging them. You can even see everyone with a clicker lean forward intently."

In a sermon dealing with family relationships, Palmisano makes chapter-type statements such as: "We can hate others because of our own pain." Each statement appears on the screen, in a blue strip below his projected image.

Palmisano then turns to his passage in the book of Genesis, dissecting the story of Joseph and his jealous brothers – even going back into the family history to find the root problems in his father, Jacob, and grandfather, Isaac.

"While Esau was out throwing passes, Jacob was at home vacuuming," he says, drawing laughs. "But he needed his father's affection just as much. Is it possible that Jacob treated his son's the same way?"

His questions range from mild to painfully personal. One suggests: "Many times children have pain in their lives because they feel: (1) that they don't measure up to the other children in the home; (2) that parents are divided because of them; (3) unable to gain acceptance by one or both parents; (4) all of the above." The responses are just as frank: A whopping 70 percent choose all of the above.

The congregation listens quietly, intently, going from keypad to Bible to keypad. Their answers voice a mute faith in divine help as Palmisano asks: "Do you believe that God can remedy wrongdoings in your family?" A green bar shows a 95 percent 'Yes' response.

"Tony is always on the cutting edge of technology and always wants to know what people are thinking. And he loves to get them involved," says Joe Palmermo of Coral Springs, who designs training software. (Davis 2004, D3)

This is the very goal of tactile methodologies. The teacher seeks to get the student involved in the learning.

Connects to Multiple Learning Preferences

"Teachers are often under attack for not using more individualized instruction even though they work with large groups ..." (Tobias 1994, 253). Tobias makes a valid

point. As teachers we are talking to large groups of people and therefore to multiple learning styles and preferences. How can the teacher or preacher connect to so much diversity? The answer may be in multi-sensory teaching. It seems plausible to this researcher that the teacher who uses multiple teaching techniques will connect to more people than the teacher who relies solely on one method, one channel, and one style. To be successful the teacher should seek to impact as many senses as possible. Success depends on using all of the senses and immersing the learner in a multitude of complex and interactive experiences. Jesus is a classic example of one who mixed his teaching style to connect to multiple learning styles. He employed lecture, visuals, and tactical elements in his teaching style. The teacher who truly teaches in a multi-sensory form seeks to connect to as many students as possible and therefore uses a shotgun approach as opposed to a bullet approach. Pazmiño says, “The greater challenge is to incorporate a variety of styles or to teach in one’s dominant style, while allowing for a degree of flexibility to accommodate the learning styles that are generally represented in any group of learners” (Pazmiño 1992, 47).

The human brain is always doing many things at one time (Ornstein and Sobel 1987). Thoughts, emotions, imagination, and predispositions operate simultaneously and interact with other modes of information processing and with the expansion of general social and cultural knowledge.

Good teaching so “orchestrates” the learner’s experience that all these aspects of brain operation are addressed. Teaching must, therefore, be based on theories and methodologies that guide the teacher to make orchestration possible. No one method or technique can adequately encompass the variations of the human brain. However, teachers need a frame of reference that enables them to select from the vast repertoire of methods and approaches that are available. (Cain 1991, 80)

Connects to the Culture

The generations coming along today have become somewhat multi-sensory dependent. They may reach a point where they will be unable to learn unless it is in the multi-sensory form. Wilkerson observes this trend:

I've found that with my elementary students, visuals work perfectly. Perhaps its because they grew up watching so many hours of television and movies – especially the older elementary students. And yes its ashamed that kids today are less auditory and more visual. But what can we do? Visual communication is what they have come to expect. Is it wrong to use a teaching method that communicates in a way that kids are used to. (Wilkerson 1994, 89)

Recent research seems to indicate a link between television watching and attention deficit in children. In fact, according to a study from the Children's Hospital and Regional Medical Center in Seattle, early television exposure in children ages 1 to 3 is associated with attention problems at age seven. Conclusions from the research, which appeared in the April 2004 issue of *Pediatrics*, indicates that television might over stimulate and permanently rewire the developing brain. The study involved 1,345 children who participated in government sponsored health surveys. Parents of the children were questioned about the children's television viewing patterns and rated their behavior at age seven on a scale similar to measures used in diagnosing attention deficit disorders (Dimitri, and others 2004, 1).

Dimitri Christakis indicated that problems in these children included difficulty concentrating, acting restless, and repulsive, and being easily confused. About 36% of the 1-year olds watched no television, while 37% watched one or two hours daily and had a 10% to 20% risk of attention problems. Fourteen percent watched three to four hours daily and had a 30% to 40% increase risk compared with children who watched no television. The remainder watched a minimum of five hours daily. Among three-year-

olds, only about 7% watched no television, 44% watched one to two hours daily, 27% viewed three to four hours daily, almost 11% watched five to six hours daily, and about 10% watched a staggering seven or more hours daily (Dimitri, and others 2004, 1).

It is widely known that the newborn brain continues to develop rapidly through the first few years of life and that considerable plasticity exists during this period. Considerable evidence also exists that environmental exposures including types and degrees of stimulation affect the number and the density of synapses. The types and intensity of visual and auditory experiences that children have early in life may have a profound influence on brain development.

In contrast to the pace with which real life unfolds and is experienced by young children, television can portray rapidly changing images, scenery, and events. It can be over stimulating yet extremely interesting. This has led some to theorize that television may shorten children's attention span.

We hypothesize that very early exposure to television during the critical periods of synaptic development would be associated with subsequent attention problems. (Dimitri, and others 2004, 1)

CNN reported on this discovery on their website.

The researchers didn't know what shows the children watched, but Christakis said the content isn't likely the culprit. Instead, he said, "Unrealistically fast paced visual images typical in most TV programming may alter normal brain development. The newborn brain develops very rapidly during the first two to three years of life. It's really being wired during that time. We know from studies of newborn rats that if you expose them to different levels of visual stimuli, the architecture of the brain looks very different depending on the amount of stimulation. Over stimulation during this critical period can create habits of the mind that are ultimately deleterious. If this theory holds true, the brain changes likely are permanent, but children with attention problems can be taught to compensate. (CNN.com 2004, 2)

Anyone who seeks to teach must be made aware of these facts and trends. The individuals we seek to teach may have become visually dependent, because of their exposure to television. Their brains may have been "rewired" in their younger years due to over exposure to the visual stimuli of the television. In other words, if they are to learn, they can only learn if the content is presented to them in a visual format. Teachers may wish that their students were more auditory, but the fact may be that they are visual learners.

Sless points out how our culture has been seduced by visual advertisements. In other words, the point of the visual image is simply to gain the attention of the individual with no real connection to the message of the advertisement. The merchant knows that he must grab the attention of the viewer and does so with no real connection to the product.

It may seem out of place in this context to strike a moral tone, but there is a point where seduction becomes prostitution; and that point is reached with illustrations when they are merely there to provide a sensory titillation. Regrettably the demands of the market place have developed those skills of prostitution to a high art. The client is a fickle page-flipper who has to be lured, whose attention must be caught, in as short a time as it takes to turn the page. (Sless 1981, 108)

The people of our culture have been “trained” as it were to give attention to that which is graphic, illustrative, and highly visual. The evidence seems to indicate that they will not only attend to what is visual, but also they may understand more clearly what they see as opposed to what they merely hear. This researcher has observed this in a casual form with the recent release of the movie *The Passion of the Christ*. How many pastors have told the story in lecture form about the passion of Jesus? For centuries, pastors have described this event in explicit verbal detail, and our people understood it to some degree. When the movie was released, however, many grasped and were shocked like never before. They had heard of the suffering of Jesus, but now they had seen it. What a profound difference it made! There is an added dimension to learning when seeing is included with hearing. Did not Job express this truth to God when he said, “My ears had heard of you, but now my eyes have seen you. Therefore I despise myself and repent in dust and ashes” (Job 42: 5-6). Job’s message is clear. He did not really *grasp* the holiness of God until he *saw* God’s holiness with his eyes. We are a visual people and our modern culture is even more so.

As this relates to the pastor, we too must deal with the culture as it is, not as we may wish it were or even think it should be. The fact is that many of the people who fill the seats in our congregation have become visual learners. The pastor who delivers a purely monologue sermon may well be disconnected from the majority of his people. John Stott laments, "Television makes it harder for people to listen attentively and responsively, and therefore for preachers to hold a congregation's attention, let alone secure an appropriate response" (Stott 1982, 70). Slaughter says, "Experience is back! From the remote control, to home entertainment systems, we are a visual, multi-sensory, emotive culture" (Slaughter 1998, 62). The people we seek to teach are used to being communicated with by means of multiple sensory technology. They do not want to merely see and hear; they want to feel what they hear! The boom box has been enhanced with super base. The same special effect has been reproduced in the CD player with headphones. How do they judge sound quality? They feel it, they sense it, and they hear it with multi-dimensional sound effects.

In an article on theology and pop culture, Stanley J. Grenz examines the influence of pop culture on theological reflection and the way theological education should be approached in an age that has become dominated by media and entertainment. He makes a revealing comment to pastors:

We can no longer expect people to flock to the ecclesiastical amphitheatre to lap up eternal truths dished out in long expositions and honed apologies for the faith that make no connection to contemporary life. The effectiveness of the church in contemporary society may in fact require a quiet different kind of pulpiteer and evangelist. (Grenz 311, 2000)

Whether we want to face it or not, the fact is the culture is changing around the church and the church must adapt. We are not suggesting that the church must change its

message, but it surely must adapt faster to the technological and sociological shifts that are occurring around it.

***Impacts the Cognitive Domain
on a Wider Scale***

Much of the literature suggests that a wider range of students can be cognitively impacted when the teaching is presented in a multi-sensory format. In other words, when the teacher presents learning material in a multi-sensory form, he or she will connect to a wide range of students as opposed to only one type of learner. When this occurs, the range of cognitive learning should increase as well. The 3M Corporation commissioned a study on the power of visual aids in 1986. Their research found that presenters who use visual aids were 43% more effective in persuading their audience to take a specified course of action than those who did not use visual aids. Westfield comments on the research done on visual aids:

Studies show that audiences have memories like sieves. They retain only about 20% of what they hear, and about 30% of what they see. But they will remember about 50% of what they hear and see. Visual aids will not only make your presentation more memorable, they can also dramatize and clarify your points. (Westerfield 2003, 129)

Research demonstrates differing results. The vast majority seems to imply that multi-sensory teaching has a greater impact on memory and learning. Fred Hofstetter, Professor and director of the University of Delaware's Instructional Technology Center cites a report: People remember:

1. 20% of what they hear
2. 30% of what they see
3. 50% of what they see and hear
4. 80% of what they see, hear, and do simultaneously (Hofstetter 1997, 2)

The findings of researcher Edgar Dale also demonstrate improved learning when multiple senses are tapped. After conducting extensive research on multi-sensory teaching, these are the conclusions he drew. People Remember:

1. 10% of what they read
2. 20% of what they hear
3. 30% of what they see
4. 50% of what they hear and see
5. 70% of what they say and write
5. 90% of what they say and perform as a task (Hofstetter 1997, 3)

One fact becomes clear from the research: though the findings on multi-sensory effects differ from research to research, the research always concludes that multi-sensory presentation tends to improve audience comprehension and retention of presentation material.

Assists the Teacher in Communication

Some communicators struggle to communicate in a purely lecture format. For whatever reason, they are unable to get the message across in a format that is solely lecture in its delivery. Therefore, their teaching may come across as boring. It seems to this researcher, that not only do students have learning styles in which they prefer to learn, but also could it be that teachers have teaching styles by which *they* prefer to teach and by which they teach the best. However, just like auditory learning has been forced on the learner, lecture has been forced on the teacher. Again, when one listens to the counsel of certain preachers and teachers, teaching through lecture format is made a spiritual moral issue. The pastor who uses visual aids and employs multi-sensory teaching devices is painted as compromising the gospel, or as MacArthur puts it, “ashamed of the gospel.”

This is tragic, because if the pastor or teacher is not a superior orator, he or she is left with no other means of communicating the material. The fact may be that many poor teachers would be great teachers if they were given the option of using multi-sensory methods of delivery. Perhaps, many preachers who come across as uninteresting could be more effective communicators if given the latitude to communicate in a multi-sensory format.

To attempt such new strategies, teachers and preachers may have to overcome the fear of change. Willis and Hodson make this point when they write,

Last but far from least, are emotional considerations. When I was a classroom teacher I remember coming to an impasse with one of my students. I had invented many techniques to work with kids who had different learning styles; however, I still wasn't reaching certain kinds of learners. (Willis and Hodson 1999, 253)

This is the point to which many teachers and preachers come. They work as hard as possible, but inexorably realize they are not connecting to many of their targets. This is when the courage to make some changes is essential. Willis recalls that moment in her own life:

I remember I realized that I needed help – that I needed to go beyond my usual ways of organizing and conducting the classroom. I felt afraid and vulnerable. I didn't want to see my shortcomings, let alone take charge and do something about them. The thought of it was overwhelming to me. (Willis and Hodson 1999, 255)

How many teachers have not felt the pain of coming to terms with their inadequacies? Perhaps we all have at one time or another. The courage to surface those shortcomings and explore new and exciting ways of teaching and communicating is the doorway to becoming a more effective and happy teacher. It is the intent of this research to find out if multi-sensory teaching will make us more effective at what we seek to do, and that is teach. This researcher is well aware that multi-sensory teaching is hard work

and demands extra amounts of preparation and effort. This researcher is also aware that if teachers are not constantly challenged by new and better ways of teaching, he or she will tend to gravitate towards the easiest way to disseminate information. Typically, lecture is chosen as that method (Osborn 1987, 171). This seems like such a cop out, especially for the pastor who seeks to disseminate information regarding the greatest truths known to mankind.

Summary

In bringing this chapter to a close, the researcher wishes to emphasize again the educational role of the church and the pastor. In a chapel session at The Southern Baptist Theological Seminary, president R. Albert Mohler, Jr. reminded the school body that God calls us to love him with all of our heart, soul, and mind. Education enables us to love him with all of our mind. He went on to preach:

Sometimes in our ordering of congregational life, we deal with education as if it's important, perhaps even essential, but not most urgent. I have to tell you: I believe unless we retrieve and rescue this generation from Christian immaturity and Christian ignorance, we are in grave danger of having no generation of faithful Christians to make any impact in this nation in a very short amount of time. We cannot be reassured by our statistics and our numbers. We do not yet know the challenges we will face, but there are ominous clouds on the horizon. Doctrine is the inescapable and unapologetic content of Christian education, and that means without apology we understand that education to have an essential content, the gospel to have an essential kerugma, the Scripture to be the fundamental text of our consideration, the inerrant and infallible Word of God that brings to us divine revelation such that our ignorance is not merely corrected with the wisdom of men but with the eternal unchanging perfect treasure of divine truth. Diligence is required and this means a resetting of priorities. In this day when so many other issues from fellowship to entertainment to whatever now claims the attention of the local church, we have to get back to the fact that if disciples are not made they will not live as disciples. (Mohler 2004)

The apostle Paul urged the Colossians to grow in their *knowledge* of God with these words: "And we pray this in order that you may live a life worthy of the Lord and

may please him in everyway; bearing fruit in every good work, growing in the knowledge of God” (Col 1:10). Peter emphasizes education and knowledge when he writes: “But grow in the grace and knowledge of our Lord and Savior Jesus Christ” (2 Pet 3:18). If the church is to grow in the grace and knowledge of our Lord and Savior, then education must be the priority of the church and of the pastor-teacher. We must focus our energy, not just on loving the Lord our God with all our heart and soul, but also with our entire mind. This is can only be accomplished when teaching the Word becomes the priority. The pastor-teacher must set the example and emphasize doctrine, theology, and the cognitive absorption of scriptural content. He must deal with more than just topics, felt needs, and pop-psychology. He must teach the Scriptures didactically and practically. His messages must focus on the cognitive domain. Our congregations must be ever learning and growing in knowledge. Yes, we want them to apply the Word of God, but it all begins at the cognitive domain.

CHAPTER 3

METHODOLOGICAL DESIGN

The gathered data in this research provides pastors, Christian educators, and other educators with a better understanding of multi-sensory teaching and advanced multi-sensory teaching and their respective influence on the cognitive domain. Specifically, the findings of this experiment seek to determine if the use of multi-sensory teaching models could improve the impact of expository preaching on the cognitive domain, particularly as it relates to attention, comprehension, and retention in the life of the student.

Design Overview

In order to answer the research questions, three separate weekend experiments were conducted to determine the relationship of the three different teaching methodologies to student attention, comprehension, and retention of teaching material.

The three teaching methods are:

1. *Mono-Sensory Teaching*: Auditory delivery
2. *Multi-sensory Teaching*: Auditory + visual delivery
3. *Advanced Multi-sensory Teaching*: Auditory + visual + tactile delivery

The experiments consisted of three Quasi-experimental Posttest Only Control Group Designs (Leedy and Ormrod, 237). The independent variable was the different teaching methodologies and the dependent variable was the effect on attention,

comprehension, and retention. Posttest data was subsequently gathered to measure influence. The experiments unfolded in the following sequence:

Week 1: The researcher developed an expository sermon from 1 John 5:13 which was delivered three times (Appendix 2).

1. The first delivery was to the *Saturday Evening* congregation, and the delivery style was *advanced multi-sensory*.
2. The second delivery of the identical sermon was to the *Sunday A Hour* congregation, and the delivery style was *mono-sensory*.
3. The final delivery of the identical sermon was to the *Sunday B Hour* congregation, and the delivery style was *multi-sensory*.

Week 2: The researcher developed a second expository sermon from 1 John 5:13-14 which was delivered three times (Appendix 3).

1. The first delivery was to the *Saturday Evening* congregation, and the delivery style was *mono-sensory*.
2. The second delivery of the identical sermon was to the *Sunday A Hour* congregation, and the delivery style was *multi-sensory*.
3. The final delivery of the identical sermon was to the *Sunday B Hour* congregation, and the delivery style was *advanced multi-sensory*.

Week 3: The researcher developed a third expository message from Hebrews 4:13-14, which was delivered three times (Appendix 1).

1. The first delivery was to the *Saturday Evening* congregation, and the delivery style was *multi-sensory*.
2. The second delivery of the identical sermon was to the *Sunday A Hour* congregation, and the delivery style was *advanced multi-sensory*.
3. The final delivery of the identical sermon was to the *Sunday B Hour* congregation, and the delivery style was *mono-sensory*.

Table 1. Week 1 sermon delivery sequence, 1 John 5:13

Context		N = 923	Delivery Type
Saturday Night	7-17-04	N = 144	Advanced multi-sensory
Sunday A Hour	7-18-04	N = 327	Mono-sensory
Sunday B Hour	7-18-04	N = 452	Multi-sensory

Table 2. Week 2 sermon delivery sequence, 1 John 5:13-14

Context		N = 923	Delivery Type
Saturday Night	7-24-04	N = 144	Mono-sensory
Sunday A Hour	7-25-04	N = 327	Multi-sensory
Sunday B Hour	7-25-04	N = 452	Advanced multi-sensory

Table 3. Week 3 sermon delivery sequence, Hebrews 4:12

Context		N = 923	Delivery Type
Saturday Night	7-31-04	N = 144	Multi-sensory
Sunday A Hour	8-01-04	N = 327	Advanced multi-sensory
Sunday B Hour	8-01-04	N = 452	Mono-sensory

Student *attention* was observed during the mono-sensory and multi-sensory deliveries by use of video recordings, and post treatment observations marked the number of distractions in a random student sample. Student *comprehension* and student *retention* were measured by a fill-in-the-blank posttest given at the conclusion of the final week of all three-delivery types (Appendix 5). Data was subsequently gathered to determine the influence of the teaching methodologies.

Population

The experiment was conducted at the Christ Fellowship in Miami, Florida. The population provided several advantages for conducting such an experiment:

1. The context provided the researcher a large population with an average weekend worship attendance of 2700.
2. The context afforded the researcher a diverse population with a membership comprised of 56 nationalities. These statistics are based on church records as of April 2004. Interestingly, in the posttest, the data revealed an even greater degree of diversity with 61 nationalities in the sample.
3. The geographical context in which the church is located demonstrates a broad range of educational and socio-economic diversity (Leavall Center for Evangelism and Church Growth. 2002, 4).
4. The church provided three separate services in which to conduct the three-pronged quasai experimental test.

Samples and Delimitations:

The research for this experiment required two separate kinds of testing. There would be one type of test for measuring *attention* and another type of test for measuring *comprehension* and *retention*. The attention test would involve samples being observed by camera during the mono-sensory and the multi-sensory deliveries. The comprehension and retention samples would involve post testing via a fill-in-the-blank test. The researcher would therefore, need two sets of samples: One set of samples would be required for the attention testing and another set of samples for the comprehension and retention testing.

Attention Sample

In order to test attention levels via camera observation, the researcher needed 60 samples, i.e., 20 for each of the three weeks. Of the 20 samples for each week, 10 were treated with mono-sensory delivery and 10 would be treated with multi-sensory delivery. The 60-sample minimum was achieved as 60 individuals were successfully

observed via video camera. The sample was stratified into two groupings from the three services:

1. Control Sample - Tx: Exposure to mono-sensory delivery
2. *Test Sample One* - Tx¹: Exposure to multi-sensory delivery.

Attention tests unfolded in the following sequence over a three-week period. Measurements were taken only for mono-sensory and multi-sensory treatments. There were no measurements for advanced multi-sensory treatments.

Table 4. Week 1 attention testings, 1 John 5:13

Context		N = 60	Delivery Type
Sunday A Hour	7-18-04	N = 10	Mono-sensory - Tx
Sunday B Hour	7-18-04	N = 10	Multi-sensory - Tx ¹

Table 5. Week 2 attention testings, 1 John 5:13-14

Context		N = 60	Delivery Type
Saturday Night	7-24-04	N = 10	Mono-sensory - Tx
Sunday A Hour	7-25-04	N = 10	Multi-sensory - Tx ¹

Table 6. Week 3 attention testings, Hebrews 4:12

Context		N = 60	Delivery Type
Saturday Night	7-31-04	N = 10	Multi-sensory - Tx ¹
Sunday A Hour	8-01-04	N = 10	Mono-sensory - Tx

Comprehension and Retention Sample

To measure comprehension and retention levels, the researcher would need a minimum of 300 posttest samples, i.e., 100 from the *Saturday Evening* context, 100 from

the *Sunday A Hour* context, and 100 from the *Sunday B Hour* context. This minimum was achieved, as the total of number of participants taking the posttest was 1604. The researcher was, however, required to disqualify any participant who did not attend all three treatments in the same contextual service. In the end, this led to the loss of 681 tests. The experiment was not foiled, however, as 144 qualified people took the posttest during the *Saturday Evening Service*, 327 qualified people took the posttest during the *Sunday A Hour Service*, and 452 qualified people took the posttest during the *Sunday B Hour Service* for a total of 923 people participating in the experiment.

The sample was stratified into three groupings from the three services:

1. *Control Sample - Tx*: Exposure to mono-sensory delivery
2. *Test Sample 1 - Tx¹*: Exposure to multi-sensory delivery.
3. *Test Sample 2 - Tx²*: Exposure to advanced multi-sensory delivery.

Week 1 Samples: *The Control Sample -Tx* consisted of 144 individuals from the *Saturday Evening* congregation. *Test Sample 1 - Tx¹* consisted of 327 individuals from the *Sunday A Hour* congregation. *Test Sample 2 -Tx²* were volunteers from the *Sunday B Hour* congregation.

Week 2 Samples: *The Control Sample -Tx* consisted of 327 individuals from the *Sunday A Hour* congregation. *Test Sample 1 - Tx¹* was comprised of 452 individuals from the *Sunday B Hour* congregation. *Test Sample 2 -Tx²* consisted of 327 individuals from the *Saturday Evening* congregation.

Week 3 Samples: *The Control Sample Tx* consisted of 452 individuals from the *Sunday B Hour* congregation. *Test Sample 1 - Tx¹* consisted of 144 individuals from

the *Saturday Evening* congregation. *Test Sample 2 Tx²* was comprised of 327 individuals from the *Sunday A Hour* congregation.

The research sample was delimited to attendees of Christ Fellowship and to those who attended all three treatments.

Limitations of Generalization

1. The data from the experiment does not generalize to special learning contexts where there may be learning disabilities.
2. The data from the experiment does not generalize to contexts where there are sensory impairments such as deafness, blindness, or even paralysis.
3. Because of the cultural diversity of the sample, this experiment could possibly contribute knowledge related to how cultures learn differently from one another. This was not the intent of the research.
4. This research may not generalize to other churches.

Instrumentation

The goal of this experiment was to measure the relationship of the three teaching methodologies to student attention, comprehension, and retention of materials taught. Two separate instruments were used to measure the relationship: One instrument was used to measure attention and another to measure comprehension and retention.

Instruments for Measuring Attention Levels

Three expository sermons were presented to each test group. The sermons were identical in content and varied only in the mode of delivery. Testing for attention involved a two-pronged approach:

1. During treatment observation
2. Post treatment observation.

During Treatment Observation

“During treatment observation” required the ability to observe individuals as they were being exposed to the particular teaching methodology. During the treatment, the researcher sought to measure attention levels of students by observation of eye contact and head movements toward or away for the focal point. To ensure successful observation, four high tech television cameras were employed. The church operates a very sophisticated television ministry (ABC local affiliate and Adelphia Cable) and therefore provided access to multiple cameras and camera angles.

The four cameras used for observation were *Sony Hyper Had C8537*. These cameras have high-resolution capacity, wide-angle range, and therefore gave the researcher film observations that had the quality of high resolution and excellent clarity. Cameras were hidden and focused before the service began so as not to alert the congregation.

Precedent literature confirmed that *basic* attention could be measured through retention tests subsequent to teaching exposure. Measuring *levels* of attention however, requires observation. These include retention observations, pupil dilation, eye fixations, and viewing times (Phye and Andre 1986, 58). Following this precedent, this researcher sought to measure attention levels by the observation of sixty individuals who sat in a specified area of the auditorium during the presentation of each teaching methodology. Cameras were focused on those individuals during presentation of teaching methods.

Levels of attention were measured by observation of eye fixations and viewing times (Phye and Andre 1986, 58-59). “Observational measures of attention require that a classroom rater make some judgment regarding the focus of student attention” (Cobb

1972; Lahadene 1968; Meyers, Attwell and Orpwt 1968; Samuels and Turnure 1974; Shannon 1942).

Observational procedures often require that the rater judge which of the several categories of behavior best describe a students actions during a brief interval of time. A behavioral definition of attentiveness – inattentiveness within such a system may include a list of specific activities (orients eyes to text or teacher, observes chalkboard, closes eyes, works or plays with non-assigned materials, etc, Samuel’s and Turnure, 1974) or a general description of focus (e.g., pupil is doing what is appropriate in the situation, Cobb, 1972). (Phye and Andre 1986 59)

Following the procedure set by these experiments, during this researcher’s experiment, observation of the sample group by film was “for a brief interval of time,” five minutes at the point when multi-sensory material was being presented or not presented depending on the treatment, and then five minutes subsequent to the teaching variable.

Post Treatment Observation

After filming, a panel of observers “classroom raters” viewed the films and focused on each of the sixty individuals during the specified time and then plotted scores for each of the ten individuals. The scores were determined by the number of head movements and eye distractions away from the determined point of focus. The panel was instructed not to count head and eye movements such as taking notes, laughing, and commenting to others about the sermon as distractions. The individuals were anonymous and designated by a number, not their names.

Instruments for Measuring Comprehension and Retention

Three expository sermons were presented to each test group. The sermons were identical in content and varied only in the mode of delivery. A posttest fill-in-the-

blank test with six questions and fifteen fill-in-the-blank answers was given to each test sample subsequent to the final treatment (Leedy and Ormrod, 237). Individuals were given ten minutes to complete the test.

Questions were designed to determine student comprehension of material taught during the mono-sensory, multi-sensory, and advanced multi-sensory treatments. Though there were only six questions, there were multiple fill-in-the-blanks to each question (Appendix 5). Question 1, for example, had three fill-in-the-blank answers. The total number of fill-in-the-blank answers was 15. To be graded as correct all fill-in-the-blanks had to be correct in each question. Three of the questions were constructed to examine the individual's comprehension of the material. Such questions examined the individual's comprehension of the theological, historical, and application aspects of the sermons.

The remaining three questions sought to test the individual's ability to recall the material taught, i.e., retention of the material taught. These questions consisted of simple statements or facts from the sermon.

At the conclusion of the posttest, data was gathered to determine the relationship of the teaching methodologies to student comprehension and retention. Cross tabulations with Chi squared tests were conducted to test for differences in the percentage of subjects who answered correctly by type of delivery. These tests were carried out on the retention and comprehension items for each week separately since the survey was administered only once. For significant Chi-squared tests, post hoc pairwise comparisons of types of delivery were performed using Holm's sequential Bonferroni

procedure to control for the probability of Type I error. All tests were significant if $< .05$. SPSS for Windows (v.12) was used for all tests.

Procedural Overview

The experiment unfolded in two primary parts: First, there were the *treatment procedures* in which the samples were treated with the three different teaching models. Then there were the *testing and observation procedures*. There was the post treatment *testing* for measuring comprehension and retention and there was the post treatment *observation* for measuring attention.

Treatment Procedures

The experiment would have three different treatments to which samples would be exposed. The three treatments were the three different types of delivery of the teaching material.

The Mono-sensory Treatment

This treatment served as the *Control Treatment Tx*, as no new teaching method was introduced to the context. The experiment was conducted on three consecutive weekends and was applied to all three contexts, i.e., *Saturday Evening*, *Sunday A Hour*, and *Sunday B Hour* congregations. Subjects in this experiment listened to an expository sermon from 1 John 5:13 the first week, an expository sermon from 1 John 5:14-15 the second week, and an expository sermon from Hebrews 4:12 the final week. Each study contained little known historical facts, theological truths, and spiritual applications.

Cognitive issues measured were:

1. Attention of the students during presentation

2. Comprehension of the material taught
3. Retention of the material taught.

The Multi-sensory Treatment

This treatment served as the *Test Treatment 1* Tx¹ as the first new teaching method was introduced. The experiment was conducted on three consecutive weekends and was applied to all three contexts, i.e., *Saturday Evening*, *Sunday A Hour*, and *Sunday B Hour* congregations. Subjects in this experiment listened to and watched an expository sermon from 1 John 5:13 the first week, an expository sermon from 1 John 5:14-15 the second week, and an expository sermon from Hebrews 4:12 the final week. Each study contained little known historical facts, theological truths, and spiritual applications.

Cognitive issues measured were:

1. Attention of the students
2. Comprehension of the material taught
3. Retention of the material taught.

The Advanced Multi-sensory Treatment

This treatment served as Tx² and was conducted on three consecutive weekends and was applied to all three contexts, i.e., *Saturday Evening* congregation, *Sunday A Hour* congregation, and *Sunday B Hour* congregation. Subjects in this experiment listened, watched, and participated in an expository sermon from 1 John 5:13 the first week, and expository sermon from 1 John 5:14-15 the second week, and an expository sermon from Hebrews 4:12 the final week. Each study contained little known

historical facts, theological truths, and spiritual applications. Cognitive issues measured were:

1. Comprehension of the material taught
2. Retention of the material taught.

The researcher did not seek to measure *attention* in the multi-sensory treatment, because students would tend to be focused on the tactile portion of the treatment and not necessarily on the teacher. The treatments unfolded over three consecutive weekends according to the following calendar:

1. The Saturday Evening Sample: 144 qualified volunteers
 - 7-17-04: Advanced multi-sensory delivery
 - 7-24-04: Mono-sensory delivery
 - 7-31-04: Multi-sensory delivery
2. The Sunday A Hour Sample: 327 qualified volunteers
 - 7-18-04: Mono-sensory delivery
 - 7-25-04: Multi-sensory delivery
 - 8-01-04: Advanced multi-sensory delivery
3. The Sunday B Hour Sample: 452 qualified volunteers
 - 7-18-04: Multi-sensory delivery
 - 7-25-04: Advanced multi-sensory delivery
 - 8-01-04: Mono-sensory delivery

Posttesting and Post Observation Procedures

In order to measure the three dependant variables of attention, comprehension, and retention, two different types of post treatment procedures were necessary. One type of procedure was necessary to examine retention and comprehension, and another type of procedure was needed to examine attention.

Comprehension and Retention Posttesting

At the conclusion of the three weeks, all groups were tested for retention and comprehension (Appendix 5). The tests sought to determine the relationship between the teaching methodologies and the dependent variables of comprehension and retention.

The post treatment written test was taken at the conclusion of the final treatment. People were encouraged to stay for the test and most did. Test sheets were placed inside the bulletins, but they did not have the questions written on them. Test papers only had the lines to fill in the blanks to the questions. Pencils were provided and ushers passed out papers to those who did not receive them. The pastor-researcher gave a challenge to the people as well as instructions for the test.

At the pastor's signal the questions were posted one at a time on the large auditorium screens. The researcher read the question to insure clarity and the people were given one minute to answer each question. At the conclusion of the test, the sheets were passed inward to the isles, and ushers gathered them together. To ensure the clarity and integrity of the test given to the congregation, the researcher did the following:

1. Questions were not posted on the test sheets. Instead, the questions were listed on projection screens at the time of the test. The sheets contained only the lines to be filled in along with appropriate personal information. This was done to prevent test questions from being discovered between the exchange of services.
2. Each sample's test was color coded to prevent papers from getting mixed together.
3. Questions on test papers were grouped in order of the sermons.
4. Questions were also arranged by cognitive objectives being tested.
5. Each question corresponded to the multi-sensory vehicle of that message.
6. Diligent preparation was given to each group before taking the test.

7. The pastor instructed the groups about the following issues: Participants would be anonymous and no one would sign their name to the test. The test was on a volunteer basis. The pastor-researcher stated very clearly to the congregation, "The test was not about their intelligence but about *how* they learn, and more than that, it was about the pastor's *teaching methodologies*." The purpose of the test was to help the pastor know more about the learning styles of the congregation. There was to be no talking during the test. There was to be no blurting out of the answers.

At the conclusion of the test, this researcher-pastor took the time to explain the significance of learning styles and teaching styles. In each of the three services, the people applauded the research and demonstrated excitement to be a part of the research.

Attention Posttesting

Three expository sermons were presented to each test group. The sermons were identical in content and varied only in the mode of delivery. Testing for attention involved a two-pronged approach of *during treatment observation* and *post treatment observation*.

During treatment those being video taped were unaware that they were being observed during the sermon delivery. The total sample observed via camera consisted of sixty individuals.

1. Week 1 consisted of 20 individuals. Ten were treated with mono-sensory delivery and 10 were treated with multi-sensory delivery.
2. Week 2 consisted of 20 individuals. Ten were treated with mono-sensory delivery and 10 were treated with multi-sensory delivery.
3. Week 3 consisted of 20 individuals. Ten were treated with mono-sensory delivery and 10 were treated with multi-sensory delivery.

Subsequent to the treatment, a panel of observers marked the number of distractions during the mono-sensory and multi-sensory deliveries. Panel members were

selected on the basis of experience and educational credentials in the field of speech communication and education. The observations followed this sequence:

1. Video observations from week 1: An observer watched via video the ten individuals filmed from the mono-sensory treatment, and an observer watched via video the ten individuals from the multi-sensory treatment. Observation occurred for ten minutes during the time when the multi-sensory element was presented, or not presented in the mono-sensory delivery.
2. Video observations from week 2: An observer watched via video the ten individuals filmed from the mono-sensory treatment, and an observer watched via video the ten individuals from the multi-sensory treatment. Observation occurred for ten minutes during the time when the multi-sensory element was presented, or not presented in the mono-sensory delivery.
3. Video observations from week 3: An observer watched via video the ten individuals filmed from the mono-sensory treatment, and an observer watched via video the ten individuals from the multi-sensory treatment. Observation occurred for ten minutes during the time when the multi-sensory element was presented, or not presented in the mono-sensory delivery.

A total of sixty individuals were observed, and observers subsequently plotted scores for each of the ten individuals they were instructed to observe. Scores were determined by the number of distractions, i.e., head movements and eye movements away from the determined point of focus. Observers were instructed not to count head and eye movements such as taking notes, laughing, or commenting to others about the sermon as distractions. The individuals were anonymous and designated by a number not their names.

Controlling Confounding Variables:

A confounding variable is an extraneous variable that has not been recognized or controlled.

1. The teacher was the same in all three treatments.
2. The message was the same in all three treatments.

3. The context was the same in all three treatments.
4. The samples were selected randomly and voluntarily.
5. A cross section of race, age, and culture was achieved.
6. Even though the groups were selected randomly, education, motivation, and other variables were uncontrollable. The random selection should have given a proper mix of these variables.
7. Each participant remained anonymous.
8. Each group was given the same posttest.
9. Hawthorne Effect was controlled, as the samples were unaware of the experiment until the time of the posttest.
10. The researcher recognizes he could deliberately influence the outcomes of the tests by not being enthusiastic about the lecture sermon. Therefore, an individual was recruited to observe this pastor-researcher as he delivered the nine sermons to the congregation. The individual had this to say: "The pastor-researcher was extremely passionate about all sermon deliveries and did not appear to alter his delivery other than the type of methodology."

CHAPTER 4

ANALYSIS OF FINDINGS

The research findings are analyzed through the systematic presentation of data and the use of tables that display the resulting analysis. The objective analysis of findings is subdivided into three sections; the compilation protocol, findings and displays, and an evaluation of the current research design.

The research findings are analyzed with respect to the purpose of the experiment, which was to examine the relationship of multi-sensory teaching, and the relationship of advanced multi-sensory teaching to the cognitive domains of attention, comprehension, and retention. In the following chapter, the researcher will describe the compilation of the data and present the analysis of findings.

Compilation Protocol

The final phase of the experiment began in September of 2004 with the data entry and analysis of response data. The test data for measuring comprehension and retention and the observation videos for measuring attention were collected from the three different services on Saturday evening July 31 and Sunday morning August 1, 2004, at the conclusion of the services. The researcher collected the data in three phases: (1) compilation of attention data, (2) compilation of comprehension data, (3) compilation of retention data.

Compilation of Attention Data

Phase 1 consisted of measuring the attention levels of those treated with mono-sensory delivery and attention levels of those treated with multi-sensory delivery. The mono-sensory delivery was the *Control Treatment* and the multi-sensory delivery was *Test Treatment 1*. The total sample being observed via camera consisted of sixty individuals. Week 1 consisted of twenty individuals. Ten were treated with mono-sensory delivery and ten were treated with multi-sensory delivery. Weeks 2 and 3 followed the same format.

Subsequent to the treatment of week 1 an observer watched via video the ten individuals from the mono-sensory treatment, and an observer watched via video the ten individuals from the multi-sensory treatment. Weeks 2 and three followed the same procedure. Gathering the data followed this protocol:

1. Observers plotted scores for each of the ten individuals they were instructed to observe. Scores were determined by the number of distractions, i.e., head movements and eye movements away from the determined point of focus. The panel was instructed not to count head and eye movements such as taking notes, laughing, or commenting to others about the sermon as distractions. The individuals were anonymous and designated by a number not their names.
2. The total distractions of the ten individuals were totaled and an average for the group was recorded for that particular treatment.
3. Following the completion of the three treatments, an average of the group's scores was totaled.

Compilation of Comprehension Data

Phase 2 analyzed and crosstabbed comprehension by treatment for each week separately. Data is presented over three weeks of treatments based on treatment methods, i.e., between mono-sensory, multi-sensory, and advanced multi-sensory delivery

methods. The mono-sensory delivery was the *Control Treatment*. The multi-sensory delivery was *Test Treatment 1*. The advanced multi-sensory delivery served as *Test Treatment 2*. The three services were the Saturday evening service, the Sunday A Hour service, and the Sunday B Hour service. Three weekends of testing were conducted and gathering the data followed the following protocol:

1. A six-question fill-in-the-blank test was distributed to each group. Three of the questions dealt with comprehension. Although there were three questions there were nine blanks to be filled in. A minimum of 100 participants was needed for each test group, and in order to participate the individuals must have attended all three treatments. That minimum was achieved. The Saturday night sample was comprised of 144 participants, Sunday A Hour was comprised of 327 participants, and Sunday B Hour was made up of 452 participants for a total sample of 923 participants.
2. The fill-in-the-blank test was successfully completed at the conclusion of each service, and the ushers gathered the tests into groups color-coded by the particular service.
3. Once the tests were gathered together the scores were tallied and recorded for analysis. Scores were recorded according to the number of correct answers for each sample group and the percentage of correct answers according to the population total.

Compilation of Retention Data

Phase 3 analyzed and crosstabbed retention by treatment for each week separately. Data is presented over three weeks of treatments based on treatment methods, i.e., between mono-sensory, multi-sensory, and advanced multi-sensory delivery methods. The mono-sensory delivery was the *Control Treatment*. The multi-sensory delivery was *Test Treatment 1*. The advanced multi-sensory delivery served as *Test Treatment 2*. The three services were the Saturday evening service, the Sunday A Hour service, and the Sunday B Hour service. Three weekends of testing were conducted and gathering the data followed the same protocol as comprehension:

1. A six-question fill-in-the-blank test was distributed to each group. Three of the questions dealt with retention. Although there were three questions there were nine blanks to be filled in. A minimum of 100 participants was needed for each test group, and in order to participate the individuals must have attended all three treatments. That minimum was achieved. The Saturday night sample was comprised of 144 participants, Sunday A Hour was comprised of 327 participants, and Sunday B Hour was made up of 452 participants for a total sample of 923 people.
2. The fill-in-the-blank test was successfully completed at the conclusion of each service and the ushers gathered the tests into groups color-coded by the particular service.
3. Once the tests were gathered together the scores were tallied and recorded for analysis. Scores were recorded according to the number of correct answers for each sample group and the percentage of correct answers according to the population total.

Findings and Displays

Data is displayed in three phases: (1) attention findings and displays, (2) retention findings and displays, and (3) comprehension findings and displays.

Attention Findings

The following tables display attention findings, i.e., scores for the Control Group and Test Sample 1. *The Control Group* was always exposed to mono-sensory delivery, i.e., auditory delivery. *Test Sample 1* was exposed to multi-sensory delivery, i.e., auditory + visual delivery. Tables 7-13 display attention scores based on types of treatment, i.e., delivery method for each week separately. The attention scores of the *Control Group*, i.e., those treated with mono-sensory delivery were contrasted with the scores of *Test Sample 1*, i.e., those treated with multi-sensory delivery and the results were tabulated.

As will be noted, there were significant differences in the number of distractions by type of delivery for each week. Attention scores improved as more senses were stimulated.

Table 7. Tabulation for attention by treatment for Week 1

Mono-sensory		Multi-sensory	
Observation	Distractions	Observation	Distractions
1	2	11	0
2	3	12	0
3	3	13	0
4	4	14	3
5	2	15	0
6	0	16	0
7	2	17	0
8	0	18	0
9	0	19	0
10	4	20	3
Total	20		3
Mean	2.00		0.30
sd	1.56		0.95

For week 1, there was a significant difference in the mean number of distractions between the mono-sensory and multi-sensory treatments, $t(18) = 2.94$, $p < .009$. The mean number of distractions in the mono-sensory treatment group was significantly higher ($M=2.00$) than in the multi-sensory treatment $M + 0.30$).

Table 8. Independent samples test for week 1

Week 1	t-test for Equality of Means		
	t	df	p-value
Distraction Count	2.940	18	0.009

Those who were treated with multi-sensory delivery scored 6.67 times better than those who were exposed only to auditory delivery.

Table 9. Tabulation for attention by treatment
for Week 2

Mono-sensory		Multi-sensory	
Observation	Distractions	Observation	Distractions
21	2	31	1
22	3	32	1
23	3	33	4
24	1	34	0
25	4	35	2
26	1	36	2
27	1	37	1
28	2	38	0
29	2	39	0
30	2	40	4
Total	21		15
Mean	2.10		1.5
sd	0.99		1.51

In week 2, although the mean number of distractions was higher in the mono-sensory treatment ($M = 2.10$), than in the multi-sensory treatment ($M = 1.5$), there was not a significant difference between them, $t(18)=1.05$, $p=.308$.

Table 10. Independent samples test for week 2

Week 2	t-test for Equality of Means		
	t	df	p-value
Distraction Count	1.050	18	0.308

Those who were treated with multi-sensory delivery scored 1.4 times better than those who were exposed only to mono-sensory delivery.

Table 11. Tabulation for attention by treatment
for Week 3

Mono-sensory		Multi-sensory	
Observation	Distractions	Observation	Distractions
41	9	51	3
42	6	52	3
43	7	53	4
44	13	54	5
45	9	55	4
46	5	56	5
47	13	57	0
48	10	58	3
49	4	59	3
50	9	60	4
Total	85		34
Mean	8.50		3.40
Sd	3.06		1.43

In week 3, there was a very significant difference in the mean number of distractions between the mono-sensory and multi-sensory treatments, $t(18) = 4.77$, $p < 0.001$. The mean number of distractions in the mono-sensory treatment group was much higher ($M=8.50$) than in the multi-sensory treatment ($M=3.40$).

Table 12. Independent samples test for week 3

Week 3	t-test for Equality of Means		
	t	df	p-value
Distraction Count	4.770	18	0.000

Those who were treated with multi-sensory delivery scored 2.5 times better than those who were exposed only to mono-sensory delivery, and this is significant.

Table 13. Tabulation for attention by treatment
for all three weeks

Mono-sensory		Multi-sensory	
Observation	Distractions	Observation	Distractions
1	2	31	0
2	3	32	0
3	3	33	0
4	4	34	3
5	2	35	0
6	0	36	0
7	2	37	0
8	0	38	0
9	0	39	0
10	4	40	0
11	2	41	1
12	3	42	1
13	3	43	4
14	1	44	0
15	4	45	2
16	1	46	2
17	1	47	1
18	2	48	0
19	2	49	0
20	2	50	4
21	9	51	3
22	6	52	3
23	7	53	4
24	13	54	5
25	9	55	4
26	5	56	5
27	13	57	0
28	10	58	3
29	4	59	3
30	9	60	4
Total	126		52
Mean	4.2		1.7

Over the three weeks, the mono-sensory treatment always had a higher number of distractions, and it was significantly higher in weeks one and three.

Attention Displays

Based on scores from Table 7, Figure 1 displays the raw data collected from week 1 of the experiment.

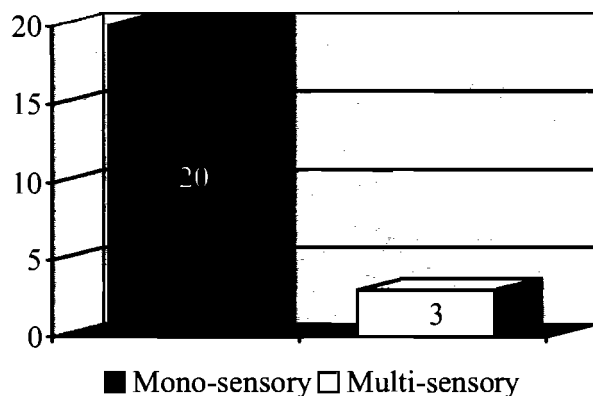


Figure 1. Attention distractions by treatment for Week 1

Based on scores from Table 9, Figure 2 displays the raw data collected from week 2 of the experiment.

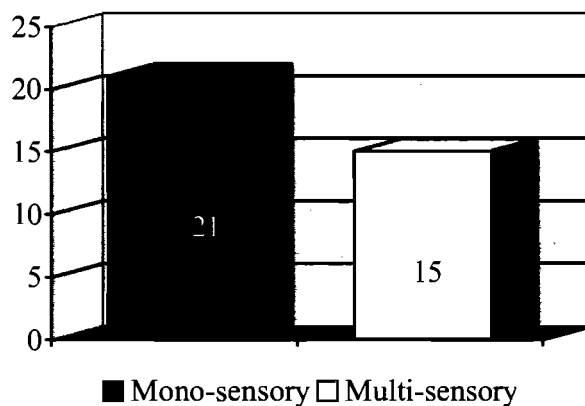


Figure 2. Attention distractions by treatment for Week 2

Based on scores from Table 11, Figure 3 displays the raw data collected from the third week of the experiment.

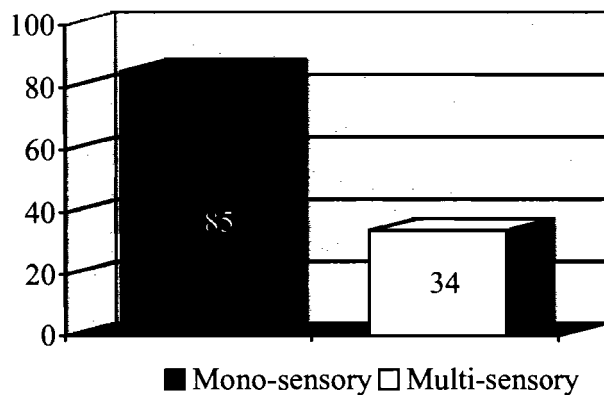


Figure 3. Attention distractions by treatment for Week 3

Based on scores from Table 13, Figure 4 displays the total raw data collected from all three weeks of the experiment.

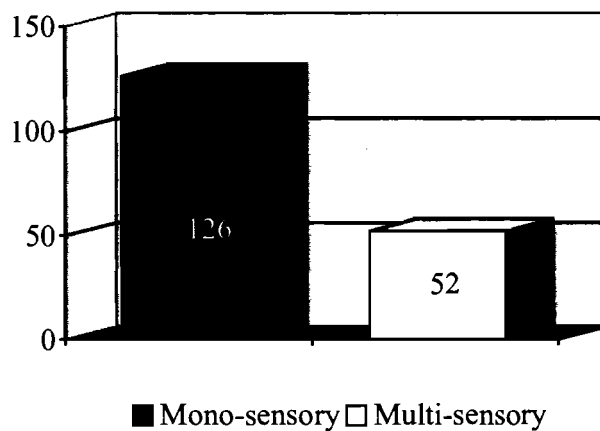


Figure 4. Attention distractions by treatment for all three weeks

Comprehension Findings

The comprehension scores of *The Control Group*, i.e., those treated with mono-sensory delivery were contrasted with the comprehension scores of *Test Sample 1*, i.e., those treated with multi-sensory and *Test Sample 2*, i.e., those treated with advanced multi-sensory delivery, and the results were tabulated. There were significant differences in percent comprehension by type of delivery for each week; week1 $X^2(2, N=923) = 149.31, p<.001$; week 2 $X^2(2, N=923) = 92.64, p<.001$; week3 $X^2(2, N=923) = 47.16, p<.001$.

Table 14. Comprehension percentages by treatment
for Week 1

Treatment Type	Mono-sensory	Multi-sensory	Advanced multi-sensory
Total Participants	327	452	144
Correct Answers	82	287	108
Percentage Correct	25.1%	63.5%	75.0%

Week 1	Df	Value	<i>p</i> value
Chi-Square	2	149.307	<.001
<i>N</i> = 923			

For week 1, the percentage of subjects who correctly answered the comprehension item increased as the number of senses increased. The percentage in the *Control Sample*, i.e. those exposed to the mono-sensory delivery who answered correctly was 25.1%, the percentage in *Test Sample 1*, i.e., those exposed to multi-sensory delivery who answered correctly was 63.5%, and the percentage in *Test Sample 2*, i.e., those exposed to advanced multi-sensory delivery who answered correctly was 75.0%. All types of delivery were significantly different from one another, $p<.05$.

Table 15. Comprehension percentages by treatment
for Week 2

Treatment Type	Mon-sensory	Multi-sensory	Advanced multi-sensory
Total Participants	144	327	452
Correct Answers	72	248	398
Percentage Correct	50.0%	75.8%	88.1%

Week 2	Df	Value	<i>p</i> value
Chi-Square	2	92.642	<.001
<i>N</i> = 923			

For week 2, a pattern similar to that of week 1 was observed except that the overall percentages correct for the comprehension item were higher. The percentage in the *Control Sample*, i.e., those exposed to the mono-sensory delivery who answered correctly was 50.0%, the percentage in *Test Sample 1*, i.e., those exposed to multi-sensory delivery who answered correctly was 75.8%, and the percentage in *Test Sample 2*, i.e., those exposed to advanced multi-sensory delivery who answered correctly was 88.1%. All types of delivery were significantly different from one another, $p < .05$.

Table 16. Comprehension percentages by treatment
for Week 3

Treatment Type	Mono-sensory	Multi-sensory	Advanced multi-sensory
Total Participants	452	144	327
Correct Answers	278	127	253
Percentage Correct	61.5%	88.2%	77.4%

Week 3	DF	Value	<i>p</i> value
Chi-Square	2	47.157	<.000
<i>N</i> = 923			

For week 3, a different pattern from the earlier weeks was observed. The percentage in the *Control Sample*, i.e., those exposed to the mono-sensory delivery who answered correctly was 61.5%, the percentage in *Test Sample 1*, i.e., those exposed to multi-sensory delivery who answered correctly was 88.2%, and the percentage in *Test Sample 2*, i.e., those exposed to advanced multi-sensory delivery who answered correctly was lower at 77.4%. All types of delivery were significantly different from one another, $p < .05$.

Overall, for comprehension, the change in percentages from mono-sensory to multi-sensory, i.e., adding visuals were much larger (week 1 38.4%, week 2 25.8%, week 3 26.7%) than adding advanced multi-sensory, i.e. tactile on top of visual (week 1 11.5%, week 2 12.3%, week 3 -10.8%).

Comprehension Displays

Based on scores from Table 14, Figure 5 displays the percentages correct for comprehension from the first week of the experiment.

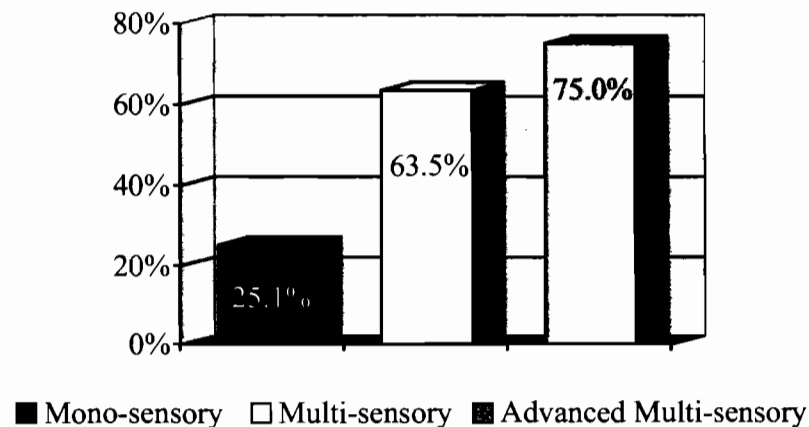


Figure 5. Comprehension scores by Treatment for Week 1

Based on scores from Table 15, Figure 6 displays the percentages correct for comprehension from the second week of the experiment.

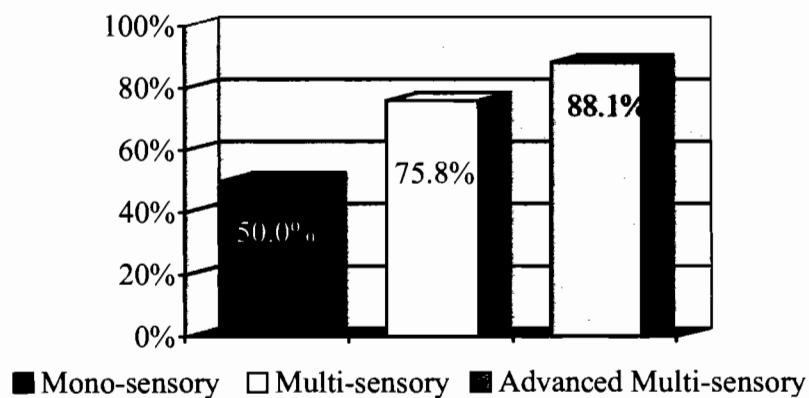


Figure 6. Comprehension scores by Treatment for Week 2

Based on scores from Table 16, Figure 7 displays the percentages correct from the third week of the experiment.

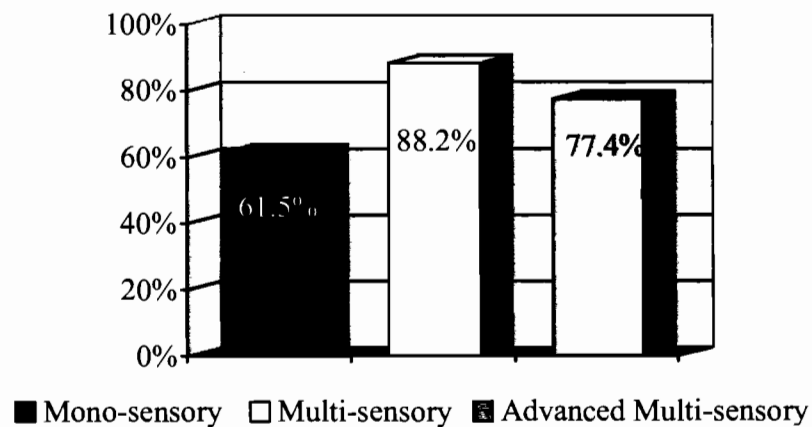


Figure 7. Comprehension scores by Treatment for Week 3

Retention Findings

The retention scores of *The Control Group*, i.e., those treated with mono-sensory delivery were contrasted with the scores of *Test Sample 1*, i.e., those treated with multi-sensory and *Test Sample 2*, i.e., those treated with advanced multi-sensory delivery, and the results were tabulated. There were significant differences in percentage retention by type of delivery for each week; week X2(2, N=923) =171.86, $p<001$; week 2 X2(2, N=923) = 100.52, $p<001$; week 3 X2(2, N=923) = 92.65, $p<001$.

Tables display retention findings based on types of treatment, i.e., delivery method for each week separately.

Table 17. Retention percentages correct by treatment
for Week 1

Treatment Type	Mono-sensory	Multi-sensory	Advanced multi-sensory
Total Participants	327	452	144
Correct Answers	102	332	116
Percentage Correct	31.2%	73.5%	80.6%

Week 1	df	Value	<i>p</i> value
Chi-Square	2	171.86	<.001
<i>N</i> = 923			

For week 1, the percentage of subjects who correctly answered the retention item increased as the number of senses increased. The percentage in the *Control Sample*, i.e., those exposed to the mono-sensory delivery who answered correctly was 31.2%, the percentage in *Test Sample 1*, i.e., those exposed to multi-sensory delivery who answered correctly was 73.5% and the percentage in *Test Sample 2*, i.e., those exposed to advanced

multi-sensory delivery who answered correctly was 80.6%. All types of delivery were significantly different from one another, $p < .05$.

Table 18. Retention percentages by treatment for Week 2

Treatment Type	Mono-sensory	Multi-sensory	Advanced multi-sensory
Total Participants	144	327	452
Correct Answers	74	256	406
Percentage Correct	51.4%	78.3%	89.8%

Week 2	df	Value	p value
Chi-Square	2	100.52	<.001
$N = 923$			

A similar pattern to that of week 1 was observed, i.e., the percentage of subjects who correctly answered the retention item increased as the number of senses increased. The only distinction was that the overall percentage correct for retention items was higher.

The percentage in the *Control Sample*, i.e., those exposed to the mono-sensory delivery who answered correctly was 51.4%, the percentage in *Test Sample 1*, i.e., those exposed to multi-sensory delivery who answered correctly was 78.3%, and the percentage in *Test Sample 2*, i.e., those exposed to advanced multi-sensory delivery who answered correctly was 89.8%. All types of delivery were significantly different from one another, $p < .05$.

Table 19. Retention percentages by treatment for Week 3

Treatment Type	Mono-sensory	Multi-sensory	Advanced multi-sensory
Total Participants	452	144	327
Correct Answers	309	134	305
Percentage Correct	68.4%	93.1%	93.3%

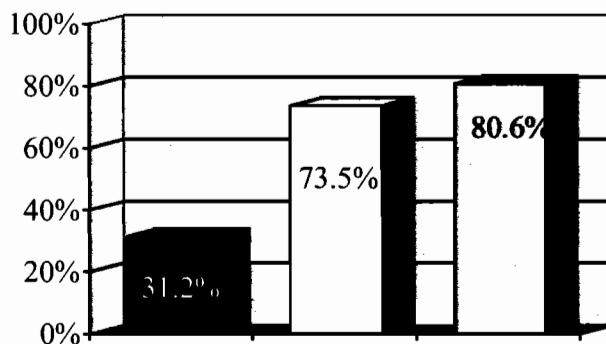
Week 3	DF	Value	<i>p</i> value
Chi-Square	2	92.65	<.001
<i>N</i> = 923			

During this week, a pattern different from those of earlier weeks was observed. The percentage of correct answers for the retention items in the sample treated with mono-sensory delivery was 64.8%, the percentage in the sample treated with multi-sensory delivery was 93.1%, and the percentage in sample treated with advanced multi-sensory delivery was 93.3%, very similar to the multi-sensory group. The differences were significant between the pairs of delivery methods of mono-sensory delivery and multi-sensory delivery, and mono-sensory delivery and advanced multi-sensory delivery. However the percentages between multi-sensory delivery and advanced multi-sensory delivery were not significantly different from one another.

Overall, for retention, the change in percentages from mono-sensory delivery to multi-sensory delivery, i.e., adding visual, were much larger (week 1, 42.3%; week 2, 26.9%; week 3, 24.7) than adding advanced multi-sensory to advanced multi-sensory, i.e., tactile on top of visual (week 1, 7.1%; week 2, 11.5%; week 3, 0.2%).

Retention Displays

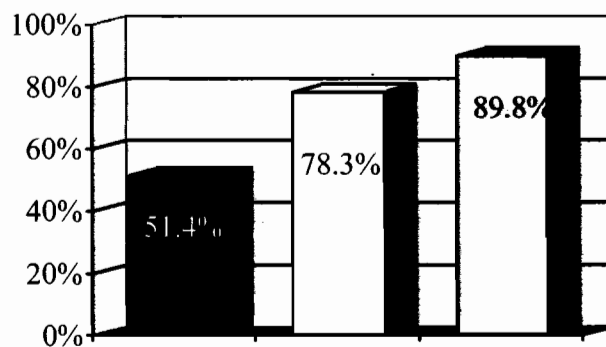
Based on scores from Table 17, Figure 8 displays the raw the percentages correct for retention from the first week of the experiment.



■ Mono-sensory □ Multi-sensory ■ Advanced Multi-sensory

Figure 8. Retention scores by Treatment for Week 1

Based on scores from Table 18, Figure 9 displays the percentages correct for retention from the second week of the experiment.



■ Mono-sensory □ Multi-sensory ■ Advanced Multi-sensory

Figure 9. Retention scores by Treatment for Week 2

Based on scores from Table 19, Figure 10 displays the percentages correct for retention from the third week of the experiment.

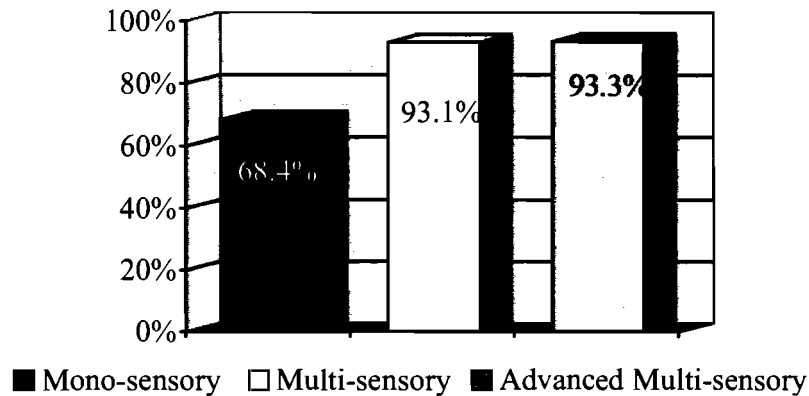


Figure 10. Retention scores by Treatment for Week 3

Evaluation of Research Design

In this section the researcher will reflect on the strengths and weaknesses of the research design methodology.

Strengths of the Current Methodology

The researcher has found the following four strengths in the application of the research design to the current study. These include the diversity of the context, the three services in which to conduct the experiment, the process of administering the experiment, and the contribution of the literature base.

The broad diversity of Christ Fellowship provided a sample of cultural diversity, racial diversity, socio-economic diversity, and educational diversity. Few churches in America could set the stage for such research.

The three different services, Saturday evening, Sunday A Hour, and Sunday B Hour provided the precise number of services in which to test the three different delivery styles, those being mono-sensory, multi-sensory, and advanced multi-sensory.

The process of administering the test afforded the researcher the opportunity to posttest the samples and to gather the resulting data immediately. The context also enabled the researcher to control confounding variables:

1. The teacher was the same in all three treatments.
2. The message was the same in all three treatments.
3. The context was the same in all three treatments.
4. Each participant was tested under each condition.
5. The samples were self-selecting.
6. A cross section of race, age, and culture was achieved.
7. Each participant remained anonymous.
8. Each group was given the same posttest.
9. Hawthorne Effect was controlled, as the samples were unaware of the experiment until the time of the posttest.
10. The researcher recognizes he could deliberately influence the outcomes of the tests by not being enthusiastic about the lecture sermon. Eric Geiger, who is familiar with the pastor-researcher's delivery style, was selected to monitor each sermon for delivery integrity.

Finally, the literature review bolstered the conclusion of the experiment from the disciplines of bibliology, psychology, and physiology. For this researcher, the ultimate authority for biblical preaching is the Bible itself. Had the Bible prohibited multi-sensory preaching and teaching, the test conclusions of the test would have been worthless to this researcher. To the contrary, the biblical theology along with the

testimony from physiology and psychology gave strong affirmation to the positive impact of multi-sensory teaching.

Weaknesses of the Current Methodology

The researcher has indicated the following area of weakness in the application of the research design to the current study. The fact that the test for retention and comprehension for all three sermons was given immediately after the final sermon may have compromised the test for this week only. Results, however for both comprehension and retention for week three were similar to those for week one and two which were further removed from the test time. All weeks demonstrated an increase in comprehension and retention for multi-sensory delivery over mono-sensory delivery. Week three only differentiated in that there was no difference between multi-sensory delivery and advanced multi-sensory delivery compared to weeks one and two. The reader must remember that the tests for retention and comprehension were given immediately after exposure to the third treatment, i.e., the third week so this may affect that week.

Stated another way: One might expect retention scores relating to the third and final message would be the highest, because the student had just been exposed to the information only minutes before. This was not always the case. Students exposed to multi-sensory delivery, three sessions removed from the test, actually had better recall of information than the final sermon they had just been exposed to when the final sermon was presented in lecture format.

1. Week 1 - *Multi-sensory Treatment*: The congregation was 15 days removed from this treatment when they took the test. Yet their retention over all scores were 73% correct.

2. Week 3 – *Mono-sensory Treatment*: The congregation was only minutes removed from this treatment when they took the test. Their retention scores were only 68% correct.

CHAPTER 5

CONCLUSIONS

The goal of this research was to determine the relationship between multi-sensory preaching and the cognitive domains of attention, comprehension and retention. To answer the research questions, this researcher investigated three distinct areas relevant to such a study. The three areas of investigation were:

1. Theological investigation from biblical literature
2. Physiological-neurological investigation from physiological literature
3. Statistical investigation from the current experiment

Research Implications

The researcher will record implications from the current study based on theological literature, neurological literature, and statistical data from the experiment.

Theological Permission

For the teacher of the Word of God, everything must find its basis in the Word of God. The goal of this research has been to discover the relationship between multi-sensory preaching and the cognitive domains of attention, comprehension, and retention. From a pragmatic angle, the research sought to determine if multi-sensory expository preaching would improve attention levels, comprehension levels and retention levels in congregational learning. The statistical data from the experiment and the neurological

findings from the precedent literature definitely demonstrate that multi-sensory teaching increases attention, comprehension, and retention levels in student learning.

For the pastor-teacher however, pragmatism does not guide methodology. The pastor-teacher does not live by the creed “if it works, do it.” The Word of God alone must guide the pastor-teacher. Speaking to Pastor Timothy, Paul wrote, “All scripture is God-breathed and is useful for teaching, rebuking, correcting and training in righteousness” (2 Tim 3:16). The apostle Paul made it clear: The Word of God is the basis of theology, instruction, and practice. Therefore, if the Word of God gives a prohibition against the use of multi-sensory teaching, the issue is over. It would not matter what the neurological and statistical data yielded.

Contrary to what some suppose, however, the Word of God gives the *green light* to multi-sensory preaching. As brought forth from the precedent literature, God taught in multi-sensory forms, the Old Testament prophets taught in multi-sensory forms, and Jesus himself taught in-depth theology in multi-sensory forms. One may not chose to teach in a multi-sensory form, and that choice should be up to the individual teacher of the Word. There are however, no prohibitions against the use of such a teaching methodology. To the contrary, it would seem to me that many pastor-teachers would look at the model of Jesus’ teaching, and be encouraged to follow his methodology.

The bottom line is that the pastor-teacher has *theological permission* to teach in mono-sensory form, multi-sensory form, and advanced multi-sensory form. Those who have a desire to be creative and multi-sensory in their delivery should proceed without any sense of compromise or guilt. One has the *green light* from the biblical example of

God, the prophets, and Jesus himself. Those who reject multi-sensory teaching methodologies can only do so on the basis of preference and tradition.

Physiological - Neurological Endorsement

The researcher not only investigated the theological implications of multi-sensory teaching, but also examined the base of literature that comes from the physiological - neurological sciences. From this research it becomes very clear that the more senses we stimulate in our teaching the greater the impact on student attention, comprehension, and retention.

Information from physiological-neurological precedent literature strongly suggests that individuals do indeed learn through sensory reception. The senses receive stimuli from the environment and then transfer that information to the brain (Hayek and Kluver 1952, 8). The five senses function as intakes through which information is transduced to the brain. In his text, *The Biochemistry of Memory: With an Inquiry into the Function of Brain Mucoids*, Samuel Bogoch, M.D., Ph.D. observes:

Sensory transduction is the process by which the information from the environment, received by specialized peripheral sensory receptors appropriated to pressure, light, odor, etc., is converted to the language of the nerve cell for transmission, abstraction, storage, and other operations of the central nervous system. Since transduction represents the first coding of experiential information, it may be that it is the definitive coding, which persists, perhaps with further modification, throughout the nervous system (Bogoch 1968, 47).

Bogoch continues by explaining the chemical implications of sensory transduction:

The phase of the chemistry of memory that deals with transduction in sensory receptors has been *almost completely ignored* by workers on memory. There are several good reasons for paying attention to this aspect of molecular events. First, this is the initial event in the chronology of *reception* and *recording* of information by the nervous system, at least as far as experiential information is concerned

Second, since we are totally ignorant of the chemical basis of all non-genetic encoding mechanisms in the nervous system, we cannot rule out the possibility that the chemical coding for experiential information is largely if not entirely accomplished at the input end in the process of sensory transduction. (Bogoch 1968, 39)

Bogoch's point is that the neurological chemistry between the senses and the brain determines *reception function* and *retention function*. Since memory is crucial to the learning process, educators must stimulate and impact the neurological connection from sensory transductions to the brain. For the teaching pastor, this means as we increase the sensory stimuli in our teaching the students will increase their attention levels, comprehension levels, and retention levels proportionately.

Furthermore, the precedent literature indicates that individuals have a dominant sense, through which they not only prefer to learn, but by which they learn the best. Seeing that most pastor-teachers work with large groups, this means they are teaching to multiple sensory preferences. The more the teacher varies the methodology of teaching the more he connects with all the students learning preferences.

Good teaching so "orchestrates" the learner's experience that all these aspects of brain operation are addressed. Teaching must, therefore, be based on theories and methodologies that guide the teacher to make orchestration possible. No one method or technique can adequately encompass the variations of the human brain. (Cain 1991, 80)

Regarding brain function and physiology, the precedent literature indicates that the brain is divided into two distinct hemispheres. These are typically referred to as the right-brain and left-brain hemispheres, and both hemispheres differ in their function for receiving information. Though both sides function in harmony in the learning process, the lateral lobes of the cerebral cortex function uniquely from one another. The left side of the brain is more comfortable with linguistic and mathematical endeavors, while the right

side of the brain wants things to be more concrete. In addition to the distinctions, research also indicates that individuals have dominant brain hemispheres just as they have dominant senses through which they not only prefer to learn but through which they learn the best.

Reilly helps us grasp these distinctions:

The human brain is divided into two main sections – called hemispheres. These contain complementary abilities – broadly referred to as “left-brain” and “right-brain”. The way you use the abilities of these hemispheres determines much of your personality and behavior. The most significant determinate is which hemisphere you *prefer* to use in responding to *sensory input* and *external stimuli*. We’ll call this preference ‘dominance’ – someone who predominantly reacts to life using their left hemisphere abilities we’ll call ‘left brain dominant’. This doesn’t mean that the right-brain is atrophied or disabled in any way – merely that the left hemisphere is that person’s preferred response hemisphere. (Reilly 2004, 2)

The conclusion of many researchers is that the left-brain dominant person is strong in verbal learning, while the right brain dominant person is strong in visual learning. The left-brained individual, for example, has little trouble processing symbols. Many academic pursuits deal with symbols – such as letters, words, and mathematical equations. The left brained person tends to be comfortable with linguistic and mathematical endeavors. The right brain on the other hand wants things to be concrete. The right brain person wants to see, feel, or touch the real object (Springer and Deutsch 1993, 56-57).

The combination of physiological-neurological data combined with the current experiment provides conclusive evidence for the superiority of multi-sensory teaching. The implications are truly appreciable and should be considered in the application of teaching and preaching methodologies. The application to such research implications will be recorded in the application section of this chapter.

Statistical Affirmation

For the teacher who has a desire to use multi-sensory aids, the statistical findings from this research should serve as a strong sense of affirmation. The researcher will record implications from the current study based on the current experiment.

Implications will be considered from three distinct categories drawn from the sequence of this investigation:

1. Attention Implications
2. Comprehension Implications
3. Retention Implications

Attention Implications

The findings from the research conducted in this experiment indicate very conclusively that individual attentiveness was increased when students were exposed to multi-sensory teaching, i.e., auditory + visual as opposed to mono-sensory teaching, i.e., auditory only. The first research question asked: In expository preaching what is the relationship between multi-sensory delivery and the attention of the student? The data from the experiment consistently revealed a significant improvement in attention levels when students were exposed to multi-sensory delivery as opposed to mono-sensory delivery. Stated another way: During the three weeks of treatment, the statistical data demonstrates lower distraction levels of those exposed to multi-sensory delivery over those exposed to mono-sensory delivery.

1. Week 1: There were a total of 20 distractions among the sample treated with mono-sensory delivery while those treated with multi-sensory delivery had a lower distraction total of 3. The variance of distraction was 6.7 times better in the samples treated with multi-sensory as opposed to mono-sensory delivery.

2. Week 2: The samples treated with lecture delivery had a total of 21 distractions while those treated with multi-sensory delivery had a lower distraction total of 15. The variance of distraction was 1.4 times better in the samples treated with multi-sensory as opposed to mono-sensory delivery.
3. Week 3: The samples treated with lecture delivery had a total of 85 distractions while those treated with multi-sensory delivery had a lower distraction total of 34. The variance of distraction was 2.5 times better in the samples treated with multi-sensory. Obviously there was a greater amount of distractions across the board in the third week of treatment, and the researcher was unable to identify the precise cause for this change in levels. In spite of this, the multi-sensory delivery remained significantly superior to the mono-sensory delivery.

These findings indicate superior levels of congregational attention when individuals are exposed to multi-sensory delivery as opposed to lecture alone. The attention distinction between mono-sensory and multi-sensory delivery is remarkable and must be of concern to those who teach and who desire for their students to pay attention to what they teach. The implication of the research demonstrates a direct correlation between increased sensory stimulation and increased attention levels. The formula would be thus: As teachers increase sensory stimuli, students increase attention levels.

Comprehension Implications

The findings of the research conducted in this experiment indicated very conclusively that individual comprehension levels increased when students were exposed to multi-sensory teaching, i.e., auditory + visual as opposed to mono-sensory teaching, i.e. lecture only. The second research question asked: In expository preaching what is the relationship between multi-sensory delivery and the comprehension of the student? The statistical data drawn from the experiment revealed a significant improvement in comprehension levels when students were exposed to multi-sensory delivery as opposed to mono-sensory delivery. During the three weeks of treatment the following variances

demonstrated higher comprehension levels of those exposed to multi-sensory teaching over those exposed to mono-sensory delivery.

1. Week 1: The samples treated with mono-sensory delivery had an average comprehension percentage level of 25%. Those treated with multi-sensory delivery, i.e. lecture + visuals had a higher comprehension percentage level of 63%. The variance of comprehension was 36% better in the samples treated with multi-sensory as opposed to mono-sensory delivery.
2. Week 2: The samples treated mono-sensory delivery had an average comprehension percentage level of 50%. Those treated with multi-sensory delivery had a higher comprehension percentage level of 76%. The variance of comprehension was 26% better in the samples treated with multi-sensory as opposed to mono-sensory delivery.
3. Week 3: The samples exposed to mono-sensory delivery had an average comprehension percentage level of 62%. Those treated with multi-sensory delivery had a higher comprehension percentage level of 88%. The variance of comprehension was 26% better in the samples treated with multi-sensory as opposed to mono-sensory delivery.

These findings indicate superior levels of congregational comprehension when individuals are exposed to multi-sensory delivery as opposed to lecture alone. The comprehension distinction between mono-sensory and multi-sensory delivery is remarkable and must be of concern to those who teach the Word of God and who desire for their students to comprehend what they teach. The implication of the research demonstrates a direct correlation between increased sensory stimulation and increased comprehension levels. The formula would be thus: As teachers increase sensory stimuli students increase comprehension levels proportionality.

Retention Implications

The findings of the research conducted in this experiment indicate very conclusively that individual retention levels increased when students were exposed to multi-sensory teaching, i.e., auditory + visual as opposed to mono-sensory teaching, i.e.

mono-sensory delivery. The fourth research question asked: In expository preaching what is the relationship between multi-sensory delivery and the retention of the student? The statistical data gathered from the current experiment revealed a significant improvement in retention levels when students were treated with multi-sensory delivery as opposed to mono-sensory delivery. During the three weeks of treatment the following variance demonstrates higher retention levels of those treated with multi-sensory teaching over those exposed to mono-sensory teaching.

1. Week 1: Those treated with mono-sensory delivery had an average retention percentage level of 31%. Those treated with multi-sensory delivery, i.e. lecture + visuals had a higher retention percentage level of 73%. The variance of retention was 42% better in the samples treated with multi-sensory as opposed to mono-sensory delivery.
2. Week 2: Those exposed to mono-sensory delivery had an average retention percentage level of 51%. Those treated with multi-sensory delivery had a higher retention percentage level of 78%. The variance of retention was 27% better in the samples treated with multi-sensory as opposed to mono-sensory delivery.
3. Week 3: Those exposed to mono-sensory delivery had an average retention percentage level of 68%. Those treated with multi-sensory delivery had a higher retention percentage level of 93%. The variance of retention was 25% better in the samples treated with multi-sensory as opposed to mono-sensory delivery.

These findings indicate superior levels of congregational retention when individuals are exposed to multi-sensory delivery as opposed to mono-sensory delivery. The retention distinction between mono-sensory delivery and multi-sensory delivery is remarkable and must be of concern to those who teach the Word of God and who desire for their students to remember what they teach. The implication of the research demonstrates a direct correlation between increased sensory stimulation and increased retention levels. The formula would be thus: As teachers increase sensory stimuli students increase retention levels proportionality.

Research Applications

For the pastor-teacher, the implications from the experiment as well as the precedent literature should give pause to the assumption that lecture delivery is the best form for teaching the Word of God. Certainly lecture must be part of the delivery package, but it must not be the only delivery vehicle. Going back to Brookfield's statement we read:

Sooner or later, however, something happens that forces the teacher to confront the possibility that they may be working with assumptions that don't really fit their situations. Recognizing the discrepancy between *what is* and what *should be* is often the beginning of the critical journey. (Brookfield 1995, 29)

The findings of the experiment and the neurological findings from the precedent literature strongly validate the following formula for teaching: Increased sensory stimulation = increased learning levels.

Attention Applications

During the delivery of the sermon, attracting the attention of the congregation is essential to the teaching process, and attracting their attention early in the delivery is paramount to the educational objectives. Based on the attracting nature of multi-sensory delivery that was born out in the experiment, pastors might do well to place a multi-sensory segment at the introduction of the message so as to attract and hold attention from the outset. This researcher was amazed at the reaction of the congregation caught on video when the messages in the experiment moved from lecture to visual. By way of casual observation one could see the more alert posture, the heightened interest, and increased involvement in the message. Many people would actually sit up in their seats when the sermon transitioned to a multi-sensory element. They would look with greater

interest. Some would glance at each other and either laugh or remark to one another about the visual. It was almost as if the teacher had been talking in a language not their own and had suddenly shifted to their native language.

Maybe for the future generations we should realize that this *is* their language. Speaking in lecture form alone without the use of visuals may be like speaking in a language they know, but not their native language. Precedent literature supports this notion by revealing that the current generation as well as future generations may be multi-sensory dependent. Many researchers place blame for this dependency on television and other forms of visual-electronic media.

Recent research cited in the precedent literature indicates a link between television watching and attention deficit in children. Going back to the study from the Children's Hospital and Regional Medical Center in Seattle, early television exposure in children ages 1 to 3 revealed attention problems at age seven. Conclusions from the research, which appeared in the April 2004 issue of *Pediatrics*, indicate that TV might over stimulate and permanently rewire the developing brain. (Dimitri, and others 2004, 1). In other words, the constant visual learning through television exposure tends to reprogram the brain so that the individual *must* be able to see information visually in order to learn. Transverse: If the individual does not see the information being taught, he cannot learn effectively.

Michael Slaughter gives this rather lengthy explanation of this trend and a subsequent warning to those who reject multi-sensory teaching:

Experience is back! From remote control to surround sound, to home entertainment systems, we are a visual, multi-sensory, emotive culture. We don't just see and hear. We want to feel what we hear.

The TV remote has changed the way we learn. I don't watch one channel at a time. The Sports Chanel, a movie, and CNN can hold my attention at the same time. Sometimes I find myself doing nothing more than grazing through 76 channels in the process of half an hour. It's amazing what I can learn about home decorating, the environment, travel, old movies, world events and religion in 30 minutes. I make a decision to change the channel on my TV or radio station in my car. Our short attention spans have caused producers to use rapid-fire edits. Watch NYPD Blue or MTV and count – one thousand one ... one thousand two ...- almost all edits are less than 4 seconds.

We shall fail in communicating Jesus to this generation with 60 minutes of literate-linear worship. Watching a talking head for 30 minutes of lecture is a futile exercise.

Multi-sensory experiences are mandatory! Late summer my son and I went to Florida where he participated in a weeklong baseball camp. We decided to go a couple days early and do the "Disney thing." I was shocked. We had an incredible time; we stayed from dawn until dusk. It was an experience! From the time you get in line you become a participant in a multi-sensory electronic media adventure. You feel the alien's breath, the drip of saliva, and the vibration of his steps. You see the ghostly appearance of holograms riding in the car with you. **When was the last time you went to church and wanted to stay all day?** (Slaughter 1998, 62-63)

Like it or not, this is the culture we live in and it is the culture God is calling us to reach. We can scream at the darkness or we can light a candle. Again, any one who aspires to be an effective teacher must take these factors into consideration, especially those who aspire to be effective teachers of the Word of God. This researcher is well aware of the power of God's Word to overcome such learning issues, but even Jesus seemed to adjust his teaching methodology to connect to the varying leaning styles among individuals.

This researcher would highly encourage the pastor-teacher who may read this dissertation to experiment with the multi-sensory form of delivery. Take notice of the people's reaction when the teacher shifts from lecture to visual illustrations or to an interactive methodology. Nothing can be more convincing than to watch for one's own self the heightened attention levels as the teaching transitions from mono-sensory to multi-sensory.

Comprehension Application

Over and over again, the Scriptures call people to understand the content of the Word of God. The experiment conducted by this researcher shows increased comprehension in congregational levels when information is presented in a multi-sensory form. Therefore, the pastor might do well to include multi-sensory techniques in his teaching delivery, particularly when the information may be difficult to comprehend. This researcher has made it a point to use multi-sensory methods when teaching information that is crucial and difficult to comprehend. Hard to understand sayings and difficult to comprehend theology might be made clearer by the use of visuals and interactive teaching elements.

For example, this researcher recently taught on the complexity of the triune human person, i.e., body, soul, and spirit. In other words, though we are one person, we have three dimensions. We are created in the image of God, and just as God is a trinity, even so, we too are a trinity. To help people grasp this concept, the pastor-researcher used a Russian doll. A Russian doll is made of wood, and it can be pulled in half at the waistline. As one pulls it in half, he discovers there is second wooden doll inside the first outer doll. The second doll on the inside can also be pulled in half, and one finds a third doll inside that doll. So, there were three dolls in one. The researcher used the outer doll to point to the body, i.e., the outer man. The second doll inside the outer doll was used to point to the soul, i.e., the emotional dimension of man. Finally, the third doll inside the second doll was used to point to the spirit, the dimension that connects man to God.

The goal was to help people visualize the three-dimensional composition of their person in order that they may better understand themselves. The researcher received numerous letters confirming that the visual had brought clarity to such a complex subject.

Retention Application

Repeatedly the Scriptures call people to *remember* the content of the Word of God. The experiment conducted by this researcher shows increased retention in congregational levels when information is presented in a multi-sensory form. Therefore, the pastor might do well to include multi-sensory techniques in teaching delivery, particularly when it is absolutely essential for the information to be remembered. Special series and vision casting messages are often crucial to the health and direction of the congregation. The pastor typically wants the congregation to remember the messages long after the series is over. Putting them in a form that is multi-sensory can be a way of ensuring retention.

For example, recently this pastor-researcher cast the vision for reaching our children while they are young and before they become set in their ways. The title of the message was “Children are Like Wet Cement.” When cement is wet, it can be shaped and molded. In a very little time, however, wet cement begins to set up and become hard. The longer it sets up, the more difficult it is to alter the shape of the cement. The moral to the story was this: Young children are like wet cement. A child’s mind can be shaped and molded early on in their life, and someone will do that shaping. We will shape children for God or someone else may shape them for Satan. If we are going to do that shaping, we must do it while “the cement is wet.”

To help our congregation visualize this fact, the pastor-researcher dressed in construction clothes. A life-size mold of child was placed on the platform and the pastor-researcher took a shovel and began to fill it with cement. The cement was wet, and it was easily shaped and molded with a trowel. Again the point was made that children are like wet cement. It is while “the cement is wet” that we need to shape them for God.

As they grow older, however, their minds and will begin harden. Their beliefs, values, priorities, and goals will begin to set up like hard cement. To visualize this, the pastor-researcher went back to the cement a short while later, and he demonstrated that it was already beginning to set up and harden. At that point, it was very difficult if not impossible to reshape it. The mold had been cast, and the cement was set up hard. The moral to the story was this: We must reach children now.

To this day, people remind this pastor of the impact that visual had on their lives. They still can recall the visual and the point of the visual. To this day, this pastor is still able to refer back to that visual and have the confidence that the congregation will remember the point. As we move forward with plans to hire more children’s staff and as we contemplate new children’s facilities, the pastor is still able to recall the cement visual to the congregation’s memory.

Application Concerns

In this section, the researcher would like to discuss some concerns that must be addressed to ensure the future integrity of multi-sensory expositional preaching. The future of multi-sensory expository preaching seems promising, but there are also potential pitfalls that could destroy its credibility before it is given the chance to demonstrate its

impact. It should be noted that there is little or no precedent literature for these concerns. The researcher must therefore resort to his own casual observations and experiences.

Substance over Technique

In this researcher's opinion, the validity of multi-sensory delivery could suffer a premature death if it becomes an *end* as opposed to a *means to an end*. Multi-sensory teaching has the negative potential to degenerate into nothing more than a gimmick that is seen as trite and trendy as opposed to powerful. MacArthur has already passed his verdict:

Some will maintain that if biblical principles are presented, the medium doesn't matter. That is nonsense. If an entertaining medium is the key to winning people, why not go all out? Why not have a real carnival? A tattooed acrobat on a high wire could juggle chain saws and shout Bible verses while a trick dog is balanced on his head. That would draw a crowd. And the content of the message would still be biblical. It's a bizarre scenario, but one that illustrates the medium can cheapen the message. (MacArthur 1993, 69)

Why is MacArthur so opposed to multi-sensory teaching? It is because he believes it to be a sideshow rather than a powerful tool, and the truth is that it can become just that – a sideshow! This researcher believes that MacArthur is terribly wrong in his comparisons of multi-sensory teaching to a carnival complete with trick dogs. He has broad-brushed all multi-sensory teaching as being a Vaudeville show. Would he have said the same thing when Jesus placed mud on the eyes of the blind man, cursed the fig tree, pulled a coin out of the mouth of a fish?

This researcher understands his concern, and agrees that care must be taken. To prevent such degradation, the pastor-teacher must always begin with the end in mind, which is the imparting of divine truth from the Holy Scriptures. When God had Abraham sacrifice animals and lay them in a row forming an isle, God was not "putting on a

show.” When God passed between those animal parts he was not trying to “entertain” anyone. He had an educational outcome and he was using a graphic-visual image to make it crystal clear.

The goal of teaching the Scriptures must remain the starting point for the pastor-teacher. Once the objective has been determined from a serious exegesis of the text, then the pastor-teacher can move to consider a multi-sensory aid which will bolster the communication of the textual truths. The substance of the Word of God must always be the priority – not the technique of delivery.

The marriage of serious expository preaching to multi-sensory delivery has great potential if the exposition of the text is seen as the goal. If, however, pastors begin to make multi-sensory the centerpiece of the sermon, opponents will be quick to call for a divorce of the two and that will be tragic.

Proper Balance of Exegetical Accuracy and Communication Clarity

There seems to be a battle of extremes between those who strive for biblical accuracy and those who strive for clarity as if the two cannot be combined. The fact is that accuracy and clarity cannot be divorced if the ultimate goal is the biblical education of the congregation, and the Bible mandates both for the biblical teacher.

Regarding accuracy, Paul admonished Timothy: “Do your best to present yourself to God as one approved, a workman who does not need to be ashamed and who correctly handles the word of truth” (2 Tim 2:15). The phrase “correctly handles” translates the Greek word $\sigma\theta\omega\tau\omega\mu\epsilon\omega$, which literally means to “cut strait.” “It was used of a craftsman cutting a strait line, of a farmer plowing a strait furrow, of a mason

setting a strait line of bricks, or of workman building a straight road” (MacArthur 1995, 76). The point is that the faithful pastor is characterized by his accurate handling of the Word of truth. This is why the teacher of God’s word must be competent in his ability to exegete the Word of God. Clarity is irrelevant if the message is inaccurate.

Regarding clarity, When Ezra the scribe taught the Word of the Law, he did so with clarity.

So on the first day of the seventh month Ezra the priest brought the Law before the assembly, which was made up of men, women, and others who could understand. He read it aloud from daybreak till noon as he faced the square before the Watergate in the presence of the men, women and others who could understand. And all the people listened attentively to the Book of the Law. They read the Book of the Law. Making it clear, and giving the meaning so the people could understand what was being read. (Neh 8: 2-3, 8)

There are two teaching principles to be gleaned from this Nehemiah text that apply to those who teach the Word. First, the teacher must *begin* with the Word of God. The sermon must start with the sound historical-grammatical exegesis of the text. Sound exegesis is the foundation for everything that is taught. Everything else is secondary to the biblical text.

Accurate exegesis of the text, however, is only half the goal of biblical teaching. The second principle gained from this passage is that the teacher must teach in a way that is understandable. Yes, the teacher must get the interpretation correct, but he must also get the message into the mind of the congregation. It does not have to be an either-or proposition. Sound exegesis and sound communication are both essential.

Beware of Cheesy Material

Multi-sensory aids can have the propensity to come off as silly, cheesy, and unprofessional. This too can undermine the credibility of the technique. Care must be

taken by the pastor-teacher to use multi-sensory aids that come across to the congregation as meaningful, contextual to the sermon, and professional. In this researcher's opinion, drama poses the greatest risk in this area. This is due to the fact that most churches do not have access to professional actors. As a result, amateurs are used and the performance often appears to be less than excellent. We must remember that the people in the congregation are exposed to high quality professional acting on television, and the contrast between what they see on television and what they see in the church sermon is often incomparable.

Application Resources

In this section, the researcher would like to discuss the issues of resources and needs that naturally accompany the implementation of multi-sensory exposition. Again, it should be noted that there is little or no precedent literature for these concerns. The researcher must therefore resort to his own casual observation and experience.

A Creative Team

Because of the labor and time consuming nature of multi-sensory teaching, the pastor-teacher would be wise to develop a creative team to help him in the creation, production, and implementation of creative multi-sensory illustrations. One of the disciplines that must accompany multi-sensory delivery is creativity. The more creative people one can put on the team, the deeper the well will be for drawing ideas. Both Ed Young and Andy Stanley have assembled creative teams to assist them in the creative side as well as the implementation side of multi-sensory aids.

On the implementation side of the equation, there is often the need for construction people. Many multi-sensory illustrations will require the building of object lessons or some stage set up. Having a team with the capacity to erect props and stage set ups can be invaluable to the multi-sensory teacher.

Media Technology and a Media Team

We are living in an electronic-media driven age. The church has the opportunity to use such technology to its advantage, especially as it relates to multi-sensory communication of the Word.

Multimedia enhanced instruction is being used on a large scale throughout our educational system to give learners of all ages a more realistic approach to learning. Applying multimedia technology such as multimedia CAI courseware in education enriches the study environment, improves teaching methods, and brings greater influences on the evolution of educational ideas as and the development of educational technology. (Fu, Lui, and Huang 1998, 249-52)

Some educators (e.g., Hoffstetter 1997, 2-3) believe that while people retain only 20% of what they hear and 30% of what they see, they remember 50% of what they see and hear, and as much as 80% of what they see, hear, and do at the same time. He proposed the idea that multimedia is quickly becoming a basic skill that will be as important to life in the twenty-first century as reading is today.

As the church moves into the twenty-first century, pastors would be well served to invest in computers, cameras, projection screens, and other technologies for the ability to project film clips, Scripture passages, pictures, outlines, and a multitude of other teaching materials on the screens during the message. With this in mind, the pastor should seek out competent people who can operate such high tech equipment.

Incompetence in the area of media can be disastrous, embarrassing, and a source of distraction from the message.

Further Research

The researcher will make the following recommendations for further research:

1. Research that measures the impact of varying kinds of multi-sensory teaching such as movie clips, drama, object lessons, etc.
2. Research that analyzes the distinction between two-dimensional multi-sensory teaching and three-dimensional multi-sensory teaching.
3. More longitudinal research that measures true long-term memory of lecture versus multi-sensory sermons.
4. Research that analyzes and compares male and female attention, comprehension, and retention levels as it relates to the different styles of delivery.

Final Thoughts

Many thoughts and questions surfaced in the mind of this researcher during the process of assembling this project. One question was this: Is it possible that preachers who struggle to communicate might be able to bolster their own communication abilities simply by a multi-sensory delivery methodology? Is it possible that average communicators might become above average communicators simply by the addition of new teaching methods? Perhaps just the incorporation of simple visuals and interactive materials in the message might turn otherwise bland teaching into an exciting experience that communicates the life-changing truth of God's Word. Those same multi-sensory teaching aids may help grab and hold onto to the congregation's attention.

Could it be that some pastors struggle to communicate simply because lecture is not their preferred teaching style. Not only do students have learning styles in which

they prefer to learn, but also teachers have teaching styles by which *they* prefer to teach and by which they teach the best. However, just like auditory learning has been forced on the learner, lecture has been forced on the teacher. Again, when one listens to the counsel of certain preachers and teachers, teaching through lecture format is made a spiritual moral issue. The pastor who uses visual aids and employs multi-sensory teaching devices is painted as compromising the gospel, or as MacArthur puts it, “ashamed of the gospel.”

This researcher wonders how many pastors are better suited to teach in a multi-sensory style, but they are trapped in a mono-sensory methodology. The fact may be that many poor preachers would be great preachers if they were given the option of using multi-sensory methods of delivery. It is the prayer of this researcher that the future of multi-sensory exposition will make pastors better communicators of the Word of Truth and that it will assist us in the command to make disciples.

APPENDIX 1

CONE OF LEARNING (Edgar Dale)

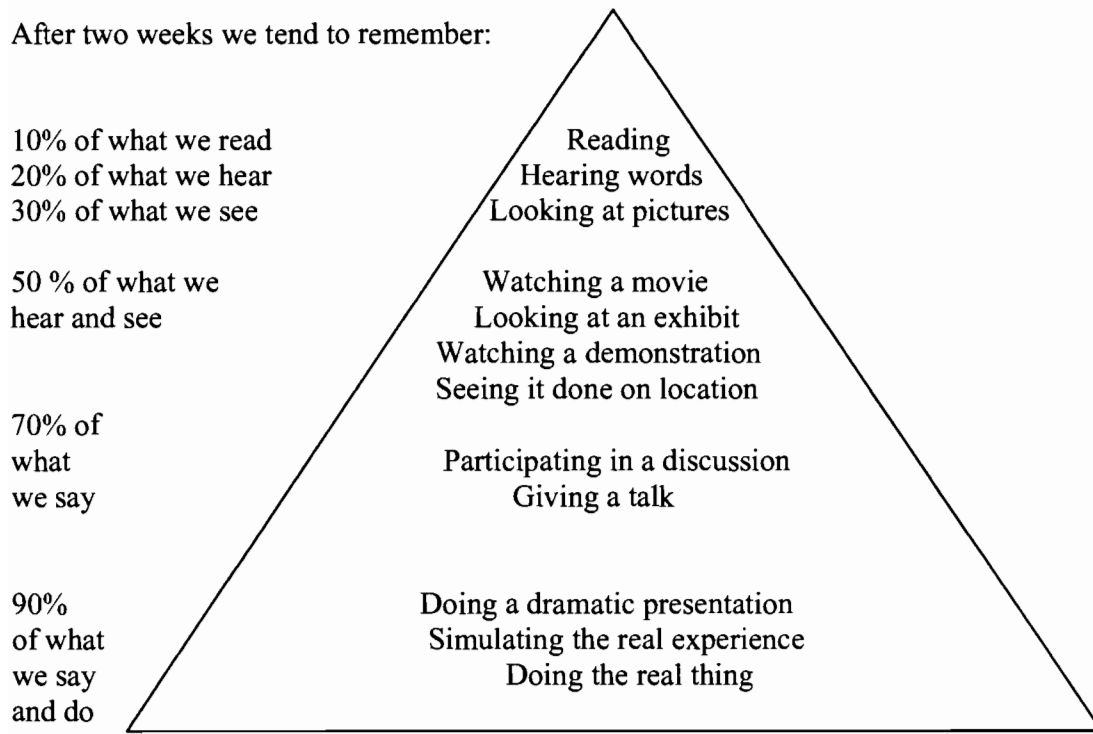


Figure 11. Cone of Learning

APPENDIX 2

SERMON MANUSCRIPT FOR TEST 3

Title: The Heart of the Matter

Text: Hebrews 4:12

I want you to help me begin the sermon by shaping your hand into a fist.

Study that fist. Deep inside your chest is a *hollow muscle* about the size & shape of that fist. It is 5 ½” long, 3 ½” wide, and 2 ½” deep. In men, it weighs about 11 oz, and in women it weighs 9 oz. As I speak, that muscle is working. In fact, that muscle is a force pump, and it’s connected to hundreds of miles of pipeline. Its function is to pump blood (that life-giving fluid) to your body, through that pipeline network. This pump is durable, pumping over 100,000 times a day. It produces enough energy to lift five tons one foot off the ground. It’s called “the heart.” It is the only organ in your body that is monitored by the physician before you are born and right up until the moment you die. The doctor’s constant interest is that *hollow muscle*.

Why is that? It is because that muscle is central to our lives. If my heart were to stop beating, you would know it in an instant. My thoughts would fail me, my legs could no longer support me, and I would collapse in great pain. A simple fist sized organ. Yet, it’s paramount to our physical health.

Now, let me turn a corner and draw an analogy to that: The Bible mentions another heart, your *spiritual heart*. And get it folks: Just as your physical heart is central to your physical health, your spiritual heart is central to your spiritual health.

Consequently, that heart is the constant focus of God's attention. God is constantly monitoring the condition of your spiritual heart.

Proposition: Just as your physical heart can become diseased and can cause you physical misery, even so, your spiritual heart can become diseased and cause you inner misery.

Get it: I meet a lot of people who are miserable on the inside. They're sick of life.

They're like Mike Jagger: "I can't get no (what?) satisfaction." And mind you, their pervasive misery is not from physical problems. It's not even from psychological problems. It is a problem at the level of their spirit. Their pervasive dissatisfaction is not from external circumstances. It is from an internal disease of the heart.

Interrogative: You say, "What are causes of heart disease at spiritual level?"

Transition: I'm going to play spiritual physician today and help you diagnose the condition of your heart. I want you to note two truths from the text:

1. The Heart Defined (4:12)
2. The Heart Diagnosed (4:12b)

1. The Heart Defined (Hebrews 4:12)

(12) "For the word of God is living and active. Sharper than any double-edged sword, it penetrates even to dividing of soul and spirit, joints and marrow; it judges the thoughts and attitudes of the [what?] heart." In this text, God is concerned about the condition of your heart. So let's take five, and make sure we know what God means by that. Your *physical heart* is relatively easy to define, but your *spiritual heart* is a bit trickier, because for one thing, you can't see it, touch it, or measure it. So, allow me to lead us on a rather heady journey of this word so you understand its significance in your life.

I Samuel 16:7 says, “The LORD does not look at the things man looks at. Man looks at the outward appearance, but the LORD looks at the (what?) heart.” What is this *heart* that God’s so preoccupied with? Put your thinking caps on: The word “heart,” translates the Hebrew word ‘laab.” The “laab” refers to your *inner spirit*, that immaterial part of you that connects you to God.

Let me break it down for you: To begin with, you are a 3-dimensional person. You have a body, a soul, and a spirit. (Visual with Russian doll). On the exterior, there is your body. This is the physical portion of your person. This is the “outward appearance” that people see. Next, on the inside of your body is a soul. The word “soul” translates the Greek word, ψυχη. ψυχη is the word we get “psychology” from. Your soul is the *psychological-emotional* portion of your being. Finally, deep within all that is the third dimension of who you are - your spirit. The word spirit translates the Greek word πνευμα. Your πνευμα is that immaterial part of you that connects you to God. Your spirit is that part of you that distinguishes you from the animal world. An animal has a body. An animal has a soul, because it has emotions. But animals do not have a spirit that connects them to God. Therefore, they do not have the capacity to have a relationship with God.

You do have that capacity, because you have a spirit. You have a third dimension within you that enables you to relate to God. Understand: Sometimes God refers to that third dimension as your spirit, but in a more endearing way, he calls that spirit your heart. Why? It’s the core of who you are. It’s that part of you that is eternal.

Mark it: As goes the condition of your heart, so goes your inner peace, and so goes your happiness. It’s interesting that people will go to a doctor to examine their

physiological health. They may even go to a psychologist to examine their psychological health. But, what most people ignore is their spiritual heart. You say, “How do I determine the condition of my heart?”

2. The Heart Diagnosed (12-13)

(12) “For the word of God is living and active. Sharper than any double-edged sword, it penetrates even to dividing (watch this) (1) soul and (2) spirit, (3) joints and marrow.” There is that 3-dimensional concept of our person. Get it: You have a body (joints and marrow), a soul with emotions and thought, and a spirit with the capacity to connect to God. Mark it: Just like a physician can take scalpel, and cut into your body to diagnose the condition of the physical heart, God has a scalpel that cuts through the body and soul and diagnoses the spiritual heart.

You say, what is this *scalpel* that God uses? (12) “For the (what?) word of God is living and active, sharper than any double-edged sword, it penetrates even to dividing soul and spirit, joints and marrow.” Get it: This book surgically penetrates through the outside facade and examines you on the inside – at the heart of the problem. (12) “For the word of God is living and active. Sharper than any double-edged sword, it penetrates even to dividing soul and spirit, joints and marrow. It [what] judges - κριτκος – literally “diagnoses the thoughts & attitudes of the heart.”

Mark me here: The Word of God does an open-heart surgery on us, and this is what it often finds: It reveals hearts that are diseased, hearts that are sick of life, and hearts that are depressed with life. And mind you: it’s not a psychological problem. It’s not a problem with the ψυχη, soul. It’s a problem at a deeper level - the heart.

Get it: Your heart was created to have a personal relationship with God, and if that inner heart is deprived of that personal relationship, if it's deprived of the resources and nourishment that only Jesus can give, it will sicken the rest of you mentally, emotionally – even physically. So God takes his word and gently cuts open the heart and says the problem is not on the outside, it's on the inside.

To illustrate that truth, let me share this with you: We have a large freezer, like this one, in our garage – and we keep it filled with meat. (Visual: Freezer on the platform). On top of the freezer, I keep an old computer. Last year, before going on vacation, I reached behind the freezer to unplug the computer, but I pulled the wrong plug. I unplugged the freezer. It was August (hot in Miami in August), and for 14 days, that freezer, full of meat, sat in a sweltering garage with the power off. When we came home from vacation, Rhonda decided to get some meat out of the freezer, and as she opened the freezer door, I could hear her scream! And guess who got fingered for pulling the plug, and guess who got to clean it out? You got it!

So I got to work. What's the best way to clean a rotten interior? I knew exactly what to do. I got a bucket of soapy water and begin cleaning the *outside* of the appliance. I was sure the odor would disappear with a good shine. So I scrubbed it with all my might! When I'd finished, that freezer could have passed a boot-camp inspection. It looked great – on the *outside*. But when I opened the *inside*, the stench was as strong as ever.

No problem, I thought. I knew exactly what to do. This freezer needs friends. I'd stink, too if I had the social life of a machine in a utility room. So, I threw a party! I invited all the appliances from the neighborhood kitchens. It was a great party. A couple

of toasters recognized each other from the appliance store. Everyone played pin the plug on the socket. They had a few laughs about limited warranties. I was sure the social interaction would cure the inside of my freezer. But I was wrong. I opened it up, and the stink was still there! Now what?

I had an idea: Maybe the freezer needed status! So, I stuck a “Mercedes Benz” sticker and a “Save the Whales” bumper sticker on it. I gave it a fancy business card. And, oh yes – cosmetic work! I mean look at that plain face. This freezer needed some help. So I put some lipstick on it, and splashed it with some Chanel #5. Then, I backed away and admired my high-class freezer. “You just might make the cover of *Popular Mechanics*,” I told it. Then I opened the door, expecting to see a clean inside. But nothing on the inside had change. It still stunk!

Well, none of that story is true. It actually comes from a story I once read. But, I hope you get the point. Who would concentrate on the outside, when the problem is within, right? Do you really want to know? How about the teen who thinks, “If I could just fit into that group, I’d feel better about myself.” The single person who imagines to his or herself, “Oh, if I could only find a mate, he or she could fill the void in my heart.” Or the man in the workplace who thinks, “If I could just get the promotion, or that position, I’d feel important.” Or the woman, who imagines, “If I could get the breast job, or get into a size 4, then men would look at me, and I’d feel better about myself.” Or the neglected wife who really thinks that her emptiness inside is due to her husbands neglect, and if she could just get him to give her some attention, he could fill the void in her heart.

Case after case of treating the outside, while ignoring the inside. Case after case of polishing the exterior while ignoring the interior! Don’t get me wrong. Many of

the things people pursue in life aren't wrong in themselves. But none of them will cure the disease of your heart.

Let me boil it all down for us. Deep within each of us, at the level of our heart is a void. Deep within each of us, at the level of our spirit is a vacuum – an empty place. That empty place longs to be filled. That void cries out within for something or someone to come in and fill it up. It will not be quiet. It will not rest until it is filled. And most people go through a lifetime of searching for someone or something to fill that void. Some people think a person can fill that void, so they find a person and come to the altar. And this is what they're saying as they stand there – not aloud but within: She's saying, "I'm counting on you to make me feel secure; to make me feel significant; to fill this void in my heart." The problem is, he can't do that. He doesn't have the capacity. And he's saying to her: "I'm depending on you to make me feel good about myself; to make me feel significant, to fill the void in my heart." What's the problem? She can't do that either. So they end up very disappointed with each other! You didn't deliver!

Here's the catch: God created that place in your heart so that only he could fill it. No thing and no person can fill that interior place. Only he can do that. That empty place has a shape that only God can match, and when you enter into a personal relationship with him, he cleans your soul from within. He starts to work on the inside by clearing away the rottenness of guilt and the stench of past failures. Then he fills your heart with himself.

Look at the freezer. Imagine the case as your body, and the interior as your soul - the place of hot or cold emotions. Now look at the motor on the freezer. The motor is the part of the freezer that can connect to the power supply, right? And the electrical

cord is that connection. I can clean up the inside, but if I don't keep the freezer connected to the power, the inside will go bad.

Imagine the motor as your heart. This is the part of you that can connect to God. This is the part of you that receives power from God, and the connection is prayer. The power cord is prayer and the Word. This is what supplies all our needs.

But most people go through life like this: (visual-look at wife or job): "Why aren't you making me happy? Why aren't you fulfilling my needs?" The problem is not them. The problem is that you are unplugged! See? Even if you're in a terrible marriage, terrible job, don't have the looks, if you're plugged into Jesus, he will supply all your needs. Don't look to those other things to do what they don't have the power to do.

Multi-sensory Materials Used

1. Physician's model of the heart
2. Stethoscope
3. Russian 3 part doll
4. Freezer, appliances, soap and bucket of water
5. Black square piece of cardboard paper

Multi-sensory Procedures

1. Physician's heart used to grab attention early and to demonstrate the centrality of the heart to our physical health. It was then contrasted to our spiritual heart.
2. Stethoscope was used to visually demonstrate how physicians monitor our human heart and how God monitors our spiritual heart.
3. Russian doll was used to visually demonstrate the three-dimensional make up of human beings. We are a body, soul, and spirit.

4. The freezer was used to demonstrate the futility of cleaning a rotten interior by only dealing with the exterior. The connection was then made to focusing on the exterior of our person to the neglect of our inner spirit.
5. A black piece of paper was held over the pastor-researcher's heart as he talked about the void that we all have in our heart. The point was made that only Jesus can fill that void.

Advanced Multi-sensory Materials Used

1. Physician's model of the heart
2. Stethoscope
3. Russian 3 part doll
4. Freezer, appliances, soap and bucket of water
5. Black square piece of cardboard paper
6. Tactile use of hand

Advanced Multi-sensory Procedures

The advanced multi-sensory procedure was the same as the multi-sensory procedure, but with the addition of a tactile teaching tool. The entire congregation was given the order to shape their hand into a fist. They were to study that fist and realize that deep inside their chest is a hollow muscle about the size and shape of that fist. They were instructed that the muscle is 5 ½" long, 3 ½" wide, and 2 ½" deep.

APPENDIX 3

SERMON MANUSCRIPT FOR TEST 1

Title: Three Certainties in Uncertain Days: Part1

Text: 1 John 5

When I was 29 yrs old, I conducted a Bible conference in the mountains of Tennessee. At the time, I was a Bible conference speaker for a Christian Jewish organization. My task was to travel to various churches and speak on prophetic issues. For this particular assignment, I drove from my home in North Carolina to this tiny church in the mountains of Tennessee to give a five-day conference.

Stay with the story: As I pulled into the dirt parking lot of the church, I was met by a short, round, bearded man around 50 years old. I can see him to this day, smiling, with overalls on, and he greeted me with these words: “Dr. Blackwood, YOU are a lucky man! You get to stay at my house the whole week.” Little did I know what that meant at that time.

As I followed him in my car to his house, we wound our way through the mountains, higher and higher, and deeper and deeper into the Blue Ridge peaks, until, alas, we came to his house at the end of a lonely dirt road. It was an old - dilapidated wooden house, built in the late 1800s. Scary old!

By the way: As we pulled up, I noticed an old out building about fifty yards behind the house that I later learned was called, “the shed.” Any way, that evening he and his wife fed me a wonderful home cooked meal, and we stayed up until 1:00 in the

morning, talking about the Bible, Jesus, and mountain life. But mind you, I had to speak the next morning.

So finally, about 1:00 a.m., the man rose from his chair and said, “Pastor, grab your bags and let’s go to over to the shed. We’ve got a room for you in the shed. I’m easy to please, so no problem. But as we walked down the path in the darkness, guided by a flashlight, he began to tell me about “the shed.” “Pastor, the shed here was built in the 1920’s. Years ago it was used for storing farm tools and equipment. But, for 50 years it was totally neglected and abandoned, until a couple of months back. We decided to clean it out and make a guest room for people who visit. It was a lot of work, because it was overrun with weeds and stuff that had grown up on the inside.” As he opened the door and turned on a light, the shed turned out to be a small musty room, with rickety floors, a worn out couch, and a naked light bulb. Above that was a small loft with a bed where I’d sleep, which again, was fine with me. But, as the man started to leave, he said something that took me back! “Dr. Blackwood, before we cleaned this shed out last month, it was infested with snakes. I still see a few from time to time. So, you might want to watch out.” With that, he closed the door and left me standing there! Folks: I was up till three in morning, searching the stinking shed for snakes. I looked all over the loft, under the bed, between the mattresses, under the sheets. As I lay there, I kept feeling things in my imagination crawling across my legs. I would jump out of the bed, fling off the blanket, and then I would think - the floor. The snakes may be on the floor, and I can’t see them in the dark. I literally stood in middle of the bed filled with paranoia and uncertainty.

Finally, I got up, went out to my car, and slept there. Every night that week, I’d wait to see the lights go off in their house, and I’d sneak to my car to sleep. Cows

would “moo” at me in the dark, and I would say, “Shut up -before you wake them up!”

But mark it: It’s impossible rest when there’s that kind of uncertainty.

Well let me turn a corner say this: We live in a day of great uncertainty. There are global uncertainties, nuclear uncertainties, national security uncertainties, terrorist uncertainties, political uncertainties, and economic uncertainties. Add to that, day-to-day uncertainties: Financial uncertainties, relational uncertainties, job uncertainties. Then, there are the uncertainties of life itself, right? There are uncertainties about disease, cancer, and death. Most people are uncertain about what will happen to them at death. Is there life after death? Where will I go at death?

Mark it: All of those uncertainties have a way of keeping us restless. Like me in the shed: We can find it difficult to experience peace. We stand in the middle of the *bed of life* filled with anxiety and worry.

Proposition: In world dominated by uncertainty, there are for the child of God, rock solid certainties. I’m talking about the kind of certainties that make all the other uncertainties lose their fear-power. These are the kind of certainties that fuel the mind with confidence, boldness, and a rest that only God can give.

Interrogative: You say, “What are these certainties?”

Transition: Here they are from the Word of God:

#1. You Certainly Have Everlasting Life,

#2. You Certainly Have God’s Attention

#3. You Can Certainly Have God’s Best.

1. You Certainly Have Everlasting Life:

“I write these things to you who believe on the name of the Son of God, that you might *know* that you have eternal life” (1 John 5:13).

Stop there and let me set this up: I love this book. The Book of 1 John is a book about *knowing*. Thirty-three times the term “know” appears in the book. The word “know” translates the Greek word οἶδα. Οἶδα means “to know something for sure, to know something for certain.” It’s the antithesis of being uncertain. It’s the opposite of a shadow of a doubt. We use that phrase “shadow of a doubt” to graphically picture what doubt does to us. Doubt is like a shadow. What does your shadow do? It follows you around, doesn’t it? Wherever you go, it goes. Doubt follows us like a shadow. And it is a shadow of uncertainty.

Mark it: Doubt is the enemy of God’s children, and our Heavenly Father hates it! Why? Because doubt robs us of confidence! Doubt strips us of courage. Doubt makes cowards of us. The person who is “doubt-less” looks to the future with boldness and courage. The person who is “doubt-full” looks to the future with fear and timidity. Therefore, God wants us to strip us of doubt and fill us with assurance. He wants to strip us of uncertainty and fuel our minds with certainty. The first thing he wants you to know for certain is that you have eternal life.

“I write these things to you who believe on the name of the Son of God that you might (what?) *know* that you have eternal life.” Of all the things God wants you to know, child of God, eternal life is priority number one. Why? You’ll never be effective for God if you’re uncertain about eternal life. Think about it: How can you effectively tell someone how to be saved if, in the back of your mind, you’re not even certain about your own salvation. How can you have peace if you don’t know you have eternal life? If you

don't know that, you'll always look at death with uncertainty. Some of you struggle with this issue, and God wants you to be rid of it.

(13) "I write these things to you who believe on the name of the Son of God that you might know that you have eternal life." Who does God want to know that that they have eternal life? (13) "I write these things to you who believe on the name of the Son of God that you might know that you have eternal life."

It's the ones who believe in his Son. The ones who have trusted Christ as their savior! Listen: If you've embraced Christ as savior, then that is all you can do to be saved. There's nothing more to do. That's all God asks from us. And what God is saying is, trust him. If he says that is all you need to do, then believe him. Relax. You're safe. And mind you, God doesn't just want you to know what you've *escaped*. God wants you to know what you've *gained* through Jesus. Jesus not only closes the door to hell, he opens the door to eternal life.

(13) "I write these things to you who believe on the name of the Son of God that you might know that you have eternal life." Two more beautiful words could not be joined together: "Eternal" and "life." Both can only exist through God. The word "life" is a wonderful word by itself. It's the word Ζοε. Ζοε means more than just biological life. In fact, when the Bible refers to biological life, it uses the Greek word βιοσ. That's not the word here. The word here is ζωε. Ζωε means life that is lived with zest; life that is filled with purpose, meaning and fulfillment; life that has significance. Now, you join that word to the word "life" to the word "eternal," and you have a dimension of life incomprehensible. The word eternal is the Greek αιον, which literally means "without end." Αιον means "no possibility of termination."

So what God gives to his children is this: Life with zest, life filled with purpose and meaning and fulfillment, life that has significance, and that never ends. He gives us everlasting excitement. (13) “I write these things to you who believe on the name of the Son of God that you might know that you [what?] have eternal life. The word *have* comes from the Greek word εἶω, which means to reach out and take hold of something; to reach out and seize hold of something; to take something as a personal possession. Get it: the moment you invited Christ into your life, you literally reached out and took hold of eternal life. You seized eternal life as a possession.

By the way: What kind of verb is “have?” Present tense, right? You “present tense” have eternal life. Listen: All of this was written, not so you could *hope* you have eternal life. This was written so you would *know* it. Listen to the words of Jesus to see how sure all this is for you. John 10:27: “My sheep (Jesus compares us to sheep) listen to my voice; I know them and they (what?) follow me.” Do you realize, sheep don’t work to stay connected to the shepherd? They just follow where he leads. And if a sheep strays off course, the shepherd goes and finds him. That is us! We’re sheep following our shepherd. And if we happen to stray, he comes to get us like a good shepherd.

“My sheep listen to my voice; I know them and they follow me. (Watch this: Verse 28), I (what?) give them eternal life.” Do you realize it? Jesus is saying, “I have given you eternal life.” The word “give” (πιδω), means “free gift.” Incidentally, that is an aorist verb meaning “something done at one point once and for all.” You’ve been given eternal life once and for all. Watch this:

(28) “I give them eternal life, and they shall never [what?] perish.” Do you realize that’s an unconditional promise? Jesus says to you who are his children, “I give

you Eternal Life. I promise you will never perish.” You ask, “What if I sin?” Never perish. “What if I stray?” He’ll come get you. Never perish!

(28) “I give the eternal life, and they shall never perish.” No one can snatch them out of my hand. Satan would love to snatch us from God, but Jesus says he can’t do that. No one can do that! Why? Because, we’re in his hands. To lose your salvation, Satan would have to snatch you out of Jesus’ hand. You think you’re in good hands with Allstate? Well, you and I are in the hands of Jesus. Talk about protection!

Jesus just drives this point home like driving a nail into wood: In fact, let me clinch this for you visually. In rough carpentry, carpenters use a technique called “clinch the nail.” They do this to make a joist triple secure. Here’s the technique: First the carpenter drives the nail through the joist. Second, he bends the nail over, and third, just to make it secure, he imbeds the nail into the wood. It’s called “clinch the nail.”

Get the sequence: Jesus drives the nail into the wood: “You have eternal life.” Second, he bends it over: “I promise you will never perish.” Third, he imbeds it: “You are in my hands.” Child of God, there are things we may not be certain about in this life. Here’s one you can take to the bank. You have eternal life. You will never perish. You are in Jesus’ hands.

Let me close with this: I get an email each week from Gabby Pedron. Gabby has one of the most deadly cancers imaginable. She gives me a report on her condition, treatments, blood count, etc. “Rick, here’s the news: The bad news is, my counts are down. I do not feel very strong this week and I need prayers for physical strength. The good news is, I know I am in the hands of the shepherd. I know I have eternal life. If I die, I know he will take me to be with him. Whether I live or die, I am safe, because I’m

in his hands.” I love that! Even though Gabby is looking death right in the face, she is confident about her future. Certainty in the face of death.

Multi-sensory Materials Used

This section will list the materials that were used in the multi-sensory portion of the delivery. Multi-sensory materials include the visual materials that were employed to conduct the test.

1. Boards
2. Nails
3. Hammer

Multi-sensory Procedures

In this section, the researcher will describe the delivery of the sermon and the procedures involved in the multi-sensory material usage. The multi-sensory portion of the message was intended to reinforce the teaching of the triple assurance of our salvation. In order to visually communicate the triple assurance of our salvation, the researcher-pastor actually drove a nail into the boards, then bent the nail over sideways, and finally, clinched the nail by imbedding it into the wood.

Advanced Multi-sensory Procedures

In this section, the researcher will describe the delivery of the sermon and the procedures involved in the advanced multi-sensory material usage. In addition to the above multi-sensory technique, the researcher-pastor also gave each person a nail to handle during the presentation. They were given instruction to hold the nail and to feel its

strength. The congregation was encouraged to fill in the blanks on notes that were provided along with the message.

APPENDIX 4

SERMON MANUSCRIPT FOR TEST 2

Title: Three Certainties – Part 2

Text: 1 John 5:14-15

In 1977, NASA launched the space probe Voyager 1. Voyager was a spacecraft designed to visit the outer planets of the solar system giving us up-close views of their environments. Three years after launch, Voyager reached Jupiter at 360 Million miles from earth. In 1980 it sped by Saturn at 790 Million miles from earth. In 1986, the craft encountered Uranus at 1 Billion 608 Million miles away, and 1989, Voyager raced by Neptune at 2.5 billion miles from earth. *Graphics of planets on screen.*

Several years ago, I contacted NASA to get the current coordinates of Voyager. I was told that it had drifted below the elliptical plane of the solar system and would not encounter Pluto. In fact, it was approaching the extreme outpost of our solar system at 4 billion 700 million miles out.

Now listen to this: At the time I called NASA, Voyager's transmitter was emitting less than $\frac{1}{4}$ of 1 kilowatt of power. You know what a kilowatt is? It is the measured power by which a transmitter emits a signal. Radio stations, for example, transmit thousands of kilowatts of energy. But Voyager, some 4.5 billion miles away, was emitting less than $\frac{1}{4}$ of 1 kilowatt. That's less energy than this penlight gives off.

Pastor has penlight in hand and congregation has penlights attached to bulletins.

Are you ready for this? NASA scientists tracking Voyager could detect that faint signal of $\frac{1}{4}$ of one kilowatt at $4\frac{1}{2}$ billion miles away. You say, "Wait a minute! How in the world can NASA detect such a faint signal from $4\frac{1}{2}$ billion miles away? It's simple: Located in Houston, Texas is an enormous satellite receiver with tremendous receptive power. In fact, so powerful is this receiver, it can hear that weak signal at the most distant outposts of the solar system. Get it: Communication between Voyager and NASA did not depend on Voyager's power to *send* the signal. No! Communication rested in the satellite's power to *receive* the signal. The power of the receiver made certain that the faint signal of Voyager would be heard by mission control in Houston. *Picture of large satellite receiver is projected onto screens.*

Now, let me turn a corner and say this: Today I want to talk to you about the certainties of prayer, because as a born-again child of God, you have the capacity to communicate to God, and your communication link is prayer.

Think of this Christian: When you pray, you transmit a message to God. When you pray, you connect to God. You communicate to God. God himself hears you. Now mind you: Some Christians send that message with strong faith. They articulate the message to God clearly and concisely. The signal seems sure and strong.

Others pray with weak faith. They're unable to speak clearly and concisely to God. Sometimes they can be so confused that their prayers don't even make sense to themselves! And mark it down: This can cause many of God's children to lose confidence in prayer. They stop praying because they're uncertain that they're being heard. They lose confidence in coming to God, because they imagine their sins and weaknesses prohibit God from hearing and caring.

Listen child of God: None of this is problem, because the power of prayer resides not in our power to *send* the prayer. No! The power of prayer lies in the power of God to *receive* the prayer. The power is not in the transmitter – us. The power is in the receiver – God. He is all-powerful! No matter how weak our signal, he hears it. That is one thing you can be certain of.

Proposition: We live in a world dominated by uncertainties. There are global uncertainties, nuclear uncertainties, national security uncertainties, terrorist uncertainties, political uncertainties, and economic uncertainties. But in a world dominated by uncertainty, there are for the child of God, rock solid certainties. I’m talking about the kind of certainties that give us rest, in a world that is pervasively restless.

Interrogative: You ask: “What are those certainties?”

Transition: Let’s find out as look to I John 5.

- #1. You Certainly have Eternal Life
- #2. You Certainly have God’s Attention
- #3. You Certainly have God’s Best.

2. You Certainly Have God’s Attention

1 John 5:13: “I write these things to you who believe in the name of the Son of God so that you may [what?] know...” I love the book of 1John because, it is a book about *knowing* things: Thirty-three times the word “know” appears in this book. The word “know” (οἶδα) means to know for sure, to know for certain. It is the opposite of not being sure. It’s the opposite of uncertainty.

And what is the first thing God wants us to know for certain? (13) “I write these things to you who believe in the name of the Son of God so that you may know that

you have eternal life.” God wants us to know that we have eternal life. He doesn’t want us to *hope* we have eternal life. He wants us to *know* it for certain. But having nailed that down – there are other facts that God wants you to KNOW for certain.

(14) “This is the confidence we have in approaching God.” This is one of those verses that requires our full concentration to dig out the full treasure contained inside. To begin with, the word “confidence” is such an assuring word. How do we approach God? With fear and uncertainty? No. We approach God with confidence. The word means “a fearless confidence.” What is that we are fearlessly confident about? (14) “This is the confidence we have in approaching God; that if we ask anything according to his will, he hears us.”

Do you realize that verse is also an unconditional promise? When you come to the Lord in prayer you can come with the confidence that you are being heard. And more than just heard, the word “hear” comes from the Greek word ακουω. Ακουω means to hear, but also means to attend to, to pay close attention, to perceive what is being said.

Have you ever been talking with someone, maybe with a spouse, and they could hear what you were saying, but they really weren’t listening? If you were to ask, “Did you hear what I just said?” They could give it back to you. They heard what you said, but they were not paying close attention. They heard you, but they certainly weren’t absorbed with what you were saying to them.

What a difference between that kind of *hearing you*, and the person who sits up and is *absorbed* in what you say. That is the picture scripture is painting of God. God is not just hearing you. He doesn’t have one eye on you and another eye on something more

important. No, God is absorbed when you come to him. He is administrating the affairs of the universe, but he's never too busy for you.

But here's the snag with many of God's children. They base the effectiveness of their prayer solely on how they feel. So they pray, and if they *feel* something, if they sense a goose bump or sensation, then they interpret that as God hearing them. But if they don't feel the sensation, they read into that, that God is not hearing them. They think God is not listening to what they are saying to him.

Listen Child of God: Stop gauging your prayer life by your emotions. Why? Because your emotions are unpredictable and unstable. One day you feel the goose bumps and the next day you don't. What an unstable foundation for any relationship. Think of your emotions as a piece of paper. *Pastor balls up a piece of paper and lays it on a table as a foundation.* Then on top of your emotions, you place your faith. *Pastor places flat of his hand on top of the balled up piece of paper.* Then on top of all that, you place the Word of God. *Pastor places Bible on top of hand, which is on top of the balled up piece of paper. The Bible, hand and paper appear to be shifting and unstable.* What kind of foundation do you have? Unstable! Uncertain! Now, reverse that. Put the Word of God down as the foundation. *Pastor places Bible down on table as the foundation.* Now on top of the certain foundation, place your trust. *Pastor places flat of hand on top of Bible.* Then put your feelings on top of that. *Pastor places balled up piece of paper on top of hand and Bible. There is the sight of greater stability.* Now you have a stable foundation for building a rock solid relationship with God.

By the way: Look at the word confidence in verse 14. This is the confidence we have in approaching God. The word "confidence" translates the Greek word

πασαρηασια. The prefix “πασα” means everything. The word “ρασαα” means to be able to say something or speak something. In other words when we come to God we have the confidence to be able to say or speak what is on our minds without having to censure it. The idea is that our talks with God do not have to be some well-spoken planned speech. In fact, sometimes our hearts can be so overwhelmed that we don’t know what we ought to say to God, right? There are times when all we can do is just pour our hearts out to God, with groans and weeping which make no sense to us. But get it: It is then that God’s spirit comes to our aid to help us speak to God.

Romans 8:26 says, “In the same way the spirit helps us with our weakness. We do not know what we ought to pray for, but the spirit himself intercedes for us with groans that words cannot express.” What a wonderful thought. In those times when you can’t seem to get the words together in prayer, God knows and understands. He will untangle those phrases and groans, and understand exactly what you wish to say. Beyond that, he will help you say what you ought to say and don’t know how to say. He will take over in times of confusion and help you to pray. The idea is, total help; total assistance as we pray. And you can be certain your prayers are heard, listened to, and understood, even when they don’t make much sense.

There’s a final thing God wants you to know for certain and that is this:

3. You Certainly Have God’s Best

(15) “And if we know that he hears us (and we do know that) whatever we ask, we know that we have what we asked of him.” You ask, “What does that mean? Does that mean that whatever we ask of God, he will give it to us?” Yes! With this

caveat: [14] “This is the confidence we have in approaching God: that if we ask anything according to his will....”

Let me give you a mental picture of that verse. Imagine this circle as God’s will. *Pastor lays down a hoola hoop*. Everything that is inside that circle is in the will of God. What this passage is saying is this: Anything you ask God for in that circle, he will give to you freely and gladly. But anything out of that circle, he will not give to you. And the point is this: What’s outside that circle is not good for you. But, like a child, you and I can’t always make the distinction, right? We don’t have the capacity that God does to separate what is good from what is harmful. We think we do, but we don’t always.

Here’s an illustration: This is Rob. He is the Father of Ashley. She bares his name. Anything that Ashley asks for, and that Rob can do, and it’s not harmful to his child, he’ll give her, right? But sometimes children will ask for things they think are good, but they don’t realize are harmful for them. *Rob and Ashley on stage*.

Ashley, ask your father for a drink from this cologne. She thinks it good for her. It’s in a pretty bottle. In her limited knowledge she imagines her father will and should give her this drink. What she doesn’t know is that the drink in this container is harmful. If he gives her what she asks for, it may kill her. So he has to say, “no.” Now, Ashley, ask for a drink of orange juice from the container. Her father freely gives it to her. Why? Because, it will not harm her. In fact, it will actually do her good.

So it is with God. Whatever we ask that’s not harmful, God is more than willing to give us, but he reserves the right to say, “no.” He reserves the right to protect us from ourselves. Do you realize that if God gave us everything we asked for it would likely lead us away from him, or into sin, or into danger?

Mark it, child of God: God hears all of your prayers. Beyond that, he answers all of your prayers: yes, no, or wait. So when we ask God for something and he says, “no,” we should be grateful. I’ve never heard anyone say, “I asked God for something, and I want to thank him for saying, “no.”

But here’s the sum of all this: God wants his children to *know* they have eternal life. God wants you to *know* that he hears your prayers no matter how weak. Take out your penlight. Let’s turn them on. The power of prayer resides not in our power to send the signal, but in God’s power to receive the signal. No matter how weak your faith, you can be assured that our Lord hears it and is absorbed in what you have to say.

Multi-sensory Materials Used

1. Still pictures of planets of the solar system projected on screens
2. Small satellite dish
3. Still picture of enormous satellite receiver projected onto screen
4. Bible, own hand, and crumpled piece of paper
5. Hoola hoop
6. Father, young daughter, poison, and orange juice.

Multi-sensory Procedures

1. The still pictures flashed on the screen were intended to give people a mental picture of Voyager going further and further from the earth.
2. The small satellite dish enabled this teacher to visually demonstrate the receptive powers of the NASA satellite. With satellite in hand the teacher not only talked about the reception of NASA’s satellite receiver but was able to point to a visual example.

With the satellite in hand, the teacher was not only able to talk about the receptive power of God when it comes to our prayers, but to give them a visual picture.

3. The still picture on the screen of the enormous satellite was designed to give people a sense of the awesome power of that NASA satellite.
4. The crumpled paper, the teacher's hand, and the Bible demonstrated a three-fold point:
 - (a) The crumpled paper was used to show the instability of our emotions.
 - (b) The teacher's hand illustrated placing our faith on something.
 - (c) The Bible was used to show the stability of the Word of God.
5. The father, his daughter, the poison, and the juice were used as visual examples of how God answers prayer.

Advanced Multi-sensory Materials Used

1. Still pictures of planets of the solar system projected on screens
2. Small satellite dish
3. Still picture of enormous satellite receiver projected onto screen
4. Penlight given to entire congregation for tactile involvement
5. Bible, own hand, and crumpled piece of paper
6. Father, young daughter, poison, and orange juice.

Advanced Multi-sensory Procedures:

The advanced multi-sensory procedure was the same as the multi-sensory procedure, but with the addition of a tactile teaching tool. The entire congregation was given penlights with three goals in mind:

- (a) To demonstrate the weakness of Voyagers transmitter
- (b) To demonstrate the weakness of our prayers
- (c) To keep on their key chain as a constant reminder of prayer

The tactile teaching moment came as the teacher instructed the congregation to turn on their penlights. With the lights off in the auditorium all the lights were turned on. Then the teacher reminded them that prayer does not depend on the power of our prayer signal, but on the power of God to receive the signal.

APPENDIX 5

TEST FOR COMPREHENSION AND RETENTION

Saturday Evening Sample

Treatment Procedures:

7-17-04: Auditory + Visual + Tactile

7-24-04: Auditory

7-31-04: Auditory + Visual

Age: _____

National Origin: _____

Sex: _____

Have you attended the past two Saturday evening services? Yes: _____ No: _____

Please fill in the blanks to the following questions:

1. What are the three steps a carpenter uses to *clinch a nail*?
 - First the carpenter _____ the nail into the board.
 - Second he _____ the nail.
 - Third he _____ the nail.

2. What are the three statements Jesus used to *clinch the security* of our salvation?
 - I give you _____.
 - You will never _____.
 - You are in _____.

3. Communication between NASA and Voyager I did not depend on Voyager's power to _____ the signal, but on the satellite's power to _____ the signal.

4. Our communication with God does not depend on our power to _____ the prayer, but on God's power to _____ the prayer.

5. The human heart muscle is about the size and shape of your _____.

Your spiritual heart refers to what part of your spiritual trinity? My

Sunday 9:00 AM Sample

Treatment Procedures:

7-18-04: Auditory

7-25-04: Auditory + Visual

8-01-04: Auditory + Visual + Tactile

Age: _____

National Origin: _____

Sex: _____

Have you attended the past two Saturday evening services? Yes: _____ No: _____

Please fill in the blanks to the following questions:

1. What are the three steps a carpenter uses to *clinch a nail*?
 - First the carpenter _____ the nail into the board.
 - Second he _____ the nail.
 - Third he _____ the nail.

2. What are the three statements Jesus used to *clinch the security* of our salvation?
 - a. I give you _____.
 - b. You will never _____.
 - c. You are in _____.

3. Communication between NASA and Voyager I did not depend on Voyager's power to _____ the signal, but on the satellite's power to _____ the signal.

4. Our communication with God does not depend on our power to _____ the prayer, but on God's power to _____ the prayer.

5. The human heart muscle is about the size and shape of your _____.

6. Your spiritual heart refers to what part of your spiritual trinity? My _____.

Thank you for helping me discern how to better teach you the Word of God. I love you all and thank God for the privilege of being you pastor.

Your Friend
Rick Blackwood, Pastor

Sunday 10:30 AM Sample

Treatment Procedures:

7-18-04: Auditory + Visual

7-25-04: Auditory + Visual + Tactile

8-01-04: Auditory

Age: _____

National Origin: _____

Sex: _____

Have you attended the past two Saturday evening services? Yes: _____ No: _____

Please fill in the blanks to the following questions:

1. What are the three steps a carpenter uses to *clinch a nail*?
 - First the carpenter _____ the nail into the board.
 - Second he _____ the nail.
 - Third he _____ the nail.

2. What are the three statements Jesus used to *clinch the security* of our salvation?
 - a. I give you _____.
 - b. You will never _____.
 - c. You are in _____.

3. Communication between NASA and Voyager I did not depend on Voyager's power to _____ the signal, but on the satellite's power to _____ the signal.

4. Our communication with God does not depend on our power to _____ the prayer, but on God's power to _____ the prayer.

5. The human heart muscle is about the size and shape of your _____.

6. Your spiritual heart refers to what part of your spiritual trinity? My _____.

Thank you for helping me discern how to better teach you the Word of God. I love you all and thank God for the privilege of being you pastor.

Your Friend
Rick Blackwood, Pastor

APPENDIX 6

SENSORY PREFERENCE TEST

This checklist indicates your sensory preference(s). It is designed for adults and is one of many that are available. You should not rely on just one checklist for self-assessment. Remember that sensory preferences are usually evident only during prolonged and complex learning tasks.

Directions: For each item, circle “A” if you agree that the statement describes you most of the time. Circle “D” if you disagree that the statement describes you most of the time. Move quickly through questions. Your first response is usually the more accurate one.

1. I prefer reading a story rather than listening to someone tell it. A D
2. I would rather watch television than listen to the radio A D
3. I remember names better than faces. A D
4. I like classrooms with lots of poster and pictures around the room. A D
5. The appearance of my handwriting is important to me. A D
6. I think more often in pictures. A D
7. I am distracted by visual disorder or movement. A D
8. I have difficulty remembering direction that were told to me. A D
9. I would rather watch athletic events than participate in them. A D
10. I tend to organize my thoughts by writing them down. A D
11. My facial expression is a good indicator of my emotions. A D
12. I tend to remember names better than faces. A D
13. I would enjoy taking part in dramatic events like plays. A D
14. I tend to subvocalize and think in sounds. A D
15. I am easily distracted by sounds. A D
16. I easily forget what I read unless I talk about it. A D
17. I would rather listen to the radio than watch television. A D
18. My handwriting is not very good. A D
19. When faced with a problem, I tend to talk it though. A D
20. I express my emotions verbally. A D
21. I would rather be in a group discussion than read about a topic. A D
22. I prefer talking on the phone rather than writing a letter to someone. A D
23. I would rather participate in athletic events than watch them. A D
24. I prefer going to museums where I can touch the exhibits. A D
25. My handwriting deteriorates when the space becomes smaller. A D
26. My mental pictures are usually accompanied by movement. A D

- | | |
|---|-----|
| 27. I like being outdoors and doing things like biking, camping, swimming, Hiking, etc. | A D |
| 28. I remember best what was done rather what was seen or talked about. | A D |
| 29. When faced with a problem, I often select the solution involving the Greatest activity. | A D |
| 30. I like to make models or other hand-crafted items. | A D |
| 31. I would rather do experiments than read about them. | A D |
| 32. My body language is a good indicator of my emotions. | A D |
| 33. I have difficulty remembering verbal directions if I have not done the Activity before. | |

Interpreting Your Score

Total the number of "A" responses in items 1-11: _____
This is your visual score.

Total the number of "A" responses in items 12-22: _____
This is your auditory score.

Total the number of "A" responses in items 23-33 _____
This is your tactile/kinesthetic score.

If you scored a lot higher in any one area: This sense is *very probably* your preference during a protracted and complex learning situation.

If you scored a lot lower in any one area: This sense is *not likely* to be your preference in a learning situation.

If you have similar scores in all three areas: You can learn things in almost any way they are presented.

Reflections

- A. What was your preferred sense? Were you surprised?
- B. How does this preference show up in your daily life?
- C. How does this preference show up in your teaching? (Sousa 2001,57-60)

APPENDIX 7

LIST OF NATIONALITIES PARTICIPATING IN TEST

1. American
2. American Indian
3. Antigua
4. Argentina
5. Bahamas
6. Barbados
7. Belize
8. Bulgaria
9. Brazil
10. Canada
11. Curacao
12. Cayman Islands
13. Chile
14. China
15. Chinese-Korean
16. Columbia
17. Costa Rica
18. Cuba
19. Dominican Republic
20. Dutch
21. Ecuador
22. England
23. El Salvador
24. Fijian
25. Germany
26. Greece
27. Guatemala
28. Guyana
29. Haiti
30. Honduras
31. India
32. Iran
33. Iraq
34. Ireland
35. Israel
36. Italy

37. Jamaica
38. Kititian
39. Korea
40. Lebanon
41. Malaysia
42. Mexico
43. Nicaragua
44. Nigeria
45. Palestine
46. Panama
47. Peru
48. Portugal
49. Puerto Rico
50. Russia
51. Scotland
52. South Africa
53. Spain
54. St. Kitts
55. Surinam
56. Sweden
57. Trinidad
58. St Vincent
59. Vietnam
60. Venezuela
61. Zaire

APPENDIX 8

LETTER TO OBSERVATION PANEL

Dear Friend,

I need your assistance for a project that may have profound implications for pastors and their congregation. I am conducting a research experiment at the doctoral level to evaluate the use of multi-sensory teaching techniques in preaching, specifically expository preaching. By “multi-sensory preaching,” I simply mean the use of visual aids and tactile teaching methodologies in preaching.

My goal is to contrast the traditional method of preaching, i.e. lecture format with the non-traditional method using multi-sensory aids. The outcome is to measure congregational *attention, comprehension* and *retention* of sermon material. The experiment will be conducted at Christ Fellowship in Miami Florida over a three-week period. At the conclusion of the three weeks, I will test my congregation for comprehension and retention of the material taught over the past three weeks. I want to find out if multi-sensory preaching improves retention and comprehension.

Here’s where I need your help. I wish to measure *attention levels* in the congregation. To do this, we will focus cameras on a portion of the congregation and observe attention levels during periods when there is a multi-sensory presentation and with its counterpart, which is the same material minus the multi-sensory aids. I need an objective set of eyes (yours) to watch ten people during that select portion of the sermon.

I need you to count the number of times the person is distracted, i.e. looks away from the point of focus. Please do not consider a turn to a neighbor for commenting on the sermon, laughing, or looking down to write notes as a distraction.

I will send you the video or DVD preset to the place for your observation. I will also contact you to make sure you are clear on the objectives. In teaching, we want to grab people's attention and hold onto it through the duration of the sermon. I simply want to find out if the use of multi-sensory methods will help us in this great calling of ours.

Thanks,

Rick Blackwood

APPENDIX 9

OBSERVATION PANEL AND CREDENTIALS

Lynn Cruz: B.S. Florida State University; Learning disabilities and speech pathology.

Dr. Roger Felipe: B.A. Miami Christian College; M.A. Trinity Evangelical Divinity School; D.Min. in Ministry to Post-modern Generations, Gordon-Conwell Theological Seminary. Professor: Trinity International University.

Eric Geiger, B.S. Louisiana Tech University; M.A. Ed.D. The Southern Baptist Theological Seminary. Speech communication major at Louisiana Tech University. Executive Pastor, Miami, FL.

David Leama, D.Min. Director, New Orleans Baptist Theological Seminary, Miami Florida Extension.

Diane Millette, Ph.D. Professor of Speech Communication, University of Miami.

Michael Vensel: B.S. Georgia State University; M.S. Florida International University. Professor at Florida International University and trained in Florida performance Measurement System.

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ABSTRACT

FACTORS IN EXPOSITORY PREACHING THAT INFLUENCE ATTENTION COMPREHENSION AND RETENTION LEVELS

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The gathered data in this research provides pastors, Christian educators, and other educators with a better understanding of multi-sensory teaching and advanced multi-sensory teaching and their influence on the cognitive domain. Specifically, this experiment seeks to determine if the use of multi-sensory teaching models could improve the impact of expository teaching in the cognitive domain, particularly as it relates to attention, comprehension, and retention in the life of the student.

The different teaching methods are:

1. *Mono-Sensory Teaching*: Auditory Teaching
2. *Multi-sensory Teaching*: Auditory + Visual Teaching
3. *Advanced Multi-sensory Teaching*: Auditory + Visual + Kinesthetic Teaching

The work sets forth the cognitive objectives of the pastor-teacher, which include influencing the attention, retention, and comprehension of students. The research questions then ask: In expository preaching, does multi-sensory delivery and advanced multi-sensory delivery significantly influence attention, retention and comprehension?

Literature was reviewed that considered the educational, neurological, and theological implications of multi-sensory teaching. Literature, which examines teaching

styles and learning styles, is also included. This literature supports the theory that people have unique learning preferences by which they prefer to learn and by which they learn the best. The closer the teaching matches the learning style of the student, the more effective the learning of the student will be.

A quasi-experimental posttest only design was conducted on a sample that included 923 individuals from 61 different nationalities. Students were treated with the three types of delivery and then observed to measure attention levels and post tested to measure comprehension and retention levels. *Mono-sensory Delivery* was the control group as no new teaching method was introduced. *Multi-sensory Delivery* was Tx¹ as the first new teaching variable was introduced. Advanced Multi-sensory Delivery was Tx² as the second new teaching variable was introduced. The test was conducted three times.

Results of the three preaching methodologies were collected, interpreted, and conclusions were reached.

KEYWORDS: Multi-sensory, attention, comprehension, retention, learning styles, expository preaching, learning preferences, brain hemispheres.

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