TEACHING THE INDUCTIVE BIBLE STUDY METHOD OF BIBLE INTERPRETATION TO ADULTS: A COMPARISON OF THREE INSTRUCTINAL APPROACHES

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements

For the Degree of DOCTOR OF PHILOSOPHY

By

Luke Kyungwhan Pak, M.Div., STM.
Denton, Texas
August, 1996
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This study compared three groups of adult learners in a church education environment in order to determine the effectiveness of using lecture/demonstration plus cooperative learning elements with or without group processing (LCL) as compared to the use of lecture/demonstration plus individualistic learning elements (LIL) with the Inductive Bible Study Method (IBSM) as the common subject for all groups. While group A experienced highly structured cooperative learning without having group processing, group B experienced highly structured cooperative learning with an emphasis on group processing. Group C served as a control group. This study took place with a total of five class hours.

For measuring student cognitive achievement, the subjects were administered a written pretest and posttest in the form of a "use-of-IBSM measure." For measuring students' attitude toward Bible interpretation (as promoted by IBSM), the students responded to an "attitude-toward-Bible-interpretation measure" at pretest and posttest. For measuring students' affective reactions, the students responded to a posttest-only "students'-satisfaction-with-the-learning-experience measure". Students' attitude toward the philosophy behind IBSM was measured by using an "attitude-toward-IBSM" instrument at posttest. In addition, teachers and students were interviewed orally at posttest to ascertain their affective reactions to the instructional approach they experienced. Connections between demographic data and students' use and/or attitude toward IBSM, as well as their satisfaction with the learning experience and attitude toward cooperative versus individualistic instructional methodology were also explored. The data from the use-of-
IBSM as well as attitude-toward-Bible-interpretation measures were analyzed by analysis of covariance. Other posttest-only tests were analyzed by a priori comparisons.

Three major findings of this study were: (1) LCL did not produce any significant impact on learners' use of IBSM, attitude toward IBSM, or satisfaction with the learning experiences compared to LIL; (2) Group processing did not enhance the achievement effects of the experimental group B when compared to other contrast groups; and (3) LCL promoted students' affective outcomes in the areas of consensus building and intragroup dynamics.
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SECTION I

STATEMENT OF THE PROBLEM

The challenge of the adult education movement

Teaching adults is a very compelling agenda to deal with because adult education is the largest and fastest growing segment of American education. According to Kelly (1986), over 30% of the college students in 1992 were adult learners over 30 years of age. By 2000, the age spread of the United States population will generally be as follows: 6% under 5; 18% between 15 and 17; 23% between 18 and 34; 30% between 35 and 54; 16% between 55 and 74; and 6% senior adults over 75. Putting it in another way, almost 70% of the whole population of America will be over 18 years of age (Barna, 1990). Also, the adult group is the most divergent group, including people in several distinctive stages of development (Zuck & Getz, 1970).

Another challenging factor in adult education is the growth of adult learners' interest in noncredit learning options or in some kind of certificate. According to Cross (1981), colleges have responded vigorously to the growing interest both in credit and noncredit learning. Thus, there is a growing demand for more practical information about how to facilitate the learning of adult learners. Brookfield (1986) points out a crying need for "instructional design activities that support teaching-learning encounters in adult education" (p. 9). This urgent need for new instructional model is true in Christian adult education, too. Although the number of adult learners are growing, churches have difficulty in reaching more than 50% of their adult members for participation in adult Christian education. In a recent study of one major denomination, one of the reasons for adults not attending church educational programs, according to Harton (1986), was their unfavorable
learning experience which made them bored. As Patterson (1989) stresses, reevaluation of instructional models in Christian adult education is very urgent "since it appears to be at the root of a fundamental problem." (p. 20)

**Adult learners and cooperative learning**

Most institutions and organizations for higher and continuing education prefer to use the traditional practice of lecture as their primary and most-used instructional method. This phenomenon has been revealed by several reports. Lecture is the most common instructional method in adult education (Merriam and Cunningham, 1989), in higher education institutions (McKeachie, 1980), and in religious education (Murray, 1987). This trend does not mean that the traditional practice is the most preferred learning method for adult learners. Several studies (Sarason, 1983; Sharan, 1990b, 1994a; Maruyama, Knechel, and Petersen, 1992) have stated that this whole-class teaching method contributes to boredom, rote learning, thoughtlessness, students' fear of failure, lack of self-regulation, and less intrinsic motivation; thus, it is said to be unsatisfactory for most pupils of almost any age, often producing many negative consequences for teachers and pupils alike. Hiemstra and Sisco (1990) suggest the need of substantial alterations in methods of learning in adult education institutions and various organizations if they are to serve the various needs of the adult learner.

Adults differ from younger people in their view of themselves and their personal needs. They are, in fact, complex beings. According to Stubblefield (1986), when the educational activities are perceived as being relevant to his/her needs, an adult participates in a particular educational activity. Also, adults bring their experiences, which are rich resources for learning. Readiness to learn is another distinctive characteristic of adult learners. Once they learn something, they are ready to apply it immediately to their current life problems. Draves (1984) states that "they bring to the learning situation a combined set
of emotional, physical, mental, and social characteristics that makes each one of them unique" (p. 7).

Obviously, there is a need for using "adequate" learning strategies with adult learners because of the adult's unique characteristics that are different from other age groups, and the cooperative learning method is said to be a promising one for that purpose. Cooperative learning, according to Lataillade-Beane (1992), shares many characteristics with adult learning. Specific characteristics have been suggested by James (1983), Knowles (1984), Lindeman (1961), and Knox (1986). Both cooperative learning and adult learning are learner- and problem-centered, have supportive environments, emphasize participation, promote positive social interaction, and require individual accountability. Johnson and Johnson (1994a) and Joyce, Weil, and Showers (1992) state that cooperative learning is an alternative to traditional teaching or lecture, regardless of age or subject, which promotes academic achievement, reduces alienation and loneliness, produces pro-social behaviors, increases self-esteem, and motivates students to learn. These potential outcomes for cooperative learning and the student-centered nature of the approach make the cooperative learning method an attractive alternative strategy to the traditional lecture approach for adult learning.

**Cooperative learning and interest among adult Christian educators**

While years of research have provided a great data base on the effects of cooperative learning practices at the elementary, secondary, and college levels (Johnson and Johnson, 1987; Slavin, 1980, 1984, 1990, 1991; McKeachie, Pintrich, Lin and Smith, 1987), little data is available for those who want to know the effects of cooperative learning on adult learners in Christian education settings (Davies, 1994; Rahn, 1992). Recently there has been increased interest in cooperative learning among many educators in Christian education, and many support the practice (Davies, 1994; Dennie, 1994; Habermas, 1994;
Lamport, 1994; Rahn, 1992, 1994). The potential benefits of using cooperative learning (i.e. positive interpersonal relationships, pro-social behaviors, self-esteem, creative ability through divergent thinking, risk-taking and productive controversy, reduction of prejudice, valuing of individual differences, promotion of intrinsic motivation, positive attitude toward subject areas and instructional activities, cultivation of a sense of belonging, acceptance/efficacy on the part of teachers and students) constitute compelling reasons for the consideration of cooperative learning as a valuable instructional approach for adult Christian education (Johnson and Johnson, 1987, 1994a; Sharan, 1994a). As Rahn (1992) aptly points out:

For seminary and college-level training, the values of loving others, enjoying learning, leading others, thinking critically and creatively to effect problem-solving and change seem desirable and are in solid alignment with cooperative learning approaches. The same is true for adult Sunday School-type settings, and largely true for children and youth (p. 11).

Indeed, the cooperative learning approach seems to be a very faithful ally to Christian educators for accomplishing their mission in teaching, which is, according to Lamport (1994), "to ensure that the learning activity will nurture godly character, interdependent community, and active service through utilization of teaching methods that are a creative fit with one's intended objectives" (p. 50).

**Purpose of the study**

Little research data is available for those who want to know the effects of cooperative learning on adult learners both in formal educational settings, such as seminary and Bible college, and less formal settings, such as Sunday school or church education.
The purpose of this study was to compare contrast groups of volunteer adult learners in a church education environment in order to find out the cause-effect relationships by manipulating the independent variable (three instructional methodologies: traditional lecture-demonstration plus individualistic learning versus traditional lecture-demonstration plus cooperative learning with/without group processing) and observing the effect on dependent variables -- students' use of the Inductive Bible Study Method (IBSM), attitude toward Bible interpretation, attitude toward IBSM, and satisfaction with the learning experience.

Training students to apply acquired information and understanding of IBSM principles in interpreting the content of the Scriptures, even when presented with unfamiliar parts of the Scriptures, is very helpful for a Christian's spiritual growth, maturity, and effectiveness. This application requires the ability to use the skills of inductive and deductive reasoning as well as critical thinking.

This study also examined the effects of group processing versus no group processing in cooperative learning on the dependent variables listed in the preceding paragraph. Yager, Johnson, Johnson, and Snider (1986) report that group processing activities, such as reflection on the group's activities at the end of each class period, can enhance the achievement effects of cooperative learning. However, Dansereau's (1985) scripted dyadic cooperation has brought success in students' reading comprehension skill without requiring group processing. If group processing can enhance the student achievement effects of cooperative learning as Yager, Johnson, and Johnson (1986) claim, can one expect even greater student achievement effects by adding group processing to Dansereau's (1985) scripted dyadic cooperation? The answer to this question will help Christian educators have greater confidence in deciding whether to use cooperative learning with or without group processing for promoting cognitive achievement and attitudinal change in adult education.
According to Johnson and Johnson (1994a), group processing provides a structure for group members to be accountable to each other for being responsible and skillful teamwork. Being accountable to one another in cooperative working situation is an indicator showing his/her Christian maturity, and promoting Christian maturity is one of the most important goals of Christian education as Wilhoit (1986) points out.

This study tested the following eight hypotheses:

1. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on a Use-of-IBSM measure than adults who receive instruction in IBSM using traditional lecture/demonstration with individualistic learning elements.

2. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on a Use-of-IBSM measure than adults who receive instruction in IBSM using cooperative learning method without group processing.

3. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on an attitude-toward-Bible-interpretation measure than adults who receive instruction in IBSM using traditional lecture/demonstration method with individualistic learning elements.

4. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on an attitude-toward-Bible-interpretation measure than adults who receive instruction in IBSM using cooperative learning elements without group processing.

5. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group
processing) will score higher on an attitude-toward-IBSM measure than adults who receive instruction in IBSM using traditional lecture/demonstration method with individualistic learning elements.

6. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on an attitude-toward-IBSM measure than adults who receive instruction in IBSM using cooperative learning elements without group processing.

7. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on a students'-satisfaction-with-the-learning-experience measure than adults who receive instruction in IBSM using traditional lecture/demonstration method with individualistic learning elements.

8. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on a students'-satisfaction-with-the-learning-experience measure than adults who receive instruction in IBSM using cooperative learning elements without group processing.

In addition to testing the eight hypotheses, this study sought to answer one research question as follows: What are the affective reactions of adult learners to instruction in IBSM using different methodologies? This study sought to understand students' and teachers' affective reactions toward the instructional approach they experienced by interviewing them.

Definition of terms

1. IBSM -- The Inductive Bible Study Method (IBSM) is teaching an interpretation process that emphasizes careful and controlled discovery. "Versions of inductive teaching are often found in schools under the label of 'discovery learning' because careful,
methodical, and intelligent discovery is the key to inductive study" (Wilhoit & Ryken, 1988, p. 140). In inductive approaches, the teacher facilitates and supports the learner's investigation and discovery.

IBSM consists of three steps. These steps are observation, interpretation, and application. Each step is designed to accomplish part of the process of understanding a Bible passage. The first step in IBSM is observation. In this step, the student asks and answers the question, "What do I see?" The second step of IBSM is interpretation. Here, the student asks and answers the question, "What does it mean?" While observation questions are designed to yield objectively verifiable answers on which people would agree, interpretive statements are less objectively verifiable. The last step of IBSM is application. In this step, the student asks and answers the question, "How does it work for me and others?" This step begins by summarizing the main principles that have emerged from the observation and interpretation steps. IBSM follows the order of the scientific method of inquiry, beginning with observation and then interpretation (hypothesis generation) based on careful observation of the Bible (data) and not merely on opinions and conjecture.

2. Cooperative learning — Cooperative learning is a structured, systematic instructional strategy in which each small group of students work together on a common goal that the participants in the group cannot achieve individually. However, a cooperative learning group differs from a traditional learning group in its emphasis on highly structured techniques for ensuring (1) positive interdependence and individual accountability, (2) heterogeneous membership, (3) the teaching of social skills, (4) the monitoring of groups, and (5) group processing (Johnson et al., 1991; Cooper, 1991).

3. Christian maturity — Christian maturity is the central aim of Christian education. In the Bible, Christian maturity is associated with four basic concepts: spiritual autonomy, spiritual wholeness, spiritual stability, and wise use of knowledge. Spiritually autonomous
individuals have control over their lives and are appropriately self-directed. Spiritual wholeness is a quality that a person loves God as well as others. Spiritual stability is a steadfastness that one has his/her anchor on the revealed truth of God. Those who use Scriptural knowledge wisely do not use knowledge to impress others but to build up others for the common good of the community.

4. Group processing -- This refers to a process in which the members of each cooperative learning group discuss how well they are achieving goals and maintaining effective working relationships in order to clarify and improve the effectiveness of the members in continuing their collaborative efforts to achieve the group's goals. According to Johnson and Johnson (1994a, 1994b), there are five steps to structure this skill into a cooperative learning group: assessing the quality of interaction among group members by observing the group at work, examining group process by promoting discussion of this topic among group members, setting group goals as to how to improve the group's effectiveness, conducting whole class processing by sharing the observation results on how effectively it is functioning with the class, and conducting small-group and whole-class celebrations. If the group processing is to be successful, the teacher should allow sufficient time for it to take place, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing (Johnson & Johnson, 1991).

5. Scripted cooperation approach -- This method was developed by Dansereau and his colleagues (1992). Dansereau found that adults working on structured "cooperative scripts" can learn technical materials or procedures far better than can students working alone. In using these steps, one member of the group takes the role of recaller, and the other member(s) of the group serve as the listener(s)/facilitator(s). The recaller, then, summarizes from memory what has been learned. The listener(s) correct any errors in the recall, fill in any omitted material, and help think of ways all students can remember the
main ideas. For the next text section, the students switch roles. Dansereau (1992) suggests the acronym "MURDER" to make the strategy easy to learn and follow. This acronym stands for "Mood, Understand, Recall, Detect, Elaborate, and Review."

6. Learning Together approach -- According to Johnson and Johnson (1994b), the Learning Together approach should include five key components: positive interdependence, individual accountability, face-to-face promotive interaction, interpersonal and small group skills, and group processing. The Johnsons (1987, 1990, 1994a, 1994b) say that positive interdependence is the most important element of successful cooperative learning structure. This element is successfully structured when group members feel that they "sink or swim together" to complete a task and perceive that each person's effort will benefit the individual as well as all the members of the group. Individual accountability/personal responsibility is structured to assess each individual's contribution to the overall performance of the group. Face-to-face promotive interaction exists when students encourage, support, help, praise and facilitate each other's efforts to complete joint tasks. Interpersonal and small group skills are the keys to group productivity, and the group members must be taught these skills in order to achieve high quality collaboration and for members to be motivated to use them. Group processing exists when the members of each cooperative learning group discuss how well they are achieving goals and maintaining effective working relationships in order to clarify and improve the effectiveness of the members in continuing their collaborative efforts to achieve the group's goals.

Assumptions

In this study, the experimenter assumes that IBSM and its underlying philosophy/principles are sound and have great value in promoting a Christian's spiritual growth, maturity, and effectiveness.
Limitations

Since this study was implemented only on the one ethnic group (Korean, Asian-American), the generalizability may be limited somewhat. The age range of the subjects for this study also is another limitation in this study. Most of the students were middle-aged adults, with the average age of all subjects being 44.65 years. Therefore, the results of this study may not be generalizable to adults of all ages. The third limitation of this study is somewhat similar to the previous statement. All participants in this study were born in Korea. According to Pang (1995), an important variable to consider when doing research with Asian-Americans is place of birth - U.S. born or immigrant. Therefore, the results of this study may apply best to immigrants. The fourth limitation is the short duration of this study. The duration of each class session was sixty minutes, and there were five class sessions (on five consecutive Sundays in all). While ideally subjects should be exposed to an experimental treatment for a longer period of time in order to more accurately assess its effectiveness, permission was granted to the experimenter to be in the church school for a maximum of five weeks. But, everything about IBSM cannot be taught even within a year. Therefore, the experimenter carefully constructed the lessons to stress the overarching concepts of IBSM with wide-ranging applicability so that the subjects may learn and apply the basic concepts and application to their life-long study on the Scripture. Because the purpose of the course, "Living by the Book", was to teach the basic and overarching concepts of IBSM, it required no more than the duration for this study to accomplish the goal. Another limitation of this study was the small number of subjects (i.e. sixteen in each of the three contrast groups), but, according to Gay (1987), as few as fifteen subjects per group are acceptable in experimental studies with fairly tight experimental controls.
SECTION II

REVIEW OF RELATED LITERATURE

What is cooperative learning?

Cooperative learning may be defined as a structured, systematic instructional strategy in which each small group of students work together on a common goal that the participants in the group cannot achieve individually. However, a cooperative learning group differs from a traditional learning group in its emphasis on highly structured techniques for ensuring (1) positive interdependence and individual accountability, (2) heterogeneous membership, (3) the teaching of social skills, (4) the monitoring of groups, and (5) group processing (Johnson et al, 1991; Cooper, 1991). These elements will be described in detail later.

A variety of cooperative learning methods have been developed since the early 1970s: the principles approach of the Johnsons (1989, 1994a), the structural approach of Kagan (1992, 1994), the student team learning methods of Slavin (1990, 1994), the group investigation approach of Sharan (1990, 1994a), and the complex instruction approach of Cohen (1986, 1994).

Some methods are complex, while other methods are fairly simple. However, these various approaches have certain characteristics in common. Davidson and Worsham (1992) describe these common characteristics as follows: (1) a structured task suitable for cooperative group work and fostering interdependence among the students, (2) student-to-student interactions in a small group, and (3) individual accountability and responsibility.

The Johnsons (1994a) place all of these diverse approaches on a continuum with conceptual applications at one end and direct applications at the other. According to the Johnsons, conceptual approaches require teachers to understand both a general conceptual
model of cooperative learning and the skills that they can use to tailor cooperative learning for any specific students and circumstances. Cohen's and the Johnsons' approaches belong to this category. The rest of the approaches mentioned above belong to the direct applications category, which include packaged lessons, curricula, and strategies that are used in a lockstep, prescribed manner. According to the Johnsons (1994a), these two applications for cooperative learning are not contradictory but are complementary to each other:

A carefully crafted approach to cooperative learning requires a combination of clear conceptual framework for engineering successful cooperative learning, while utilizing the concrete examples of lessons and scripts (p. 20).

What are the basic elements in various types of cooperative learning?

Merely because people are gathered together for the purpose of cooperative learning does not guarantee that anything worthwhile will occur. There are basic elements which differentiate successful cooperative learning from poorly structured cooperative learning. In personal correspondence with Strother (1990), Deutsch, who was one of the most brilliant graduate students of Kurt Lewin, said that successful cooperative learning requires three key points, including: (1) students having opportunities to develop their motivation and to help one another learn; (2) students developing the attitude that they are responsible for and accountable to the other students, and (3) students acquiring the group processing skills necessary for effective cooperative work. In all, there are six approaches to cooperative learning. Each is discussed below.

David Johnson, who was a graduate student under Deutsch, extended Deutsch's work to social interdependence theory (Johnson & Johnson, 1974) and became one of the developers of the Learning Together approach. Johnson & Johnson (1974), who
developed the Learning Together approach, list five key components to well-structured cooperative learning: positive interdependence, individual accountability, face-to-face promotive interaction, interpersonal and small group skills, and group processing. Below, each of these elements will be explained in detail:

Positive interdependence is the first element. According to the Johnsons (1987, 1990, 1994a, 1994b) positive interdependence is the most important element of successful cooperative learning structure. This element is successfully structured when group members feel that they "sink or swim together" to complete a task and perceive that each person's effort will benefit the individual as well as all the members of the group.

There are three steps of structuring this element. The first step is assigning a group task which is clear and measurable. The second step is to build positive goal interdependence in the minds of the group members so that they perceive their personal success brings on everybody's success in the group. This element gives meaning to the efforts of the group members, thus exerting people's extraordinary efforts. One way to structure positive goal interdependence is to inform group members that everybody in the group needs to achieve a score above a specified criterion when tested individually. The third step is to utilize various types of positive interdependence as supplements to positive goal interdependence.

Reward/celebration interdependence is one of the various means of providing positive goal interdependence by rewarding each group member for successfully completing a joint task or by celebrating a group's success. Another type is role interdependence, which assigns roles (e.g., reader, recorder, elaborator, encourager, spokesperson) for each member to complete within the joint task. Resource interdependence involves controlling the amount of information, materials, or resources necessary for completing the joint task by either limiting the resources given to the group or jigsawing materials for the group to share. Identity interdependence fosters a spirit of interdependence by choosing a group name, motto, flag, logo, or song. Outside enemy interdependence involves trying to perform
better than other groups. Fantasy interdependence strives to solve any hypothetical
problems. Task interdependence can be created by using division of labor so that each part
must be done by the assigned individual in order for other members of the group to
complete their responsibilities. Finally, environmental interdependence happens when
providing a specified work place to a group (Johnson and Johnson, 1994a).

Individual accountability/personal responsibility is the second element. This
element is structured to assess each individual’s contribution to the overall performance of
the group. According to the Johnsons (1992b, 1994a), the purpose of a cooperative
learning group is to make each member a stronger individual in his or her own right. To
ensure this purpose, each student should be accountable to do his or her fair share of the
work. Individual accountability can be created by giving an individual test or oral
examination to each student, and then the results are given back to the group and the
individual so that the group knows who needs more assistance, support, and
encouragement. Another way to structure this element is to assign one member of the
group as a checker. The role of checker is to check other group members’ understanding
by asking them to explain the reasoning and rationale underlying the group answer.

The third element is face-to-face promotive interaction. This element exists when
students encourage, support, help, praise and facilitate each other’s efforts to complete joint
tasks. For creating this interaction, three steps are utilized: scheduling group meeting time,
highlighting positive interdependence, and encouraging promotive interaction among the
students in the group (Johnson and Johnson, 1994b).

The fourth element is interpersonal and small group skills. These skills are the keys
to group productivity, and the group members must be taught these skills in order to
achieve high quality collaboration and for members to be motivated to use them. For a
successful cooperative learning experience, the students must learn academic subject matter
(taskwork) as well as the interpersonal and small group skills for functioning as part of a
group (teamwork). The skills to get to know and trust each other, communicate accurately and clearly, accept and support one another, and resolve conflicts constructively have to be taught with equal emphasis as academic skills (Johnson and Johnson, 1994a, 1994b).

The fifth element is group processing. This element exists when the members of each cooperative learning group discuss how well they are achieving goals and maintaining effective working relationships in order to clarify and improve the effectiveness of the members in continuing their collaborative efforts to achieve the group's goals. Johnson and Johnson (1994a) define this element as "reflecting on a group session to (a) describe what member actions were helpful and unhelpful and (b) make decisions about what actions to continue or change" (p. 91). According to Johnson and Johnson (1994a, 1994b), there are five steps to structure this skill into a cooperative learning group: assessing the quality of interaction among group members by observing the group at work, examining group process by promoting discussion of this topic among group members, setting group goals as to how to improve the group's effectiveness, conducting whole class processing by sharing the observation results on how effectively it is functioning with the class, and conducting small-group and whole-class celebrations. If the group processing is to be successful, the teacher should allow sufficient time for it to take place, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing (Johnson & Johnson, 1991).

Johnson & Johnson (1994a, 1994b) state that the five essential elements mentioned above ought to be mastered by the teachers for at least two reasons. First, teachers must be able to tailor cooperative learning to their unique instructional settings. Second, teachers must be able to diagnose some students' deficiencies in working together with other students and to intervene in order to promote the learning effectiveness of the cooperative groups.
Johnson & Johnson's (1994a, 1994b) Learning Together approach must include four elements: the integrative use of types of cooperative learning (formal, informal, and base group), the five essential elements for a cooperative effort, cooperative learning structures, and a cooperative organizational structure for the school.

The formal type of cooperative learning as described by Johnson and Johnson (1992b) lasts from one class period to several weeks to achieve shared learning goals and to complete specific tasks and assignments. The teacher's role in this cooperative learning type is to: (1) specify the academic and social objectives for the lesson, (2) make a number of preinstructional decisions with regard to the size of the groups, the method of assigning students to groups, the roles students will be assigned, the materials needed to conduct the lesson, and the way the room will be arranged, (3) explain the task and the positive interdependence, individual responsibility, and expected social skills to be engaged in, (4) monitor students' learning and intervene within the groups to provide task assistance or to increase students' interpersonal and group skills, and (5) evaluate students' learning and help students process how well their groups functioned.

Johnson and Johnson (1992b) characterize informal cooperative learning groups are temporary, ad hoc groups that last possibly two to a few minutes to a full class period. The purposes of this type of cooperative learning are to "focus student attention on the material to be learned, set a mood conducive to learning, help organize in advance the material to be covered in a class session, ensure that students process the materials to be taught cognitively, and provide closure to an instructional session" (p. 174-175). Students often engage in focused discussions before and after a lecture for a few minutes and several turn-to-your-partner discussions throughout a lecture.

Cooperative base groups are long-term learning groups with stable memberships. The purpose of a base group is to promote students' mutual support, help, encouragement, and assistance, for each member needs to make academic process and develop cognitively
and socially in healthy ways (Johnson & Johnson, 1994a; Johnson, Johnson, Holubec, 1992; Johnson, Johnson, & Smith, 1991). To ensure the effect of individual accountability, one member of each base group is assigned to be a checker. The role of the checker is to check other group members' understanding of the content discussed in each class session (Johnson & Johnson, 1992b, 1994a).

_Academic Controversy_ is a second approach to cooperative learning. The Johnsons (1979, 1987) have developed and tested a theory about how controversy promotes positive outcomes. Academic Controversy is the result of their findings. This cooperative learning method tends to result in (1) greater student mastery and retention of the subject matter as well as greater ability to generalize the principles of the lesson, (2) higher quality decisions and solutions to complex problems, (3) more creative insights into the issues being discussed, (4) greater exchange of expertise and greater task involvement, (5) the creation of positive relationships among participants, (6) higher academic self-esteem, and (7) greater perspective-taking accuracy (Johnson & Johnson, 1992). In other words, this cooperative learning method can help students learn interpersonal, mediation, and negotiation skills. According to the Johnsons (1994C), cooperative learning establishes the context within which conflicts may be resolved constructively by increasing the probability that students will have clear perceptions of each other's positions and motivations, communicate accurately and completely, have a positive and trusting attitude toward each other, and define conflicts as a mutual problem to be solved.

When instructors structure controversies within cooperative learning, groups are required to (1) organize information and derive a conclusion, (2) present and advocate a position, (3) when challenged by opposing views, rebut opposing views by analyzing and evaluating critically, (4) take the perspective of others, and (5) synthesize and integrate information and arrive at a joint position to which all sides can agree. The task must be
structured as follows: (1) prepare instructional materials, (2) structure the controversy, (3) conduct the controversy, and (4) teach students conflict skills (Johnson & Johnson, 1994b).

**Student Team Learning** is a third approach to cooperative learning. According to Slavin (1994), team rewards, individual accountability, and equal opportunities for success are three central concepts to all Student Team Learning methods. When teams achieve above a specified criterion, they may earn certificates or other rewards. "Individual accountability" means that the team's success is tied to the individual learning of all team members. "Equal opportunities" for success refers to the fact that what students contribute to their teams is based on their improvement over their own past performance. Team rewards and individual accountability, indicates Slavin (1990), are essential elements for successful cooperation on basic skills achievement. Use of team rewards increases the group's achievement if and only if the team rewards are based on the individual learning of all team members (Slavin, 1990). According to Slavin (1989), however, Dansereau (1985) provided an example of successful implementation of the cooperative learning strategy at the college level without the above two ingredients. Dansereau's cooperative scripts for comprehension of technical material and procedural instructions lent themselves to a cooperative task structure rather than an incentive task structure. No group rewards were required at all. More details about Dansereau's method will be included in the section dealing with the effects of cooperative learning on cognitive outcomes in formal education settings.

**Complex Instruction** is a fourth approach to cooperative learning. Elizabeth Cohen (1994b), a social cohesion theorist, conceptualized this cooperative learning approach. Complex Instruction does not implement a reward interdependence structure as it is used in
the models of Slavin and the Johnsons. A challenging and interesting group task that requires everyone's contribution for a good outcome, according to Cohen, does not necessitate reward interdependence. This suggestion is echoed in Kohn's (1991) statement that a carefully structured cooperative learning task that allows students to construct how they perform those tasks and emphasizes the value of helping each other learn constitutes an alternative to extrinsic motivators.

This approach emphasizes clear task instructions, student preparation for interactive skills, and an understanding of the teacher's role in accordance with the nature of the group task. Cohen (1994a) states that a group task should be a task that requires resources -- information, knowledge, heuristic problem-solving strategies, materials, and skills -- that no single individual possesses so that the solution of the problem or accomplishment of the task objectives requires at least others' input.

Features such as training students for cooperation, developing cooperative norms, using student roles, and emphasizing the role of the teacher are the most important factors for promoting productive group work in the Complex Instruction method. Cohen (1994a) strongly recommends either pretraining or processing of the group while they are at work on the task in order to enhance cooperation. Based on her review of empirical research, Cohen (1994b) suggests if students are not taught with development of specific skills, they tend to operate at the most concrete level. For high-level operation, the students need specific development of skills for discourse, either in advance of cooperative learning or through direct assistance when groups are in operation. These social skills, therefore, should be taught by the instructor either through some kind of motivational device or through deliberate instruction. The group behaviors must not only be very specific but also directly relevant to the desired behaviors in the particular tasks that the teacher has assigned to the groups.
Like other cooperative learning approaches, Complex Instruction emphasizes the importance of students' being prepared for the new behaviors that are essential for working in a cooperative group. According to Cohen (1994b), there are two central cooperative norms to be developed among the students before starting group work: (a) "You have the right to ask anyone else in your group for assistance," and (b) "You have the duty to assist anyone in your group who asks for help" (p. 88). During group work, the teacher ought to observe students' cooperative behaviors and give specific feedback both to individuals and to groups.

Delegation of authority to the students is one of the critical issues of Complex Instruction, and it can be done by giving students roles to play. The roles ought to be rotated to each student so that everyone in the group has a chance to play each role. Although there are various roles selected by the nature of the task and by the age of the student, a facilitator is always used in the Complex Instruction approach.

Cohen, Lotan, & Leecehors' (1989) research on Complex Instruction suggests that the more students talk and work together, the more they learn. Direct instruction by the teacher reduces students' interaction time, thus decreasing desired learning outcomes. The teacher's roles in Complex Instruction, according to Cohen (1994b), are delegating authority to the students and helping students to think by asking higher-order questions while they are engaged in task-related discussions. Also, at the introduction and end of the lesson, the teacher provides an overall picture of the lesson by informing, summarizing, and connecting the segments of knowledge.

*Group Investigation* is a fifth approach to cooperative learning. It is a complex structure in which students form cooperative groups by the students' common interest in a topic. This group project method has four basic features: investigation, interaction, interpretation, and intrinsic motivation (Sharan, 1994a). All these features are combined in
the six stages of the model: (1) class determines subtopics and organizes into research groups, (2) groups plan their investigations, (3) groups carry out their investigations, (4) groups plan their presentations, (5) groups make their presentations, and (6) teacher and students evaluate their projects. Emphasis is placed on students planning how to research their topic, interpreting the data they gather, synthesizing and summarizing the group work, and presenting their findings to the whole class.

A sixth approach to cooperative learning and another strategy in the group-investigation camp is the **Structural Approach** by Kagan (1992, 1994), which organizes the interaction of students by structuring and prescribing students' behavior, step-by-step, as they complete the assignment. This approach is a content-free way of organizing social interaction in the classroom. In this regard, structures are different from activities that are specific and content-bound. Jigsaw, Student-Teams- Achievement-Divisions or STAD, Think-Pair-Share, and Group-Investigation are some of the most well-known structures (Kagan, 1989). The following are the six key components of the Structural Approach: (1) structures and related constructs, (2) basic principles, (3) team building and class building, (4) teams, (5) management, and (6) social skills (Kagan, 1994).

The appropriate structure is chosen according to the objective at hand. Since there are many objectives, a variety of structures is necessary. Kagan (1994) states that the most important considerations when determining the domain of usefulness of a structure are:

1. What kind of cognitive development does it foster?
2. What kind of social development does it foster?
3. Where in a lesson plan does it best fit?
4. What kind of curriculum does it deliver? (p. 118)

Different structures are useful for distinct objectives such as team building, class building, communication building, mastery, and concept development. For example,
Think-Pair-Share is most often used for concept development and involves generating and revising hypotheses, inductive/deductive reasoning, and application. It also is used for promoting the participation and involvement of the students. Numbered Heads Together, on the other hand, is used for mastery and involves reviewing or checking for comprehension.

Before implementing these strategies, however, one should note that some of these strategies presuppose the pre-acquisition of interpersonal and group processing skills (Sharan, 1994a). According to the Sharans (1994a), interaction among students is essential to Group Investigation, and effective interaction requires the acquisition of basic teamwork and discussion skills. Kagan (1994) also stresses this aspect when saying that teams experience serious difficulties if teambuilding and classbuilding are neglected, especially in classrooms in which there are preexisting tensions. Not paying enough attention about these prerequisites may cause failure and lead many instructors to return to a more traditional instructional approach.

What effect does cooperative learning have on various cognitive and affective outcomes in formal educational settings?

Through their careful study of the effect of the cooperative learning method on sixth-grade students' motivation to learn and its relation to academic achievement, Sharan and Shaulov (1990a) concluded that even those students whose achievement heretofore is not very high can be motivated to learn if the instructional method is appropriate for them and engages them in learning. Cooperative learning appears to provide such an environment. In fact, other researchers (Cohen, 1994a, 1994b; Johnson & Johnson, 1987, 1994a, 1994b; Sharan, 1990a, 1990b; Slavin, 1989; Davidson and Worsham, 1992) indicate that cooperative learning is a strategy for increasing academic and social outcomes, producing pro-social behaviors of both students and teachers, improving interracial
acceptance, aiding teachers to help students at risk, promoting higher order thinking, motivating students to learn, and managing academically heterogeneous students in their learning of basic skills in elementary and secondary classrooms in the United States and abroad. Below are some of the effects that cooperative learning has had on various cognitive and affective outcomes in formal educational settings.

Concerning the effects of cooperative learning approaches on cognitive outcomes, Slavin (1990) conducted a meta-analysis of 60 studies which focussing on elementary and secondary schools. Meta-analysis is a method of statistically combining the results of a set of independent studies that test the same hypothesis and use inferential statistics to draw overall conclusions. To be included in his review, studies had to have lasted at least four weeks, and experimental and control classes had to take the same achievement tests under the same conditions. The research review used effect size as the measure of the impact of cooperative learning on student achievement. An effect size is the proportion of a standard deviation by which an experimental group exceeds a control group (Glass, McGaw, and Smith, 1981). Through the review, Slavin (1990) found that cooperative learning increased academic achievement and student interaction while being easy to use and cost effective. Another benefit of cooperative learning was that the proportion of students' class time spent on-task increased.

Johnson & Johnson (1989) also conducted a meta-analysis of five hundred twenty-one experimental studies and one hundred correlational studies. The Johnsons (1994a) contend that the overall body of research has considerable generalizability, for the research participants have varied in their economic class, age, gender, and cultural background. The research tasks and measures of the dependent variables have also varied widely. Their conclusions are that cooperative efforts result in higher student achievement, greater productivity, greater interpersonal liking, more social support, higher self-esteem, and greater psychological health than do competitive or individualistic efforts.
Cooperative learning may also be a good instrument for value-based instruction such as character education and conflict resolution. Concern over the moral condition of American society has some calling for a character education comeback in American schools. According to Lickona (1993), character education must develop good character in the young by encompassing the cognitive, affective, and behavioral aspects of morality. Cooperative learning, suggests Lickona (1993), is very effective in developing students' appreciation of learning, capacity for hard work, commitment to excellence, and sense of work as affecting the lives of others. Furthermore, cooperative learning promotes student retention by allowing for significant amounts of meaningful student discussion that enhances students' satisfaction with the learning experience.

Another cognitive outcome that cooperative learning has been shown to promote is a greater use of high-level reasoning strategies and critical thinking as compared to when competitive or individualistic learning strategies are used. Presently, critical thinking is considered to be the primary goal in many subject areas at all levels in both public and private schools. However, the application, evaluation, and synthesis of knowledge are often neglected. Cooperative learning shows great potential as a possible remedy for this problem (Gabbert, Johnson, & Johnson, 1986; Johnson, Skon, & Johnson, 1980).

Since the inception of the cooperative learning approaches, researchers have been looking for positive effects on affective outcomes. In fact, numerous and consistently positive effects on affective and social variables have been reported in conjunction with many of the cooperative learning approaches. According to Slavin (1990), cooperative learning, by nature, is a social method. By working with others in cooperative learning environment, students gain respect for and understanding of others who may be very different from themselves. As a matter of fact, Johnson et al. (1983), Slavin (1985), Kagan (1989) conclude that cooperative learning improves intergroup relations. When
students of different racial or ethnic backgrounds work together toward a common goal, they gain in liking and respect for one another.

Cooperative learning experiences, compared with competitive and individualistic ones, promote the social acceptance of academically handicapped students by their non handicapped classmates (Johnson and Johnson, 1985; Madden and Slavin, 1983). Self-esteem is an individual self-perception of attitudes, abilities, and assumptions held, which direct all the behaviors of a person (Aronson et al., 1978). Cooperative learning promotes higher self-esteem in students' minds than does competitive or individualistic efforts (Johnson & Johnson, 1989; Lazarowitz & Karsenty, 1990; Slavin, 1990). In addition, within cooperative situations, students learn more social skills, such as effective communication and constructive management of conflicts, than within competitive and individualistic efforts (Deutsch, 1962; Johnson & Johnson, 1973).

According to Johnson and Johnson (1994a), students who study cooperatively develop considerably more commitment and caring for each other, no matter what their initial impressions of and attitudes toward each other are. Also, those who learn cooperatively like the teacher better and perceive the teacher as being more supportive and accepting academically and personally.

Concerning the effect of cooperative learning approaches on adult learners, Dansereau and his colleagues (1985) have examined the effects of experimentally manipulating scripted interactions between student dyads in laboratory settings with college students. They found that college students working on structured "cooperative scripts" can learn technical materials or procedures far better than can students working alone. In this method, students take roles as recaller and listener. They read a section of text, and then the recaller summarizes the information while the listener corrects any errors, fills in any omitted material, and helps think of ways both students can remember the main ideas. For the next text section, the students switch roles. Dansereau (1985) found in a series of
studies that although both the recaller and the listener learned more than did students working alone, the recaller learned more. This mirrors the peer-tutoring findings of Webb (1985), who discovered that the students who gained the most from cooperative activities were those who provided elaborated explanations to others. In this research as well as in Dansereau's, students who received elaborated explanations learned more than those who worked alone, but not as much as those who served as explainers.

The Johnsons (1987a, 1987b) also have reviewed the studies which utilized adult samples -- individuals who are 18 years of age or older -- in 133 studies among the 450 studies that have been conducted since 1987. They found that cooperative effort among adult learners enhanced academic achievement and produced greater interpersonal relationships, social support, and higher self-esteem than either competitive or individualistic efforts.

According to Helmreich, Sawin, and Carsrud (1986), high achievers, such as scientists, MBAs, and pilots, tend not to be very competitive individuals. Through their study, they found a negative correlation between achievement and competitiveness, and they have not been able to find a single professional arena where highly competitive individuals tend to be more successful. Thus, the outcomes from a cooperative learning environment appear to be valuable for adults in terms of their career success in the real world.

What are the causal elements behind cooperative learning outcomes?

Several researchers (i.e. Hertz-Lazarowitz, 1985; Johnson & Johnson, 1985; Kagan, 1986; O'Donnell and Dansereau, 1992; Sharan, 1990b; Slavin, 1983; Webb, 1985) have noted that few studies have been done that analyze the internal dynamics of cooperative learning groups by relating group-process variables to academic achievement. Sharan and Shaulov (1990a) showed some affective variables (e.g., students' inclination to
work with others) mediate the students' academic achievement in various subjects. They suggested that cooperative learning enhances motivation to learn and, in return, achievement. Yet, these same researchers admitted that since this effect was observed primarily among students who initially preferred cooperative activities, motivation to learn was a mediating variable while initial preference for cooperative activities was a moderating variable. They point out that the multiple mediating and moderating variables that may be operating may change roles over time. The implication is that there is a difficulty when one attempts to identify the appropriate use of a variable at different points in time.

Battistich, Solomon, and Delucchi (1993) examined relations between the frequency and quality of students' experiences in learning groups and their attitudes toward school, perceptions of the classroom environment, intrinsic motivation, limited academic achievement outcomes, and various social attitudes, skills, and values. The participants were teachers and students from eighteen fourth- through sixth-grade classrooms at four elementary schools in two public school districts in the greater San Francisco Bay area. One district was suburban, white, middle to upper-middle class, whose students regularly scored in the top 10% to 20% in the state on standardized achievement tests. The second district was urban, with an ethnically and socio-economically heterogeneous population. Fifty to seventy percent of the students were minority, mainly Hispanic. Between a quarter and a third came from limited- or non-English-speaking families. Over a third of the students scored in the lowest quartile of state achievement test scores.

The frequency and quality of participation in learning groups in the study by Battistich et al. (1993) were determined through direct observation with a structured observation instrument. From this study, the researchers found that frequent participation in learning groups was associated with positive student outcomes only when the quality of within-group interactions was rated by the observers as being high. Frequent group work was associated with poorer outcomes when the quality of interactions was low. The
authors were not surprised at this, but they suggested some implications for practice. Teachers need training in small-group management for the work of the small group to be effective. Students should be prepared for group work. Their interaction skills should be improved to maximize interpersonal and task-related behavior. Teachers need to monitor these and to summarize or "wrap up" as a regular part of group activity. These suggestions are consistent with the emphasis by other researchers such as the Johnsons (1994a), Cohen (1994), Kagan (1994), and Sharan (1994b).

According to the Johnsons (1987, 1994a), a teacher's having group members aware of how to behave and what to think are crucial to the effectiveness and productivity of the group. Yager, Johnson, Johnson, and Snider (1986) found that group processing activities, such as reflection on the group's activities at the end of each class period, can enhance the achievement effects of cooperative learning.

However, not all the cooperative learning approaches require group processing for a successful group experience. One example is Dansereau's (1985) scripted dyadic cooperation. In this method, students take on the roles of recaller and listener. They read a section of text, and then the recaller summarizes the information while the listener corrects any errors, fills in any omitted material, and helps think of ways both students can remember the main ideas. In a series of experiments, Dansereau (1985) found that the students who were instructed by "cooperative scripts" showed far better outcome in learning technical materials or procedures than the students by individualistic instructional method.

Why is cooperative learning of interest to Christian educators?

According to Eble (1972), such things as variety, enthusiasm, and creativity are crucial for effective teaching. Lecturing certainly often lacks these components. Quoting Astin's assertion about the cooperative learning method in college education, Gangel
(1988) points out the significance of cooperative learning in formal and informal Christian education settings.

If a cooperative approach to education can be considered important in secular education and the major university systems as Astin proclaims, how much more important in Bible colleges, Christian liberal arts colleges, and seminaries. At the very least students can gain awareness of how to operate in small groups within the framework of the local church (p. 338).

While years of research have provided a great data base on the effects of cooperative learning practices at the elementary, secondary, and college levels (Johnson and Johnson, 1987; Slavin, 1980, 1984, 1990, 1991; McKeachie, Pintrich, Lin and Smith, 1987), little data is available for those who want to know the effects of cooperative learning on adult learners in Christian education settings (Davies, 1994; Rahn, 1992). Recently there has been increased interest in cooperative learning because many Christian educators (e.g., Davies, 1994; Dennie, 1994; Habermas, 1994; Lamport, 1994; Rahn, 1992, 1994) support the practice. The potential outcomes in cooperative learning (e.g., positive interpersonal relationships, pro-social behaviors, positive self-esteem, creative ability through divergent thinking, risk-taking and productive controversy, reduction of prejudice, promotion of intrinsic motivation, positive attitude toward subject areas and instructional activities, cultivation of a sense of belonging, acceptance/efficacy on the part of teachers and students) constitute compelling reasons for the consideration of cooperative learning as a valuable instructional approach for adult Christian education (Johnson and Johnson, 1987, 1994a; Sharan, 1994a).

Central to the aim of Christian education, according to Wilhoit (1986), is the promotion of Christian maturity. Christian education seeks to enable the Christian to
glorify God more fully and to participate more deeply in the life and service of the church. In the Bible, Christian maturity is associated with four basic concepts: spiritual autonomy, spiritual wholeness, spiritual stability, and wise use of knowledge. Spiritually autonomous individuals have control over their lives and are appropriately self-directed. Without appropriate self-direction, Christians cannot mature in their relationship to God and to other believers. Spiritual wholeness is a quality that a person loves the Lord as well as others in the community of faith. Spiritual stability is a steadfastness that one has his/her anchor on the revealed truth of God. People with this characteristic cannot easily be turned by the latest fads or currents of thought. Finally, a mature Christian uses knowledge wisely. S/he does not use knowledge to impress others but to build up others for the common good of the community of faith. When considering these aspects, the potential outcomes of cooperative learning approaches as mentioned before seem to be absolutely necessary elements for promoting Christian maturity, and thus various cooperative learning approaches may be powerful tools for accomplishing the purpose of Christian education. According to Rahn (1992), the learning outcomes of the cooperative learning approach "look a lot like the kind of outcomes prescribed in the Bible for the followers of Christ" (p. 20).

In addition, the various cooperative learning strategies appear to have potential for helping with many issues/areas in Christian education. For example, Johnson and Johnson's Academic Controversy (1987) might be used with controversial material/topics in Christian education to (1) help students' reach high quality decisions and solutions to controversial issues and (2) produce positive relationships among participants. Another example of using cooperative learning strategies might be in preventing the status problem among students in various settings of Christian education. Those students in a class who are erudite to the Scriptures might easily dominate the discussion. Cooperative learning has
the potential for preventing such a problem and providing a positively interdependent
environment among the students.

*What effect does cooperative learning have on various cognitive and affective outcomes in
formal and informal Christian education?*

Rahn (1992) conducted a study on the effect of the Co-op, Co-op method on
students' attitude toward the subject matter as well as the cooperative learning experience in
an adult Christian education class at Huntington College, Indiana. From an initial whole
class discussion, the class of sixteen students identified personally interesting areas. Then,
they organized four inquiry teams, blended personal interests to create a group goal, and
zeroed in on pertinent mini-topics as individual students.

After the initial activities, students identified some of their particular areas of interest
and were clustered together in groups of loose affiliation. Each of these groups was asked
to find a way to sensibly gather their topics under larger questions which served as the
overall goals of the class. The students' clusters of cooperative learning groups, according
to Rahn, had a very natural feel, and the larger questions gave the students a commonality
of purpose while adding significance to their individual contributions (i.e., the taking of a
mini-topic by each group member). Rahn reported that students rated the quality of
instruction as very high with regard to their learning experiences, and the group
presentations and individual mini-topic papers were exceptional. In this study, the role of
the teacher was to serve as a facilitator, guide, resource person, and coach on group
processes, drifting between groups during mini-topic presentations and observing the very
real feedback which students were giving to one another as they worked to make each
group member better. In conclusion, the investigator commented that Co-op, Co-op was
not complicated to implement and helped create many of the desired outcomes one would
predict from such a cooperative learning strategy.
Davies (1994) suggested the critical components of cooperative learning, as well as some practical implementation ideas, for Christian education settings. These six critical aspects of the cooperative learning approach are positive interdependence, an appropriate rationale for grouping, individual accountability, structured student interaction, and attention to social skills. Although his article did not include any experiment on the effectiveness of cooperative learning in any Christian education context, Davies suggested that cooperative learning might be very helpful in fostering positive interdependence and promoting sharing in small groups, which constitute critical parts of Christian character development and socialization.

Habermas (1994) reported a case in which a modified Jigsaw method was implemented in a Foundations of Christian Education class in Huntington College, Indiana. In this study, students were grouped by the assigned task (mastering the content of one chapter in the textbook for the course) previously given to them. Then the students within each group spent the entire class helping each other become experts in their assigned task. The following class period was a small group teach-in. In the first part of the class, a teaching pair of students instructed another teaching pair of students in the chapter content they had previously mastered. In the next part of the class, the instruction was reversed. With any remaining time, the investigator solicited feedback about the process. For the next couple of sessions, the investigator assigned each student to one of the three chapters. In the next class period, there were three groups, with each group checking its members' understanding of the material in its respective chapter. Each group formulated a strategy as to how they could most effectively teach the material of their assigned chapter within a given time period to two classmates who had not read the chapter. Ultimately, the investigator informed the class that the students would teach their chapter "solo" at the next class session. Triads were formed around the room at the next class session. The members of the groups taught and listened to the others. A very brief summary and
debriefing were offered at the end of the class session. Lastly, the assignment was given to each student to (1) submit a short reflection paper about his/her cooperative learning experiences and (2) describe his/her feelings and insights regarding classroom atmosphere, students' cooperation, and mutual linkage in the Body of Christ.

The result was very encouraging. The students expressed favor for the experience of working together, and they felt that they had learned the material well. However, many students also showed a certain degree of anxiety about how well they might have been taught. The students acknowledged that this anxiety might hinder them from entering into positive interdependence. But overall, responses of students to their cooperative learning experience were very positive.

The cooperative learning strategy does not always provide a positive learning experience to those who explore it in Christian education. Some of the problems need to be addressed if such a strategy is to be employed in traditional Christian education settings. Dennie (1994) implemented the Co-op Co-op method in an adult Sunday school effectively with very little cooperative learning coaching. The course dealing with Christian's concerns in the work place went on about eight weeks. The implementer began by introducing the class topic and the general course design, broke the class into five groups, and asked them to discuss two paragraphs to stimulate students' thinking on the subject. Once students offered some interest areas they wanted to explore, the groups were clustered according to their subject interests.

Beginning with the next class session, some complications beyond the control of the investigator occurred. One complication was the irregular attendance of students in the class. Since all of the students were volunteers, they withdrew themselves without taking any individual responsibility. In addition, some students enrolled later, after the introduction of the project. That situation required the investigator to reexplain the project and process of each class session to the new students. Another complication was the lack
of enough time for adequately addressing all of the processes of a full-blown Co-op Co-op method in a Sunday school. Moreover, students' motivation could not be improved because of lack of time for teambuilding. Intimidation, according to Dennie, was another problem inherent in using the cooperative learning approach. Many people preferred to sit in the background, but not actively participate in group discussions. Also, lack of cooperative learning coaching caused people's discussions to focus on opinions rather than new information gained through research and reading. Although the investigator expressed personal benefits out of this experience, his attitude toward further usage of cooperative learning was negative.

Gibbs (1994) cautioned that teachers and pupils both may need more extensive preparation if cooperative learning experiences in Christian education settings are to be successful. According to Gibbs, this need seems to be increased when the teachers have little formal preparation for their roles. It is clear that cooperative learning has great potential for Christian education. But if close attention is not paid to the above elements when implementing cooperative learning, the teaching-learning experiences of students and teachers may be jeopardized.

In an attempt to design and field-test a cooperative learning approach in Christian education settings, Rahn (1994) reported a positive response by students to their learning experience. This study lasted for six weeks with a group of five students fulfilling a class assignment at Huntington College, Indiana. In addition, a group of men at a small community church in northeast Indiana also tried the strategy. Participants in this study were introduced to the group experience with the goal that it would serve as a catalyst toward Christlikeness among persons of common commitments. The experience featured (1) consensus decision-making around biblical curriculum, (2) clear communication about group members' roles, and (3) a culminating project with an outreach/service orientation.
The students recognized that their behaviors were to focus on helping each other grow in both maturity and faithfulness.

In the initial meeting, the curricular agenda was set for the next four weeks. The group leader's skills in bringing about group consensus were critical. But the questions drawn by students, as reported by Rahn, seemed to be disconnected from week to week, and thus essential Bible material was missed using this approach. A role was given to each student in a group, and these functions were rotated on a weekly basis. One person was designated leader for the group, and the responsibility of the leader was to focus on all the organizational enabling details necessary to serve the group. All other group members were to rotate through each of the roles as noted below.

The Bible study researcher and facilitator was in charge of leading the forty-minute Bible study intended to address a specific, tightly defined question focusing on maturity. The encourager was to go out of the way during the week to do acts of encouragement, coaching, and affirmation for others in the group. The prayer warrior was to engage in the battle for spiritual growth during the week through intensive prayer on behalf of the group and each of its members.

While the investigator admitted some of the obvious limitations of the field-test of this cooperative learning strategy, the students' responses toward their learning experience were positive in general. The students appreciated the value of interdependence that it seemed to yield—the kind of positive outcome one might predict from a cooperative learning strategy. But, warnings to cooperative learning practitioners were offered by the students, and these were that the members needed to have more concrete guidelines and more guidance from the leader during group work.

Lamport (1994) reported the results of a study on the use of Co-op Co-op by four different groups. This was a descriptive research study designed to assess learner attitudes toward cooperative learning in ministry settings. More specifically, this study sought to
answer the following research questions: (1) To what extent is Co-op Co-op effective as a Christian education teaching methodology as perceived by learners?; (2) To what extent do males and females differ in their view of Co-op Co-op as a learning strategy?; (3) To what extent do various age groupings differ in their view of Co-op Co-op as a learning strategy?; and (4) To what extent do "volunteers" and "non-volunteers" differ in their view of Co-op Co-op as a learning strategy.

The subjects of this study consisted of fifty-two predominantly Caucasian, middle-class Christians from Massachusetts and Indiana who participated in one of four study groups that met regularly throughout the fall of one year. Males and females participated in equal numbers in this study. Ages ranged from fourteen to fifty years old. Twenty-one students came from a non-compulsory, "volunteer" group (e.g., a Sunday school class), and the rest came from a "non-volunteer" group, where attendance and academic grading might be a factor (e.g., a college course). One group was composed of high school student leaders in their local church youth groups; the second and third groups were from Sunday school classes; and the fourth group was composed of college students in Christian education or youth ministry courses from two Christian colleges. The four group leaders were presented information on how to utilize the Co-op Co-op method for their respective groups.

To answer the research questions, Lamport developed the Co-op Co-op Learning Project Inventory. This Likert scale was used for measuring students' responses. The students' responses indicated their strong favoring of the cooperative learning strategy. Over two-thirds of all subjects expressed satisfaction with their new learning experience. Yet some of the respondents seemed dissatisfied and wanted more group interaction with the instructor. The difference between male and female subjects toward their view of Co-op Co-op was statistically significant in this study, but the experimenter concluded that there was no significant difference in light of the fact that females still responded more
positively than negatively to the experience as a whole. Also, females seemed to learn less than males with Co-op Co-op than through more traditional methods. The other research question was whether there was a difference among age groups regarding their experience with the cooperative learning strategy. The median age of the entire sample was 25.75 years. Lamport reported that a very strong level of agreement existed between all ages regarding their experience with Co-op Co-op as a learning strategy. One exception was the older age subjects' lesser satisfaction for this learning experience because of the teacher's exercising too much control in the direction of the group. Lamport discussed this source of dissatisfaction because it seemed not to be caused by the methodology but by the role a particular facilitator had played. The answer for the last research question was self-evident. That is, those who had chosen to be a part of this study appeared to be more receptive to cooperative learning than those who were non-volunteers.

Based on the findings of this study, the experimenter offered several suggestions. First, shared leadership between the teachers and students in learning seemed more appealing. Second, the experimenter stated that the intrinsic rather than extrinsic motivation of the individual learner might be desirable since volunteers were more receptive to cooperative learning than non-volunteers in less formal Christian education settings. Lamport also suggested the potential efficacy of using non-hypothetical situations rather than mere information processing for student learning. Fourth, Lamport reported positive attitudes among the various subsets or subjects regardless of their gender, age, and type of group. Lastly, based on the qualitative, anecdotal comments of the sample, the experimenter suggested that the role of the facilitator-teacher seemed a critical factor in determining whether one's cooperative learning experience was positive or negative.

In contrast, gender differences were more apparent in a study by Atkins and Rohrbeck (1993). This study showed that fifth grade girls in individual training condition on self-management improved significantly less than girls in cooperative condition and
boys in individual condition. Boys in cooperative condition, however, did not differ significantly from either boys in individual training or girls in cooperative training. Therefore, stratifying the subjects by gender seems to be helpful in understanding the effects of the cooperative learning method.

A review of the literature suggests that cooperative learning has great potential for improving students' cognitive achievement and attitude toward the learning in formal and informal settings of public and Christian education. Considering that the cooperative learning approach appears capable of producing outcomes and processes that are extremely valuable to Christian educators, testing the efficacy of the cooperative learning approach in adult Christian education is necessary. Presently, no research has been done on the effects of cooperative learning on adults' use of the Inductive Bible Study Method (IBSM), attitude toward the Inductive Bible Study Method, and attitude toward Bible interpretation in less formal settings of adult Christian education.

The Inductive Bible Study Method (IBSM) is teaching and interpretation that emphasizes the process of careful and controlled discovery. "Versions of inductive teaching are often found in schools under the label of 'discovery learning' because careful, methodical, and intelligent discovery is the key to inductive study" (Wilhoit & Ryken, 1988, p. 140). In inductive approaches, the teacher facilitates and supports the learner's investigation and discovery.

IBSM consists of three steps. These steps are observation, interpretation, and application. Each step is designed to accomplish part of the process of understanding a Bible passage. The first step in IBSM is observation. In this step, the student asks and answers the question, "What do I see?" The moment the student comes to the Scriptures s/he asks, "What are the facts?" According to Hendricks (1991), one needs to look for four things to observe the significant aspects of a passage. These four things can be described as follows:
1. **Terms.** A term consists of words, phrases, or ideas that appear repeatedly in a passage. It is a key word that is crucial to what an author has to say.

2. **Structure.** There are two basic kinds of structure. First, there is grammatical structure. Another kind of structure is literary structure, which involves the used of connective and linking words, questions and answers, climax and resolution, cause and effect, contrast and comparison, time words, and location or place.

3. **Literary form.** Is the passage a poem, a story, or an epistle? Each of these forms has its own set of procedures. Knowing the literary form tells us at once what to look for in a passage.

4. **Atmosphere.** This thing involves picking up the setting and feelings from the biblical text. It requires transportation of your senses into the passage.

   The second step of IBSM is interpretation. Here, the student asks and answers the question, "What does it mean?" While observation questions are designed to yield objectively verifiable answers on which people would agree, interpretive statements are less objectively verifiable. This step involves drawing conclusions based on the facts, or seeing connections between things, or seeing patterns into which details fall.

   The last step of IBSM is application. In this step, the student asks and answers the question, "How does it work for me and others?" This step begins by summarizing the main principles that have emerged from the observation and interpretation steps. With these crystallized principles, the interpreter begins to consider ways s/he lives out these principles his/her daily experiences.

   Training students to apply acquired information and understanding of IBSM principles in interpreting the content of the Scriptures, even when presented with unfamiliar parts of the Scriptures, is said to be very helpful for a Christian's spiritual growth, maturity, and effectiveness. This application requires the ability to use the skills of inductive and deductive reasoning as well as critical thinking. IBSM follows the order of
the scientific method of inquiry, beginning with observation and then interpretation (hypothesis generation) based on careful observation of the Bible (data) and not merely on opinions and conjecture. According to Wilhoit and Ryken (1988), IBSM encourages students to perform discovery learning which leads them to discover the truth that is likely to be better understood, more meaningful, and less forgotten than truth just has been told. Cooperative learning strategy seems to be a more than adequate method to teach IBSM because of its tendency to increase and necessitate higher level reasoning and critical thinking, seek long-term retention, and require more application of the content (Johnson & Johnson, 1992).

Another question which needs to be answered based on the review of the literature is whether there is a unique effect on enhancing adult learners' achievement and attitudes in Christian education due to the use of group processing in a cooperative learning environment. Research by Cohen (1994), Johnson and Johnson (1987, 1994a), Kagan (1994), Sharan (1994b), Yager, Johnson, Johnson and Snider (1986) suggest that implementing group processing has many positive effects. Group processing can create more vital interaction, can cause more reflection on each group member's performance within the team, and can result in more encouragement, and support among group members as they strive toward a common goal.

One of the major purposes for this study was to determine whether traditional lecture-demonstration plus cooperative learning enhances adult learners' use of IBSM, attitude toward Bible interpretation, attitude toward IBSM, and satisfaction with the learning experience better than a more traditional lecture-demonstration method plus individualistic learning. Another major purpose of this study was to determine the effect of group processing versus no group processing in cooperative learning on adult learners' use of IBSM, attitude toward Bible interpretation, attitude toward IBSM, and satisfaction with the learning experience.
SECTION III

STATEMENT OF THE HYPOTHESES

This study tested the following eight hypotheses:

1. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on a Use-of-IBSM measure than adults who receive instruction in IBSM using traditional lecture/demonstration with individualistic learning elements.

2. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on a Use-of-IBSM measure than adults who receive instruction in IBSM using cooperative learning method without group processing.

3. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on an attitude-toward-Bible-interpretation measure than adults who receive instruction in IBSM using traditional lecture/demonstration method with individualistic learning elements.

4. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on an attitude-toward-Bible-interpretation measure than adults who receive instruction in IBSM using cooperative learning elements without group processing.

5. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on an attitude-toward-IBSM measure than adults who receive
instruction in IBSM using traditional lecture/demonstration method with individualistic learning elements.

6. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on an attitude-toward-IBSM measure than adults who receive instruction in IBSM using cooperative learning elements without group processing.

7. It is hypothesized that adults who receive instruction in IBSM using lecture/demonstration with cooperative learning elements (with or without group processing) will score higher on a students'-satisfaction-with-the-learning-experience measure than adults who receive instruction in IBSM using traditional lecture/demonstration method with individualistic learning elements.

8. It is hypothesized that adults who receive instruction in IBSM using cooperative learning elements with group processing will score higher on a students'-satisfaction-with-the-learning-experience measure than adults who receive instruction in IBSM using cooperative learning elements without group processing.

In addition to testing the eight hypotheses, this study sought to answer one research question as follows: What are the affective reactions of adult learners to instruction in IBSM using different methodologies? This study sought to understand students' and teachers' affective reactions toward the instructional approach they experienced by interviewing them.
SECTION IV

OVERVIEW OF THE DESIGN

In this experiment, the researcher sought to find out the cause-effect relationships by manipulating the independent variable (instructional methodology) and observing the effect on dependent variables (students' use and attitude toward Inductive Bible Study Method, students' attitude toward Bible interpretation, and students' satisfaction toward the learning experience). All groups in this study were identical in terms of curriculum material, allocated learning time, and schedule of instruction. The only difference between the treatment groups was the instructional approaches. If there had been any significant differences in the posttest results, then the differences would have been attributed to the independent variable.

There were three contrast groups in this study. Contrast group C (the control group) received instruction in IBSM using lecture/demonstration plus individualistic learning. Contrast group A (an experimental group) received instruction in IBSM using the lecture/demonstration method plus cooperative learning. The cooperative learning approach used was a combination of Dansereau and O'Donnells' (1992) scripted cooperative learning and the Johnsons' (1994b) "Learning Together" approach. Contrast group B (an experimental group) was identical to contrast group A with the addition of group processing at the end of each class session.

The students in both contrast groups A and B (the experimental groups) worked together in base groups. These groups of four students were formed by drawing names of the students from a hat. The purpose of the base group was to promote students' mutual support, help, encouragement, and assistance for each member's needs in order for all to
make academic progress and develop cognitively and socially in healthy ways (Johnson & Johnson, 1994a; Johnson, Johnson, Holubec, 1992; Johnson, Johnson, & Smith, 1991). In the experimental treatments, the base groups worked together once they were formed at the beginning of the first class meeting. But each of the base groups of experimental group B also evaluated its performance as a group (i.e. used group processing) at the end of each class session.

A demographic survey (See Appendix G) and a "use-of-IBSM measure" (See Appendix C) were administered at the beginning of the course to all students to assess students' entering characteristics and behavior. With respect to the use-of-IBSM measure, written responses to three passages from the Bible were elicited at pretest. Students' responses were evaluated by using an analytic scoring guide (See Appendix D) which had been developed for the purpose of the present study. The identical posttest was administered to each of the three groups at the end of the study. Students' posttest responses were evaluated in the same manner used for the pretest.

The "attitude-toward-Bible-interpretation measure" (See Appendix E) was also administered to all students at the beginning and end of the course in order to assess students' attitudinal change (if any) with respect to Bible interpretation.

The "students'-satisfaction-with-the-learning-experience measure" (See Appendix H) and "attitude-toward-IBSM measure" (See Appendix F) were administered to all students at posttest only. These measures assessed students' attitudes related to IBSM and the learning experience as a whole.
SECTION V

SAMPLING AND ASSIGNMENT OF SUBJECTS TO TREATMENTS

The setting of the study was three classrooms in a Korean Baptist church in a metropolitan area of north central Texas. This church was established in 1980. Since then, the church has played an important role in the Korean immigrants’ community by guiding and serving Korean people in the area. The number of members has been consistently at the level of one hundred people. Forty-eight adult volunteer learners (those who participate in a non-compulsory learning environment - a Sunday school class) and three instructors of the church participated in this study through the course entitled "Living by the Book." All participants in the study were Asian, middle-class Christians. There were eighteen males and thirty females, and they were all born in Korea.

Most of the subjects were highly educated; almost fifty percent of the participants were college graduates. Among them, four participants had Master's degrees. All the participants were educated above middle school level.

The age of the participants varied somewhat. Eighteen students were between the ages of twenty-seven and thirty-five; seventeen students were between the ages of thirty-six and forty-five; ten students were between the ages of forty-six and fifty-five; and three students were over sixty.

Each of the three groups in this study was composed of sixteen students. With the aid of a random numbers table in Gay (1987), the subjects were randomly assigned to classes/groups using gender and age as stratification variables. As a result, each contrast group had the same proportion of subjects in terms of gender and age as the whole group. Gender and age were used as stratification variables because of gender and/or age
differences found in previous cooperative learning studies (i.e. Lamport, 1994; Atkins and Rohrbeck, 1993). Conditions (i.e. the three contrasts) and teachers (for the experimental groups) were randomly assigned by using a random numbers table in Gay (1987).

Before including a subject in the study, voluntary written consent was obtained. An informed consent form was used for this purpose. All groups studied the same content, the Inductive Bible Study Method described in Hendricks and Hendricks (1991) and Wilhoit and Ryken (1988).

Each classroom was large enough to accommodate at least forty students. For each contrast group in this study, the chairs and tables in the classroom were arranged row by row, like a traditional classroom, for the lecture-demonstration portion of each lesson. This arrangement was maintained for the control group as subjects engaged in individualistic seatwork activities. For the experimental groups, the chairs and tables in the classrooms were moved into groups of four so that the students sat close to each other at the same table as they were asked to complete cooperative learning activities. Also, the groups were arranged so that they would not interfere with other groups' learning. In addition, each group had a clear access lane to/for the teacher.
SECTION VI

TREATMENT DEFINITIONS/DESCRIPTIONS

All contrast groups in this study were identical in terms of curriculum material, allocated learning time, and schedule of instruction. The only difference between the contrast groups was the instructional approach used.

The teaching strategy for the two experimental groups in this study was a combination of the scripted cooperation approach (Dansereau & O'Donnell, 1992) and the Johnsons' Learning Together cooperative learning approach (Johnson & Johnson, 1991/1994). Both contrast groups A and B, the two experimental groups, were organized into four cooperative groups of four students formed on a random basis by drawing names from a hat. These cooperative groups of four students functioned as base groups. The base groups maintained stable memberships. The purpose of a base group was to promote students' mutual support, help, encouragement, and assistance for each member's needs in order to make academic process and develop cognitively and socially in healthy ways (Johnson and Johnson, 1994a; Johnson, Johnson, and Holubec, 1992; Johnson, Johnson, and Smith, 1991). The base groups in contrast group B also worked together at the end of each class session in order to engage in group processing by evaluating their performance as groups.

Groups of four were used for a variety of reasons. Kagan (1994) strongly suggests the use of groups of four. Part of his reason for his suggestion is that, compared to other group formats, a group of four doubles the probability of an optimum cognitive and linguistic mismatch. According to Kagan (1994), the research results on moral and linguistic development indicates that "we learn well from someone only somewhat different
from our own level of development--someone who will provide stimulation in our zone of proximal development" (p. 131). Discussion in cooperative learning groups requires group members to perform more frequent summarizing, explaining, and teaching of what they are learning, and it necessitates higher levels of cognitive organization and elaboration than simply learning the material for one's own use (Ellis and Feldman, 1994; Johnson & Johnson, 1992). Therefore, teams of four students provide a discussion opportunity for the members of the cooperative groups.

As mentioned previously, the teaching strategy for contrast groups A and B in this study was a combination of the scripted cooperation approach (Dansereau & O'Donnell, 1992) and the "Learning Together" cooperative learning approach (Johnson & Johnson, 1991/1994). Each class session had somewhat different tasks due to the uniqueness of content in each instructional subunit. In general, the following tasks were included in each class session:

1. At the beginning of each session, the instructor gave the students a clear idea of the objective. The students' internal motivation was elicited by pointing out the importance/purpose of the content.

2. The lecture segment on each subunit content was delivered to the whole class. During the lecture, the instructor modeled examples of interpreting a passage. After the lecture, each base group engaged in discussion in order to respond to the questions on a handout. The teacher assisted students' thinking as they worked on the questions on the handout by asking a question or by making a comment or suggestion without undermining the students' responsibility for their own learning. Students' interactive skills were encouraged through instructions on how to respond to handout questions. See Appendix A for the handouts for each session.

Dansereau's (1992) prototypical script steps were adapted and used with students in contrast groups A and B in conjunction with the reading and interpretation of Bible
passages during the learning process. In using these steps, each group member read a passage and examined it by using the IBSM components that were taught in the lecture/demonstration. One member of the group then took on the role of recaller, and the other members of the group served as the listeners/facilitators. The recaller summarized from memory what had been learned. The listeners corrected any errors in the recall, filled in any omitted material, and helped think of ways all students could remember the main ideas. For the next text section, the students switched roles. Dansereau (1992) suggests the acronym "MURDER" to make the strategy easy to learn and follow. This acronym stands for "Mood, Understand, Recall, Detect, Elaborate, and Review." Students engaged in this activity in their groups, and the teacher was attentive to each group's interaction by moving from one group to another, checking each group member's participation. But, the teacher did not overdirect students. These script steps were used at least once during each class period as the students processed Biblical passages.

3. If called for, a second lecture segment on subunit content was delivered to the whole class. Again, after the lecture, each base group engaged in discussion to respond to the questions on a handout. The teacher assisted students' thinking as they worked on the questions on the handout by asking a question or by making a comment or suggestion without undermining the students' responsibility for their own learning. Dansereau's script steps were adapted and used as the students processed the Scriptural passages as described above.

4. Each subunit session ended with a discussion to (1) summarize the main points of the lecture segment(s) and (2) integrate what students had learned into their existing conceptual frameworks. The teacher helped students reach a broader understanding of what they had done.
5. Only contrast group B did group processing (i.e. group self-evaluation using the questions in appendix B) as a fifth and final lesson segment. The checker led the group processing by using "group processing principles," which are contained in Appendix B.

To ensure individual accountability in the cooperative learning groups, one member of each base group was assigned at the first class meeting to be a checker as Johnson and Johnson (1992b, 1994a) suggest. The role of the checker was to check other group members' understanding of the content discussed in each class session and, if required, to lead the base group's processing discussion at the end of each session. Positive interdependence was promoted in the cooperative learning groups by distributing only one handout for each group so that the group members worked together with limited resources. A group goal for the cooperative learning groups was provided by having each group reach consensus on the answers to the handout questions. All members of each group had to work together to respond to the questions. To help ensure attention to the group goal, the instructors asked each group member to write his/her name on each page of the handout to indicate his/her agreement with the group's answers. The respective instructors of contrast groups A and B moved from group to group as the students worked on their questions. The students were asked to sign their names on the bottom of the handout. By observing the groups and looking at those signatures, the instructor knew that each group had worked together and reached consensus in responding to each question on the handout. Also, by moving around the room and asking individuals to explain the group's answers, the instructor made individuals accountable for their learning. To check for adequacy of treatment implementation, all class sessions were tape recorded and reviewed by the researcher.

Contrast group C, which was the control group, studied the same content (the course "Living By the Book") as the two experimental groups but in a traditional classroom setting, with the material presented to students by the teacher followed by individualistic
learning. The teacher in the control group lectured and demonstrated to the whole class during the subunits of content: (a) the importance of discovering the meaning of biblical passages in Christian life; (b) observation, the first component of the Inductive Bible Study Method (part 1); (c) observation, the first component of the Inductive Bible Study Method (part 2); (d) observation (part 3) and interpretation, the second component of the Inductive Bible Study Method; and (e) application, the third component of the Inductive Bible Study Method. The teacher applied and modeled the components of the Inductive Bible Study Method as he interpreted selected passages from the Bible.

Teacher-student interaction was allowed in the control group in the form of (1) teacher questions directed to students and (2) clarifying questions asked by students, but no communication between students was encouraged. Learning pace was dictated by the teacher. Adequate space for post-lecture seatwork activities was provided for each student so that s/he could respond to the questions on handouts without being interrupted by others. Each class period for each subunit lasted for sixty minutes on five consecutive Sundays. Each class session had somewhat different tasks due to the uniqueness of content in each instructional subunit. In general, the following tasks were included in each class session:

1. At the beginning of each session, the instructor gave the students a clear idea of the objective. The students' internal motivation was elicited by pointing out the importance/purpose of the content.

2. The lecture segment on each subunit content was delivered to the whole class. During the lecture, the instructor modeled examples of interpreting a passage. After the lecture, each student individually responded to the questions on a handout. The teacher assisted students' thinking as they worked on the questions on the handout by asking a question or by making a comment or suggestion without undermining the students' responsibility for his/her own learning.
3. If called for, a second lecture segment on subunit content was delivered to the whole class. Again, after the lecture, each individual student responded to the handout questions.

4. Each subunit session ended with a discussion to (1) summarize the main points of the lecture segment(s) and (2) integrate what students had learned into their existing conceptual framework.
SECTION VII

THE INSTRUMENTS

In this experiment, the researcher sought to find out cause-effect relationships by manipulating an independent variable (three instructional methodologies) and observing the effect on dependent variables (students' use and attitude toward Inductive Bible Study Method, attitude toward Bible interpretation, and students' satisfaction with the instructional experience). Each of these measures is described in detail below.

The "use-of-IBSM measure" (See Appendix C) was administered at the beginning and end of the course to all students to assess students' entering and exiting behavior with respect to their use/non-use of the steps of IBSM. Students' written responses to three passages from the Bible were elicited at pretest and posttest. "Low-", "moderate-", and "high-" difficulty passages were selected for use in conjunction with the "use-of-IBSM measure." Three expert judges selected the three passages for the pre- and posttest. These judges consisted of three doctoral candidates in theology. The "moderate-difficulty" passage in the pre- and posttest was used during the unit of instruction on IBSM, but the "low-" and "high-" difficulty passages were not studied previously. Students' responses to these passages at pretest versus posttest served to indicate the effect of the course on students' competency in using IBSM. Students' responses to the three passages used at pre- and posttest were evaluated based on students' use/non-use of IBSM components. Two expert judges, neither one of whom was the researcher, blindly and independently evaluated students' responses to the pre- and posttests by using an analytic scoring guide (See Appendix D) developed for the purpose of the present study. To ensure blind evaluation by both judges, a subject's identity and group membership were coded and recorded on the back of the subject's
identity and group membership were coded and recorded on the back of the subject's response. The points awarded each response represented the average of the two expert judges' scores. Decision consistency between the judges was high (89% agreement). The analytic scoring guide was based on students' use/non-use of IBSM components. The evaluation criteria for evaluating students' Bible passage interpretations are given below.

- Does the student analyze the given biblical passage using the observation step of IBSM? If so, how well?
- Does the student analyze the given biblical passage using the interpretation step of IBSM? If so, how well?
- Does the student use the application step of IBSM to interpret the biblical passage? If so, how well?

Students' responses to the pre- and posttest questions were worth between 0 and 6 points. The arithmetic mean of the two judges' scores served as the indicator of the student's level of competency in using IBSM. The evaluation criteria in terms of point allocation are given below.

\[ 0 = \text{student is not using the steps of IBSM to interpret the passage.} \]
\[ 1 - 2 = \text{student is using "observation", the first step of IBSM, to interpret the passage; 1 point = low quality use; 2 points = high quality use.} \]
\[ 1 - 2 = \text{student is using "interpretation", the second step of IBSM, to interpret the passage; 1 point = low quality use; 2 points = high quality use.} \]
\[ 1 - 2 = \text{student is using "application", the third component of IBSM, to interpret the passage; 1 point = low quality use; 2 points = high quality use.} \]

This scale was developed by the experimenter for the present study to measure students' competency in interpreting the Bible by using IBSM. Student's "low quality" use
of a component of IBSM means that s/he can show his/her recognition of the existence of the component of IBSM by writing one entry indicative of that component of IBSM. On the other hand, a student's "high quality" use of a component of IBSM can demonstrate his/her more complete understanding of IBSM by writing more than one entry indicative of that component of IBSM. One point was awarded when the student showed his/her recognition of the existence of the component of IBSM by writing at least one entry which rightly fell in line with that component of IBSM. For example, one subject, in response to the second question on the use-of-IBSM measure, answered that the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control. Because this answer constitutes one entry and falls into the component of observation - "what are the facts?" - the answer could be awarded one point. When the student not only recognized the existence of the steps of IBSM but also could write more than one fact of each step of IBSM, then two points were awarded. If the students not only recognized the existence of the steps of IBSM but also could write more than one fact of each step of IBSM, then two points were awarded. For example, the student also acquired one more point by responding to the second question on the use-of-IBSM measure that the way of the fleshly living is hatred, greed, and lustfulness.

When a student, in his/her response, showed his/her knowledge of observation only, he/she could receive minimum of 1 point or a maximum of 2 points. But when the student showed his/her knowledge on both observation and interpretation, s/he could acquire at least 2 points but not more than 4 points. When the student showed his/her knowledge on all the components of IBSM, then s/he could achieve a minimum of 3 points and a maximum of 6 points.

For measuring students' attitude toward Bible interpretation, the students responded to an "attitude-toward-Bible-interpretation measure". (See Appendix E.) The statements on this measure reflected Bible interpretation attitudes consistent or inconsistent with the
principles underlying IBSM. A Likert scale of summated ratings were employed in this instrument using a scaling technique that assigned a five point scale value starting with a particular point of view. The points of view with each statement were strongly agree (SA), agree (A), undecided (U), disagree (D), or strongly disagree (SD). The following point values were assigned to responses to positive statements reflecting a positive attitude toward Bible interpretation: SA = 5, A = 4, U = 3, D = 2, SD = 1. For negative statements reflecting a positive attitude toward Bible interpretation, the point values were reversed, that is, SA = 1, A = 2, U = 3, D = 4, SD = 5. A high point value on a positively or negatively stated item indicated a positive attitude. A high total score on the test was indicative of a positive attitude (Gay, 1987).

For measuring students' attitude toward IBSM, the students responded to an "attitude-toward-IBSM measure". (See Appendix F.) The same Likert scale and scaling technique that were used for the "attitude-toward-Bible-interpretation measure" were employed in this instrument.

For measuring students' attitude toward the learning experience, the students responded to a "students'-satisfaction-with-the-learning-experience measure". (See Appendix H.) On this instrument, students were asked to respond to a series of statements about their learning experience. The same Likert scale and scaling technique that were used for the "attitude-toward-Bible-interpretation measure" were employed in this instrument.

In order to further ascertain their affective reactions to instruction and IBSM, the teachers as well as students in all three contrast groups were also asked open-ended oral interview questions about (1) how they would describe the classroom climate during the course, (2) what they liked/disliked about the learning methodology they experienced, (3) how they would change the class in terms of how it was taught, and (4) how they planned to use what they had. (See Appendix I.) Also, the students in all three contrast groups were required to write an answer to the open-ended question about what they could/would
do with what they learned from the course. (See the last question of appendix H.) The data analysis from the interviews was based on techniques from Laney et al. (in press) and Brophy et al. (1992). Stated more specifically, the data were analyzed by identifying categories of responses and tallying the number of responses in each category. These categories were developed post facto based on obtained student responses. All of the students' responses to the open-ended questions were categorized by the two coders, including the experimenter himself, using constant comparison methods. A subject's identity and group membership were coded and recorded on the back of the subject's responses. Decision consistency between the judges was high (91% agreement).

The content validity of the "use-of-IBSM", "attitude-toward-Bible-interpretation", "attitude-toward-IBSM" and "students'-satisfaction-with-the-learning-experience" measures was established by allowing three experts in theology examine the tests. They judged each test's items for "correctness/appropriateness" and provided suggestions for revising the items and improving the tests. They also suggested some revisions for the analytic scoring guide, and their opinions were reflected in the guide.

Test-retest reliability for the use-of-IBSM measure was established by testing and retesting a group of adults similar to the ones participating in the study. Scores were correlated by calculating a correlation coefficient to ascertain reliability. Using the Pearson product-moment correlation, the reliability (i.e. stability) of the use-of-IBSM measure was calculated, and it was high (r = .85). For the reliability of three attitudinal measures (i.e., the attitude toward Bible interpretation, attitude-toward-IBSM, and students'-satisfaction-with-the-learning-experience measures), internal consistency reliability was established. For each item, a correlation was computed between the item and the total score. Table 1 contains correlation coefficients for the three attitudinal measures. Except for three items (8-10) on the attitude-toward-Bible-interpretation measure, all items were moderate to high in internal consistency (r = .37 to .82). The three items that were low in internal
consistency ($r = .17$ to $.23$) were retained because of their importance/relevance to key principles underlying the philosophy of IBSM.

Stability reliability data on the three attitudinal measures was collected by giving these tests to the subjects twice - once at posttest and again one week after posttest. Stability coefficients for these measures were as follows: attitude-toward-Bible-interpretation measure ($r = .84$); attitude-toward-IBSM measure ($r = .77$); and students' satisfaction-with-the-learning-experience measure ($r = .75$). According to Popham (1981), stability coefficients often range between .70 and .90 with well-developed norm-referenced measures and a reasonably short between-testing temporal interval. The stability coefficients for the three attitudinal measures fall right in this range. In fact, when considering the affective nature of these items, the stability reliabilities of the three measures are rather high.

Demographic data was also collected related to gender, age, number of years in Bible study, and whether or not subjects had any prior experience with a small group learning approach. This data was used to see whether students' gender, age, number of years in Bible study, or their previous small group learning experiences had any relationship to the study's results. All tests and subunit contents were developed in English first and then translated into Korean.
SECTION VIII

PROCEDURE

Forty-eight adult volunteer learners (participants in a non-compulsory learning environment - a Sunday school class), and three instructors of a Korean Baptist church in a metropolitan area of north central Texas participated in this study through the course entitled "Living by the Book." All participants in the study were Asian, middle-class Christians. There were twenty-two males and twenty-six females. The age of the participants varied somewhat. Eighteen students were between the ages of twenty-six and thirty-five; twenty-seven students were between the ages of thirty-six and fifty-five; and three students were over fifty-five. Each group in this study were composed of sixteen students. Although their years of residing in United States were quite different (from three to twenty-five years), over 85% of the subjects came to the U.S. when they were above twenty years old. According to Pang (1995), an important variable to consider when doing research with Asian Americans is place of birth - U.S. born or immigrant. Since all subjects in this study were immigrants, the experimenter did not deal with this characteristic in the data analysis.

The three instructors in the present study were all males and had Master's degrees, and they had learned IBSM as a required course in their Masters' programs (Master of Theology and Master of Sacred Theology). All were well equipped to apply the Inductive Bible Study Method to their personal study and to teach others how to use it. Their ages ranged from thirty-four to thirty-five years. All instructors had more than eight years of teaching experience with adults. Prior to the instructional phase of the study, all teachers participated in a workshop in which they were trained in the appropriate method of instruction. The workshop included (1) the content to be
taught in the study, (2) the respective treatments to be used, and (3) the teacher's role within each treatment, as suggested by Johnson & Johnson (1994a), Dansereau (1985), and Sharan (1994b).

This study took place over five consecutive Sundays. There were five subunits, and each subunit was taught during one class period. The duration of each class session was sixty minutes. While ideally subjects should be exposed to the experimental treatment for a longer period of time in order to more accurately assess its effectiveness, permission was granted to the experimenter to be in the church school for a maximum of five weeks. Another limitation of this study was the small number of the subjects (i.e. sixteen in each of the three contrast groups), but, according to Gay (1987), as few as fifteen subjects per group are acceptable in experimental studies with fairly tight experimental controls.

Treatment conditions and teachers for the experimental groups were randomly assigned by using a table of random numbers in Gay (1987). Likewise, the students for each treatment group were randomly assigned (using gender and age as stratification variables) to the classes by using a table of random numbers. As a result, each treatment group had the same proportion of subjects in terms of gender and age as the whole group. The three contrast groups were as follows: (A) lecture/demonstration plus cooperative learning without group processing, (B) lecture/demonstration plus cooperative learning with group processing, and (C) control or lecture/demonstration with individualistic learning.

The use-of-IBSM measure was administered at the beginning and end of the course to all students to assess student's use/non-use of the steps of IBSM. Students' written responses to three passages of the Bible were elicited. Students' responses were awarded points using an analytic scoring guide. In order not to cue and/or intimidate the subjects, subjects were not told that their responses to the use-of-IBSM measure would be scored and analyzed based on their use/non-use of the three components of IBSM. The identical
posttest was administered to each of the treatment groups at the end of the study. Students' responses were also evaluated in the same manner used for the pretest.

The attitude-toward-Bible-interpretation measure was also administered at the beginning and end of the course. This measure assessed students' entering and exiting attitude toward Bible interpretation based on the philosophical principles of IBSM.

At the beginning of the first class session, each contrast group took the pretests, filled out a demographic survey, and received an explanation or general overview of the course. An overhead projector was provided to the instructor of each contrast group in order to use transparencies for the class sessions. After the introduction, each group studied the subject matter according to the treatment to which it was assigned.

The experimenter taught the control group in order to avoid the teacher variable effect, for, unlike the experimenter, the other teachers in this study did not have any previous experience in using cooperative learning. In order to minimize teacher effect, lessons and directions were detailed and scripted as needed. (See appendix A.) Another effort to reduce teacher effect involved tape recording the lessons of each instructor and conducting debriefings with the instructors about the adequacy of each treatment's implementation. The experimenter monitored the adequacy of each treatment implementation on each group by listening to tape recordings of each class session for each group. The teachers of experimental groups A and B recorded their classes for this purpose, and then they handed in the tapes to the experimenter after each class period. In addition, the experimenter looked over students' written work to monitor the implementation of the treatment conditions.

The attitude-toward-IBSM measure and students'-satisfaction-with-the-learning-experience measure were administered to all students at the end of the course. These instruments served to evaluate students' exiting attitude toward IBSM and the instructional approach/method they experienced during the course.
SECTION IX

DATA ANALYSIS

For measuring students' use of IBSM and attitude toward Bible interpretation, the subjects were administered written pre- and posttests. The posttest results from the use-of-IBSM measure and attitude-toward-Bible-interpretation measure were analyzed using analysis of covariance (ANCOVA) with pretest scores serving as a covariate to adjust posttest scores and to determine whether there were significant differences at posttest between the three means of the contrast groups at the .05 level of significance. According to Gay (1987), ANCOVA is a superior method for controlling for pretest differences for a study based on a pretest-posttest control group design. When there is a significant F ratio, the null hypothesis should be rejected.

For posttest-only data analysis, in conjunction with the attitude-toward-IBSM measure and the students' satisfaction-with-the-learning-experience measure, the following a priori comparisons at the .05 level of significance were conducted: (1) control group C mean vs. combined means of experimental groups A and B, and (2) experimental group A mean vs. experimental group B mean.

Teachers and students were also interviewed orally with open-ended questions to ascertain their affective reactions to the teaching approach/methodology and to IBSM in general. The interview questions were about what they liked/disliked about the learning methodology and included a question regarding how students planned to use what they had learned (See Appendix I.) The teachers' and students' answers were tape recorded and later transcribed to facilitate analysis. All these questions were analyzed by identifying categories of responses using constant comparison methods and tallying the number of
responses in each category. These categories were developed post facto based on obtained student responses.

Table 2 was made to summarize demographic data collected on students' age, gender, number of years in Bible study, and their previous group learning experiences. This information was collected in order to help explain any apparent differences between the subgroups of subjects on subjects' responses to the oral interview questions.
SECTION X

TIME SCHEDULE

Prior to the first week of the experiment, the investigator: 1. completed work on lesson plans, instructional materials, measuring instruments, 2. sought the subjects' consent, and 3. trained teachers by conducting a workshop; assigned students and teachers randomly with regard to treatments and classes. From the first week to the fifth week, the investigator (1) administered pre-tests, (2) delivered instruction, (3) administered posttests, (4) surveyed students, and (5) interviewed teachers. After the fifth week, the investigator: 1. supervised the scoring of pre- and posttests, 2. supervised the coding of interview data, 3. analyzed data, and 4. completed the written research report.
SECTION XI

PERSONNEL

Personnel for the study included three instructors (including the experimenter), and two expert judges/scorers/coders (excluding the experimenter). The instructors of the present study had Master's degrees, and they learned the IBSM as a required course in their Masters' programs (Master of Theology and Master of Sacred Theology). All were well equipped to apply the Inductive Bible Study Method to their personal study and to teach IBSM to others. All of the instructors were Korean-born males, and their ages ranged from thirty-four to thirty-five years. One of them came to the United States when he was in junior high school. The rest came to America in their early twenties. The instructors did not appear to have any cultural differences which might have caused some differences in instructional approach. All instructors had more than eight years' teaching experience with adults. Prior to the instructional phase of the study, all teachers participated in a workshop in which they were trained in the appropriate method of instruction. The workshop included (1) the content to be taught in the study, (2) the respective treatments to be used, and (3) the teacher's role within each treatment, as suggested by Johnson & Johnson (1994a), Dansereau (1985), and Sharan (1994b). The experimenter conducted the above workshop and monitored the adequacy of the treatment implementation in each group by (1) listening to tape recordings of each class session for each group and (2) reviewing students' written assignments. None of the instructors except the experimenter had previous experience in using the cooperative learning strategy. To reduce the teacher effect variable, the experimenter instructed the control group, and detailed lessons (with scripted directions as needed) were written and implemented for all treatment conditions.
Through tape recordings of each class session, the experimenter found that the instructors satisfactorily performed their respective roles in their classes. For example, the instructors followed the scripted directions faithfully in each class session and kept the time allotments for each instructional step. Also, the instructors, in their post-study teacher interview questions, expressed no problem with regard to their respective roles in this study.
SECTION XII

RESULTS

The demographic information indicated that most subjects (i.e., 70.8% of the respondents) in this study had previously experienced small group learning of some kind. The rest (29.2%) had not experienced small group learning but were very familiar with whole class learning. Oral questioning of the subjects indicated that none had any cooperative learning experience. Because each group showed very similar conformity regarding the subjects' experience in small group learning (the average ratio of subjects experienced in small group learning versus not experienced in small group learning for all groups was equal to 11.3: 4.7; in each group the number of subjects experienced with small group learning ranged from 11 to 12 and for the students inexperienced with small group learning, 4 to 5), potential sampling bias was not apparent. Although the years of Bible learning ranged from 1 to 30, each group showed almost the same average number of years (about 7.5 years). This was also true for both the average number of years in the United States (14.3 years) and the average age of subjects (44.25 years of age). The range for the average number of years in the United States was a minimum of 3 years and a maximum of 25 years. The gender ratio for each group was similar in all groups (the average ratio of males versus females for each group was equal to 7:9). The number of males in each group ranged from 6 to 7 and that of females 8 to 10. Demographic information for all subjects is presented in Table 2. The research questions presented above were investigated with the aid of the procedures and instruments described in previous chapters.

To hypotheses 1 and 2, using the use-of-IBSM pretest scores as a covariate, the experimenter conducted three analyses of covariance (ANCOVA) - one for each of the
Bible passages used at posttest in conjunction with the use-of-IBSM measure. Table 3 contains the results of the three analyses of covariance for each of the three Bible passages. Table 3 presents the obtained means, the adjusted means (posttest scores were adjusted for differences in the corresponding pretest scores), and the standard deviations of the three groups. According to Table 3, the mean scores of the students who received instruction in IBSM using lecture-demonstration with cooperative learning elements (adjusted means were equal to 2.91 and 2.46 for experimental groups A and B respectively) were slightly higher than the mean score of the group instructed using lecture-demonstration with individualistic learning elements (adjusted mean was equal to 2.41) on the first question. On the second question, the mean scores of the students who received instruction in IBSM using lecture-demonstration with cooperative learning elements (adjusted means were equal to 3.13 and 3.00 for experimental group A and B respectively) were slightly higher than the mean score of the group instructed using lecture-demonstration with individualistic learning elements (adjusted mean was equal to 2.40). The same trend was observed with respect to the students' means on the third question. The mean scores of the students who received instruction in IBSM using lecture-demonstration with cooperative learning elements (adjusted means were equal to 2.97 and 3.08 for experimental groups A and B respectively) were slightly higher than the mean score of the group instructed using lecture-demonstration with individualistic learning elements (adjusted mean was equal to 2.51). But these small mean differences were not statistically significant. In fact, the ANCOVA indicated no significant differences between the mean scores of the groups (F calculated = .78, F critical = 3.20, p>.05, df = 2, 44 on question #1; F calculated = 1.75, F critical = 3.20, p>.05, df = 2, 44 on question #2; F calculated = .70, F critical = 3.20, p>.05, df = 2, 44 on question #3). Although experimental group A, which experienced the group processing strategy, attained slightly higher mean scores on questions #1 and #2 (Mean = 2.91 and 3.13 respectively) than those of experimental group B (Mean = 2.46 and 3.00...
respectively), and lower mean score on question #3 (Mean = 2.97 for group A and Mean = 3.08 for group B), ANCOVA indicated no statistically significant differences between the groups as was explained before.

Using the attitude-toward-Bible-interpretation pre-test scores as a covariate, the researcher conducted an analysis of covariance (ANCOVA) for the attitude-toward-Bible-interpretation posttest in conjunction with the attitude-toward-Bible-interpretation measure. This significance test served to test hypotheses 3 and 4. Table 4 contains the obtained means, the adjusted means (posttest scores were adjusted for differences in the corresponding pretest scores), and the standard deviations of the three groups on the attitude-toward-Bible-interpretation measure. With respect to hypotheses 3 and 4, Table 4 indicates that the mean scores of the students who received instruction in IBSM using lecture-demonstration plus cooperative learning elements (with or without group processing) were slightly lower than the mean score of the group instructed using lecture-demonstration with individualistic learning elements (means were equal to 3.11, 3.23, and 3.25 for the experimental groups A, B and control group C respectively). Also, the students who received instruction in IBSM using lecture-demonstration containing cooperative learning elements with group processing attained a slightly higher mean score than those who did not experience group processing (Mean = 3.11 for group A and Mean = 3.23 for group B). The ANCOVA indicated no statistically significant differences between the mean scores of the three groups (F calculated = .47, F critical = 3.20, p >.05, df = 2, 44).

Table 5 contains the posttest means and standard deviations for the three groups on the attitude-toward-IBSM measure. With respect to hypotheses 5 and 6, Table 5 indicates that the mean scores on the attitude-toward-IBSM posttest of the students who received instruction in IBSM using lecture/demonstration plus cooperative learning elements (with
or without group processing) were slightly lower than the mean score of the group instructed using lecture-demonstration with individualistic learning elements (means were equal to 3.30, 3.18, and 3.39 for the experimental groups A, B and control group C respectively). Also, the students who received instruction in IBSM using lecture/demonstration containing cooperative learning elements with group processing attained a slightly lower mean score than those who did not experience group processing (Mean = 3.30 for group A and Mean = 3.18 for group B). To test hypotheses 5 and 6, the following a priori comparisons at the .05 level of significance were conducted: (1) control group C mean vs. combined means of experimental groups A and B, and (2) experimental group A mean vs. experimental group B mean on the attitude-toward-IBSM posttest-only measure. The combined mean score of experimental groups A and B was lower than the mean score of the control group C, with t observed = -.81 and t critical (one-tailed test, \( \alpha = .05 \), df = 46) = 1.68. Also, the mean score of experimental group B was lower than the mean score of the contrast group A, with t observed = - .53 and t critical (one-tailed test, \( \alpha = .05 \), df = 30) = 1.70. Thus, these mean differences were not statistically significant.

With respect to hypotheses 7 and 8 and the students' satisfaction with the learning experience measure, Table 6 indicates that the mean scores of the students who received instruction in IBSM using lecture/demonstration plus cooperative learning elements (with or without group processing) were slightly higher than the mean score of the group instructed using lecture-demonstration with individualistic learning elements (means were equal to 3.59, 3.84, and 3.50 for the experimental groups A, B and control group C respectively). Also, the students who received instruction in IBSM using lecture/demonstration containing cooperative learning elements with group processing attained a slightly higher mean score than those who did not experience group processing (Mean = 3.59 for group A and Mean = 3.84 for group B). To test hypotheses 7 and 8, the following a priori comparisons at the .05 level of significance were conducted: (1) control
group C mean vs. the combined means of experimental groups A and B, and (2) experimental group A mean vs. experimental group B mean on the students'-satisfaction-toward-learning-experience measure. The combined mean score of experimental groups A and B was not significantly greater than the mean score of the control group C, with $t_{\text{observed}} = 1.43$ and $t_{\text{critical (one-tailed test, } \alpha = .05, \text{ df = 46)}} = 1.68$. Also, the mean score of experimental group B was not significantly greater than the mean score of experimental group A, with $t_{\text{observed}} = 1.34$ and $t_{\text{critical (one-tailed test, } \alpha = .05, \text{ df = 30)}} = 1.70$.

Tables 7 through 16 contain response/category frequencies at posttest for the various oral interview questions. In generating the tables, the students were stratified by treatment, age, and gender. Each interview required fifteen minutes, and the questions called for students to describe their opinions about the learning experience. The tables contain all responses of the students.

Table 7 and 8 contain the response/category frequencies of students and teachers with respect to oral interview question #1: "How would you describe the classroom climate during the course?" Table 7 serves to reveal contrast group and gender-related differences, while Table 8 makes contrast group and age-related differences apparent.

While the students in the two experimental groups expressed positive responses such as "much better as class progressed", "satisfying", "encouraging", and "stimulating for learning", only a couple of students in the control group responded as positively as the students in the experimental groups. Instead, several students in the control group mentioned "systematic and organized lessons". Interestingly enough, only a few students in the experimental groups said that the lessons were organized and systematic. Perhaps it was because of the "busyness" of the experimental groups with regard to their instruction. In fact, the experimental group B instructor expressed his frustration that he needed more time for each class to cover both the content and instructional methodology.
While many students in all groups in their 30s to 50s showed satisfaction (with responses such as "lively", "satisfying", and "encouraging") with the classroom climate in their learning experience, some older students (over 60 years old) in experimental group A and control group C expressed uncomfortable feelings such as "difficult to understand", and "uncomfortable to share opinions". In fact, the oral interview data suggest that the students in the younger age brackets showed more positive responses to this interview question (and to most other interview questions) than older age students in all groups. The possible reason for this result may be the pressures the older students felt from being in any school-like, teaching-learning setting regardless of the type of instructional approach used. There was no apparent differences between gender in students' responses.

The teachers' responses in experimental groups A and B to the same question, "How would you describe the classroom climate during the course?", were highly positive, and they praised the serious attitude of the students toward their learning. But the teacher for the control group expressed somewhat similar opinions to those of the experimental group teacher mentioned. Also, the teacher of experimental group B, which experienced the group processing strategy, mentioned steady progress of the students in their cooperation and encouragement of each other in class.

Tables 9 and 10 contain the frequencies/categories of students and teachers' responses to oral interview question #2: "What did you like best about how the class was taught?" Again, Tables 9 and 10 reveal contrast group and gender differences, and contrast group and age differences respectively. For this question, the students in different treatment groups expressed distinctively different opinions. The students in the experimental groups responded to this question mostly by pointing out things related to group dynamics such as "discussion for agreement", "group dynamics", and "cooperative and encouraging atmosphere." Thus, it seems that the students in the experimental groups were very positively influenced by cooperative learning elements. The constructive and
caring nature of the experience dominated their responses. The most frequent responses from the experimental group students concerned (a) group discussion which led them to merge/harmonize their various views, and (b) group dynamics. But the students in the control group mentioned nothing about the above areas. Rather, they were more interested in how to apply what they have learned. In experimental groups A and B, the male students showed more positive reactions than female students. Also, younger students made these responses more often than older students.

All instructors' reactions to this question were also positive. The instructors of experimental groups A and B mentioned the vitality of teacher-student interactions and the effectiveness of the flow of the lesson, and they commended Dansereau's method by which the students were led to participate in student-student interactions. But, the instructor of the control group did not mention the same opinion because the control group did not receive Dansereau's method during instruction. However, he mentioned the effectiveness of the flow of the lesson.

Tables 11 and 12 contain students' and teachers' reactions when they were asked oral interview question #3: "What did you like least about how the class was taught?" Those tables were again stratified for revealing (a) contrast group and gender and (b) contrast group and age differences. The most frequent response to this question from the two experimental groups was lack of time to master the content. The students in both experimental groups seemed dissatisfied in conjunction with time allotment for each class and wanted more time for the lessons. Yet this negative opinion of the students seems to be caused partly by their enthusiasm to master the content as well as have more discussion with their groups, especially when one considers their positive reaction toward the learning experience in general as indicated in Tables 7-10 described above. The control group students did not complain about lack of time for learning the content. It is clear that the control class did not experience any cooperative learning elements on which they could use
more time. The focus was on individuals' conceptual understanding rather than on helping and building up each other's understanding on the content.

Some older age subjects (51-60 and over 60) in experimental groups A and B seemed to be less satisfied with the learning experience, for they found it "difficult" and felt "pressure to participate." The source of dissatisfaction may have been caused by the cooperative learning strategy, which was somewhat forcing students to participate in the learning process by sharing their opinions, listening to others' opinions carefully to understand various thoughts of others, and contributing their efforts for group success. The pressure that the older age subjects felt during each lesson was evident when one younger female subject in the 30-40 age bracket in experimental group A told the experimenter that the older age subjects in her group had very dissatisfied feelings toward the cooperative learning strategy. Interestingly enough, fewer older age subjects participating in the control group expressed this kind of dissatisfaction with their learning experience. As noted by the instructors and the experimenter during their teaching and monitoring of instruction, most of the older age subjects in the experimental groups preferred to sit in the background, but not actively participate in group discussions. Thus, intimidation might be the biggest problem inherent in using cooperative learning approach, especially with older people. No apparent differences in students' responses were found through the table with regard to gender.

The instructors of experimental groups A and B complained about not having enough time to cover the content and instructional method. But, the instructor of the control group did not express the same opinion. However, careful time allotment was given to each lesson, and the instructors of experimental groups A and B were clearly informed about the time assignment during the workshop. Time spent in implementing the cooperative learning approach is time spent on extra effort in each lesson, to be sure. But,
everything about IBSM cannot be taught even within a year, no matter what instructional methodology is used.

Tables 13 and 14 show the students’ and teachers’ opinions in response to oral interview question #4: "How would you change this class in terms of how it was taught?" The comments of the respondents indicated that the students in the experimental groups wanted more time for adequately focusing their attention on mastering the content as well as applying it to their daily living. Some students in experimental group A expressed their interest in the subject by mentioning their need to have some homework for reviewing and previewing. One student in the control group suggested the need for more examples for practicing what she learned. But interestingly enough, many control group students said that there was nothing to say concerning the question, whereas the experimental group students tended to mention some things to change in the instruction. The learning experience seems to have stimulated the experimental group students more than those in the control group; thus, the experimental group students suggested more ideas for an even learning experience.

Both teachers of the experimental groups also pointed out their lack of enough time for addressing all of the processes of the cooperative learning approach. One teacher suggested having ninety minutes rather than sixty minutes for each class session. Also, an instructor mentioned the importance of giving homework to the students for review and preview for more effective learning. The instructor of the control group did not mention any problem regarding time constraint for each lesson. There were no noticeable differences in frequencies/categories regarding gender and age on either table.

Tables 15 and 16 contain the reactions of the students and teachers to oral interview question #5: "Is there anything you would like to comment on pertaining to the teaching/learning you experienced in this course?" Most of the students in all groups responded positively. Several students in the experimental groups mentioned the necessity
of working together with their group members for effective learning. A couple of students in experimental group B expressed their excitement when saying that their group came up with some fresh perceptions on some Scriptural verses that even the instructor had not thought of before. Also, the impact of group processing on students' learning process seemed to be apparent when two people in experimental group B (with group processing) used the word "must" when referring to having group process at the end of each session. No students in the control group made any suggestions regarding their learning experience.

One negative comment that emerged was about the inappropriateness of the cooperative learning approach as an instructional tool in a church context. The reason for that, according to the respondents (one male in the fifty-one to sixty age bracket in experimental group A and another male in the same age bracket in experimental group B), was the pressure on students to participate in group work, especially felt by the older age subjects. Considering that only a couple of students brought up this matter, the researcher acknowledges it as a potential problem for some older students that may need to be overcome, but he does not view it as a sufficient reason for abandoning the application of cooperative learning elements in the context of church education. A Christian's attainment of conceptual understanding and behavioral change may require that s/he feels uncomfortable.

Both teachers of the experimental groups commended the effectiveness of group discussion during each class. The instructor of experimental group A said that the pressure given for participation was effective. The teacher of experimental group B with group processing also praised the instructional method as very helpful in getting students to encourage each other and in building security within each group. Also, he said that group processing was powerful in building a team. Since there were no elements of cooperative learning for the control group during instruction, the instructor of the control group did not
mention anything regarding group dynamics. There were no noticeable differences in frequencies/categories regarding gender and age in either table.

When asked the open-ended question, "What can/will you do with what you learned from this course?", almost half of the students (38.0%, 44%, and 56% from experimental groups A, B, and control group C respectively) described their future plan to use the knowledge they acquired through the course by applying it to their everyday reading of the Scriptures. Among the students who expressed positive future plan of using IBSM, 33%, 29%, and 78% from groups A, B, and C respectively expressed their willingness to apply the knowledge from their individual study of the Bible to their daily living. One possible reason for the control group to have the highest percentages might be due to the familiarity and comfort level control group students felt for the lecture-individualistic learning method.
In this study, the researcher sought to find out the cause-effect relationships by manipulating the independent variable (instructional methodology) and observing the effect on dependent variables (students' use and attitude toward Inductive Bible Study Method, students' attitude toward Bible interpretation, and students' satisfaction toward the learning experience). This study tested eight hypotheses.

The first hypothesis of the study said that the students who received instruction in IBSM using cooperative learning elements (with or without group processing) would score higher on a use-of-IBSM measure than adult learners who received instruction in IBSM using traditional lecture/demonstration with individualistic learning elements. In not rejecting the null hypothesis associated with hypothesis 1, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements (with or without group processing) do not score significantly higher on a use-of-IBSM measure than adult learners who receive instruction in IBSM using traditional lecture/demonstration with individualistic learning elements. Analysis of students' pretest and posttest scores on the use-of-IBSM measure did not indicate statistically significant differences among the contrast groups.

The second hypothesis of the study was that the students who received instruction in IBSM using cooperative learning elements with group processing would score higher on a use-of-IBSM measure than those who received instruction in IBSM using cooperative learning method without group processing. In not rejecting the null hypothesis associated with hypothesis 2, the experimenter concludes that adult students who receive instruction in
IBSM using cooperative learning elements with group processing do not score significantly higher on a use-of-IBSM measure than adult learners who received instruction in IBSM using cooperative learning method without group processing. ANCOVA indicated there was no significant difference between these groups in this study.

The third hypothesis of the study was that the students who received instruction in IBSM using cooperative learning elements (with or without group processing) would score higher on an attitude-toward-Bible-interpretation measure than adult learners who received instruction in IBSM using traditional lecture/demonstration with individualistic learning elements. In not rejecting the null hypothesis associated with hypothesis 3, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements (with or without group processing) do not score significantly higher on an attitude-toward-Bible-interpretation measure than adult learners who receive instruction in IBSM using traditional lecture/demonstration with individualistic learning elements. The ANCOVA in conjunction with the attitude-toward-Bible-interpretation measure did not show any statistically significant mean difference among the contrast groups in the present study.

The fourth hypothesis of the study stated the students who received instruction in IBSM using cooperative learning elements with group processing would score higher on an attitude-toward-Bible-interpretation measure than those who received instruction in IBSM using cooperative learning method without group processing. In not rejecting the null hypothesis associated with hypothesis 4, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements with group processing do not score significantly higher on an attitude-toward-Bible-interpretation measure than adult learners who receive instruction in IBSM using cooperative learning method without group processing.
The fifth hypothesis stated that students who received instruction in IBSM using lecture-demonstration method with cooperative learning elements (with or without group processing) would score higher on an attitude-toward-IBSM measure than the adults who received instruction in IBSM using traditional lecture-demonstration method with individualistic learning elements. In not rejecting the null hypothesis associated with hypothesis 5, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements (with or without group processing) do not score significantly higher on an attitude-toward-IBSM measure than adult learners who receive instruction in IBSM using traditional lecture/demonstration with individualistic learning elements. A priori comparisons of posttest results on the attitude-toward-IBSM measure indicated no significant mean differences among the contrast groups.

The sixth hypothesis of the study was that the students who received instruction in IBSM using cooperative learning elements with group processing would score higher on an attitude-toward-IBSM measure than those who received instruction in IBSM using cooperative learning method without group processing. In not rejecting the null hypothesis associated with hypothesis 6, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements with group processing do not score significantly higher on an attitude-toward-IBSM measure than adult learners who receive instruction in IBSM using cooperative learning method without group processing. The posttest mean score of the experimental group B (with group processing) was slightly lower than contrast group A (without group processing on the attitude-toward-IBSM measure).

The seventh hypothesis said that the students who received instruction in IBSM using lecture-demonstration method with cooperative learning elements (with or without group processing) would score higher on a students'-satisfaction-with-the-learning-experience measure than the adults who received instruction in IBSM using traditional
lecture-demonstration method with individualistic learning elements. In not rejecting the null hypothesis associated with hypothesis 7, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements (with or without group processing) do not score significantly higher on a students'-satisfaction-with-the-learning-experience measure than adult learners who receive instruction in IBSM using traditional lecture/demonstration with individualistic learning elements. A priori comparisons indicated no significant mean differences among the contrast groups on the students'-satisfaction-with-the-learning-experience measure.

The final hypothesis in conjunction with the students'-satisfaction-with-the-learning-experience measure contended that pupils who received instruction in IBSM using cooperative learning elements with group processing would score higher on a students'-satisfaction-toward-learning-experience measure than those who received instruction in IBSM using cooperative learning method without group processing. In not rejecting the null hypothesis associated with hypothesis 8, the experimenter concludes that adult students who receive instruction in IBSM using cooperative learning elements with group processing do not score significantly higher on a students'-satisfaction-with-the-learning-experience measure than adult learners who receive instruction in IBSM using cooperative learning method without group processing. The mean score of the experimental group B (with group processing) was slightly higher than contrast group A (without group processing), but not statistically significant.

Briefly summarizing the first major research finding of this study, with respect to teaching adult learners the Inductive Bible Study Method (IBSM) of Bible interpretation, the lecture-demonstration method containing cooperative learning elements with or without group processing, does not produce greater use of IBSM, a more positive attitude toward IBSM, or greater student satisfaction with the learning experience than the lecture-demonstration method with individualistic learning elements. Analysis of pretest and
posttest scores showed no significant differences on all significance tests. The lack of significant results may have been based on the fact that the class did not have enough time for adequately addressing all of the processes of a full-blown cooperative learning method in a Sunday School. Teachers' and students' not having enough time for each class might have caused lack of proper preparation of students' working in cooperative groups. In fact, the teachers of experimental groups A and B suggested having a longer time period for each class to address all of the cooperative learning processes adequately. Training students for cooperation is strongly recommended by several researchers such as Cohen (1994), Kagan (1994), and Sharans (1994a). For example, Kagan (194) stresses this aspect when saying that teams experience serious difficulties if teambuilding and classbuilding are neglected, especially in classrooms in which there are preexisting tensions. The experimenter, as well as instructors in this study, noticed that most of the older age subjects preferred to sit in the background, not actively participating in group discussions. Gibbs (1994) also cautioned that both teachers and pupils may need more extensive preparation if cooperative learning experiences in Christian education settings are to be successful. Although teachers received pretraining by the experimenter, the subjects in this study may not have received enough training on cooperative learning elements for the work of the small-group to be effective.

Another possible reason for having no significant differences between the mean scores of the contrast groups might have been the difficulty of measuring subtle differences in students' achievement and attitudes. This is evident when comparing students' responses to open-ended interview questions to their performance on selected-response measures. For example, despite the fact that almost half of the students in all groups (38.0%, 44%, and 56% for experimental groups A, B, and control group C respectively) described their future plan to use the knowledge they acquired through the course by applying it to their everyday reading of the Scriptures, the students marked the attitude
toward-Bible-interpretation posttest nearly the same as they did at pretest. In one case, a fifty-four year old woman in experimental group A, when answering the interview question: "What will/can you do with what you learned from this course?", said she knew now how to interpret the Bible alone; thus, she wanted to start her study of the Scriptures everyday. But, her score on the attitude-toward-Bible interpretation measure at posttest was lower than before she took the course, "Living by the Book." Also, on the attitude-toward-IBSM measure, in spite of their somewhat enthusiastic attitude toward IBSM as indicated in responses to interview questions, the students marked just average score. These kind of inconsistent responses from the students may be due to their background preconceptions about Bible interpretation (e.g., only “spiritual people” can define the meaning of the Bible verses). Preconceptions such as this one might hold students’ thoughts and prevent what Piaget would refer to as the process of adaptation by means of accommodation. That frustration in their mind might have caused them to respond in one way on the forced-choice, paper-pencil measures and respond in another way on the open-ended interview questions. Perhaps, a descriptive study focusing on thought processes and attitudes needs to be done in order to understand the apparent discrepancies between the affective outcomes in the present study.

The other possible cause for the non-significant differences between contrast groups might be the inability of some students to adequately describe their thinking when responding to the use-of-IBSM questions. In fact, one pupil expressed her struggle on this matter by writing before one of the required responses: “I’m sorry, but I can’t describe what I know. Perhaps, it has been a long time since I wrote my thoughts in this organized and intensive way.” Several others also expressed having difficulty in conveying their understanding of the subject matter. This suggests that a more sophisticated instrument for measuring students’ use of IBSM may need to be developed.
Lack of feedback correctives from the instructors, while the students engaged in group work, might be the another possible cause for non-significant differences in this experiment. According to Laney et al. (1995), the presence of specific, positive feedback in cooperative group settings provides superior outcomes with respect to primary grade students’ learning and retention of economic concepts. Although the subjects of Laney’s study were not adult learners and were learning economics content, the principle may be relevant to the present research, too. In fact, a couple of students in experimental groups A and B expressed related opinions as follows: (1) “I need more teacher involvement with regard to learning new Bible interpretation method” and (2) “We need more examples to practice IBSM with the instructor.” This kind of reaction supports Lamport’s (1994) suggestion that the role of the “facilitator-teacher seems critical to the successful or unsuccessful experience of students” (p.50) in the cooperative learning approach.

The second major finding from this study is that group processing did not enhance the achievement/attitudinal effects of the experimental group B as compared to experimental group A. Although group processing activities can enhance the achievement effects of cooperative learning as Yager, Johnson, Johnson and Snider (1986) point out, time constraints in the present study may have forced the teacher for experimental group B, which had group processing in each class period, not to practice it fully so that the students did not fully benefit from the practice. According to the Johnsons (1991), group processing can be successful if teachers allow sufficient time for it to take place and maintain student involvement in processing. Despite this problem, a couple of students (younger males) in experimental group B emphasized the effectiveness of group processing in their oral interview. They even said that group processing was a “must” to be practiced. Practicing group processing, though it did not bring significant differences in this study, cannot be dismissed as an important element for successful cooperative learning experiences. Definitely, it needs to be investigated more thoroughly in a future study.
As suggested by interview data, the third major finding from the present study is that the lecture/demonstration method combined with cooperative learning elements may promote positive affective outcomes for adult students in Christian education — at least in some respects. One of the research questions of this study concerned the affective reactions of students and teachers to the particular instructional approach to teaching/learning IBSM that they experienced. According to the students' responses to oral interview questions, the lecture/demonstration method plus cooperative learning elements (with or without group processing) seemed to promote students' abilities to cooperate, participate, and encourage each other in small group settings. For example, Tables 7 and 8 indicate that several students (one in experimental group A and four in experimental group B) described the classroom climate as encouraging. The students in control group also had very positive responses such as "systematic and organized", "satisfying", and "very lively". But there was no student in the control group who expressed a feeling related to intragroup dynamics. Also, from Tables 9 and 10, which summarize students' responses to the question: "What did you like best about how the class was taught?", it is clear that the students in both experimental groups favored discussion for reaching agreement. This suggests that the instructional strategy for the experimental groups could promote students' ability to cooperate together for consensus building. Again, no student in the control group mentioned any similar ideas to that of the students in the experimental groups in this regard. Tables 9 and 10 also show us that several students in the experimental groups mentioned "cooperative and encouraging atmosphere" as the best features of the instructional approach they experienced. There was no student who mentioned the same thought as this in control group. This kind of "silence" by the students in control group is understandable because they did not experience any kind of element which was aimed at promoting group dynamics. In Tables 15 and 16, one sees that the students in the experimental groups considered group work as important for learning. A couple of students in the experimental
group B said that "group processing is a 'must' to do." This kind of attitude toward group processing suggests that these students had very positive feelings toward their learning experience. Thus, it suggests that the lecture/demonstration method combined with cooperative learning elements may promote adult learners' affective outcomes such as cooperation, participation and encouraging each other in Christian education. This finding is in line with Johnson and Johnsons' (1994a) conclusion that cooperative efforts result in greater interpersonal liking, more social support, higher self-esteem, and greater psychological health than do competitive or individualistic efforts.

A possible contextual problem with the present study bear some discussion. The content taught in this study was very value-laden and personal. This study might have gotten quite different results if the subject matter had been traditional, academic, non-religious content. Cooperative learning with or without group processing may not have worked to its maximum benefit because students are naturally reluctant to share their personal values/beliefs/interpretations.

There was a gender difference in students' responses to one oral interview question: "What did you like best about how the class was taught?" More male students expressed their positive feelings toward the learning experience than female students regarding discussion for reaching agreement/consensus, group dynamics, and the techniques promoting group participation (such as answering the questions on the handout as groups). Also, more male students expressed their negative feelings toward the learning experience than female students regarding discussion for reaching agreement/consensus, group dynamics, and the technique promoting group participation. Other than that, male and female students showed no significant difference on each category.

Concerning age differences in students' responses to the oral interview questions mentioned above, the experimenter found that the younger students in all experimental groups showed more positive attitudes toward their learning experience than the older ones.
Thus, with respect to age difference, it is possible to state that younger male students are the group that seems to accept the lecture/demonstration method combined with cooperative learning elements most compared to other groups. This is contrary to what Lamport (1994) indicates that there are insignificant differences in the reactions of younger and older respondents. The mean age of Lamport's study was 25.75. However, Lamport admittedly states that a more representative age range needs to be studied to compare different age groupings. The mean age of the present study is 44.65 and as Lamport suggests, a future study is needed to more reliably compare other age groupings.

Five limitations of the present study bear some discussion. The first pertains to the limitation with respect to its generalizability to other groups of adult learners. Because this study was implemented with only one ethnic group (Korean, Asian-American), the generalizability may be limited somewhat. The age range of the subjects for this study also is a second limitation in this study. Most of the students were middle-aged adults, with the average age of all subjects being 44.65 years. Therefore, the results of this study may not be applicable to adults of dissimilar age. A third limitation of this study is somewhat similar to the previous statement. All participants in this study were born in Korea. According to Pang (1995), an important variable to consider when doing research with Asian-Americans is place of birth -- U.S. born or immigrant. Therefore, the results of this study may be applicable best to other immigrants. In addition to that, the possible tension existing between the older students and the younger ones needs to be noticed. One of the traditional Korean attitudes are younger peoples' showing respect to the older people. As a result, freely expressing their feelings and opinions about learning experiences as well as group cooperation throughout this study might have been somewhat difficult for the younger students before the older ones. A fourth possible limitation is in the duration of this study. This study lasted for five weeks (with one session per week), and the length of each class session was sixty minutes. While ideally subjects should be exposed to the
experimental treatment for a longer period of time in order to more accurately assess its
effectiveness, permission was granted to the experimenter to be in church school for a
maximum of five weeks. Only having sixty minutes per each session was due to the large
number of Sunday programs following right after the church school, and the scheduling of
these programs was beyond what the experimenter could control. However, since the
course, "Living by the Book", dealt only with the basic ideas of IBSM, five weeks with a
full hour per each session was sufficient for the instructors to treat the limited content
properly. In fact, most courses in IBSM are limited in their duration. This study, then, is
realistic in suggesting what is possible in terms of what can be achieved under normal
circumstances in this kind of setting. A final limitation of this study was the small number
of subjects (i.e. sixteen in each of the three contrast groups), but, according to Gay (1987),
as few as fifteen subjects per group are acceptable in experimental studies with fairly tight
experimental controls. Further study is necessary to investigate the applicability of the
effect of lecture/demonstration method containing cooperative learning elements on people
of different cultural backgrounds, even Koreans who were born in the U.S.

There are some implications of the present study for instructional practice. First,
the teacher's role is very important in cooperative learning. Although cooperative learning
can develop students' positive social relationships with others, this learning strategy may
need to have elements of mastery learning (e.g., more extensive feedback correctives from
the instructor) for improving the conceptual gains of adult learners. This implication was
apparent when the experimenter examined students' comments pertaining to the
teaching/learning they experienced in this study. According to Tables 15 and 16, several
students from experimental groups A and B mentioned the importance of the teacher's role.
On the contrary, no students in the control group pointed out the significant role of the
instructor. Perhaps, students' different reactions within the experimental groups versus the
control group may be attributed to the nature of the particular instructional approaches for
the groups. The cooperative learning method requires an instructor's active involvement and close work with students as Johnson and Johnson (1994a) point out.

Second, as alluded to in the above paragraph, the present study suggests that there may need to be more frequent opportunities for the students to practice with the instructor in order to better acquire a new method or new concept. More opportunities for practice with the instructor translate into more opportunities for the instructor to provide corrective feedback. This implication is congruent to the suggestion by Rosenshine (1995) that the more one rehearses and reviews information, the stronger the interconnection of the number of pieces of information that are in the long-term memory.

Third, lecture-demonstration plus cooperative learning elements (with or without group processing) apparently provides a great positive effect on the instructor. Both teachers of experimental groups expressed their satisfaction with the teaching experience by saying: (1) "Student participants are very active" and (2) "This learning strategy gives more student-teacher interaction, and it is great." In addition to that, the instructor for the group who experienced group processing also conveyed his satisfaction with the learning experience by saying, (1) "This method is very helpful to encourage one another and to build security in a group" and (2) "Group processing is powerful for encouraging better group participation." Indeed, lecture-demonstration containing cooperative learning elements (with or without group processing) appears to give teachers enthusiasm for their teaching role. This is congruent to Johnson and Johnson's (1987, 1994a) and Sharan's (1994a) statement that one of the potential outcomes of using cooperative learning is acceptance/efficacy on the part of teachers.

Three major findings of this study were: (1) The lecture/demonstration plus cooperative learning elements with or without group processing did not produce any significant impact on learners' use of IBSM, attitude toward IBSM, or satisfaction with the learning experiences compared to the lecture/demonstration plus individualistic learning
elements; (2) Group processing did not enhance the achievement effects of the experimental group B when compared to other contrast groups; and (3) The lecture/demonstration plus cooperative learning elements with or without group processing promoted students' affective outcomes in some respects.

Even after one year has gone by since the end of this experiment, the participants still remember the IBSM. When the researcher recently visited the church, he talked with several people who had participated in the experiment. They were happy to talk about their cooperative learning experiences, and could remember the basic frame of IBSM. One regrettable thing is that cooperative learning method is not being use today in that church. Related to this, the experimenter thinks that cooperative learning method needs to be used "globally" in one institution if one wants to acquire serious effects for the institution. All instructors will need to have cooperative and positive spirits toward this learning method and willing to take painful effort to embrace full knowledge of cooperative learning. Then and only then cooperative learning method can realize its potential fully.

One more thing the experimenter wants to add is that even though older subjects resisted the cooperative learning method, the experimenter does not think it is desirable not to use the cooperative learning method for older subjects. Because in order to achieve better stage, we need to be patient with one another. In that effort, we all will go one step further toward maturity. When we learn from each other and teach each other, cooperative environment which acknowledges and respects one another may be built. Will the society that builds up one another not the city of dream that we, educators, want to achieve? In that sense, the experimenter believes in cooperative learning method as the best tool to achieve that dream.
APPENDIX A

OUTLINES FOR THE SUBUNITS OF "LIVING BY THE BOOK" COURSE
(Each letter, a to e, represents a subunit.)

(a) The importance of discovering the meaning of the passages of the Bible for the Christian life:

Objective: The student will demonstrate an understanding of the importance of discovering the meaning of the passages of the Bible.

Materials:
* "Use-of-IBSM measure"/demographic survey/"attitude-toward-Bible-Interpretation measure"
* handout for the subunit
* transparencies for this subunit

Lecturing: The instructor will lecture on the importance of discovering the meaning of passages from the Bible for Christian life. Then, the instructor will model examples of interpreting a passage which has a "middle" level of difficulty. Also, the instructor will explain the steps of Dansereau's (1992) method and how to apply it for students' Scriptural readings.

Each treatment group will have a handout dealing with the content of the subunit. All groups will answer the questions on the handout. While the experimental groups solve the problems in groups, the students in the control group will work on the problems individually.

Group work (only for experimental groups A and B): Experimental groups A and B will analyze, reinforce, and summarize the lecture content presented. Also, they will follow the steps of Dansereau's method as they read the same passage the instructor used in the lecture.

Positive interdependence: Experimental groups A and B will work on tasks such as answering the questions on the handout as groups. Then, they will share their answers with the rest of the class.

Group goal (only for experimental groups A and B): The members of each group must reach consensus for the answers to the questions on handout. Both members must work together to solve the problems.

Individual accountability (only for experimental groups A and B): Each person in a group must be able to summarize the content of the subunit and be able to explain the reasons for studying the Scriptures. Group members need to make sure each individual member can do this. Instructor will move from group to group checking individual's understanding.

Group processing (only for experimental group B): The teacher will allow at least 10 minutes for small-groups to evaluate their group work, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing. The students will reflect on a group session by (a) describing what member actions were helpful and unhelpful and (b) making
decisions about what actions to continue or change. The checker will lead the group processing by using "group processing principles" which are contained in appendix B.

* Instructions for teachers of each treatment group:

**Experimental Group A:** Cooperative learning without group processing.
Title: The Joy of Discovery.
Topic: The importance of discovering the meaning of Biblical passages for the life of believers.
Treatment: cooperative learning without group processing.
Day 1 (60 minutes)
Teacher: Timothy T. Chong.
Objective: The students will demonstrate an understanding of the importance of discovering the meaning of the Bible passages through the IBSM.
Materials:
* "Use-of-IBSM measure/demographic survey/attitude-toward-Bible-interpretation measure"
* 1.A. handout
* 1.A. transparency T.1.

Procedure:
1. Have students form groups of four randomly as they come in by drawing their names from a hat.
2. Briefly explain the objective of the course. Administer "use-of-IBSM measure/demographic survey/attitude-toward-Bible-interpretation measure". Make sure that the students need to respond to the sheet by following your direction.** Collect them.
3. Explain the overall content of the course briefly. Use transparency T.1. for the explanation.
4. Have students answer question B on the handout in group. Explain the answers briefly. Tell students that "the purpose of these questions is to let us know the importance of studying the Bible."
5. Have students do question C in group. Explain that God is revealed in Christ, and Christ reveals Himself through the Scripture.
6. Have students respond to four questions per each group, and each member of the group answer one question. Explain them Dansereau’s (1992) method and how to apply it in group. Let them respond to the questions by using Dansereau’s method. Each member in group will be a recaller after reading a or some verse(s). Other members of the group will be the listeners. Then, another student will become a recaller and the rest will be the listeners. In this way, all students will experience both roles. Ask each group to share their thoughts with the whole class. Make brief comments on students' answers as needed. Emphasize Dansereau’s method, recaller/listener.
7. Have each group review and summarize: (1) overall content of the course, and (2) the reasons for studying the Bible. Then, review them with the whole class.

* Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.
* Distribute only one handout for each group so that the group works together with limited resource.
* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

** Tell students to start and end their responses as you direct. Let them respond to demographic survey and attitude section first for five minutes. Then, tell them start to interpret the three passages given for five minutes for each, thus fifteen minutes total. Collect sheets.

Experimental Group B: Cooperative learning with group processing.
Title: The Joy of Discovery.
Topic: The importance of discovering the meaning of the Biblical passages for the life of the believers.
Treatment: cooperative learning with group processing.
Day 1 (60 minutes)
Teacher: Roger C. Kang.
Objective: The students will demonstrate an understanding of the importance of discovering the meaning of the Bible passages through IBSM.
Materials:
* "Use-of-IBSM measure"/demographic survey/"attitude-toward-Bible-interpretation measure"
* 1.B. handout
* 1.B. transparencies T.1.

Procedure:
1. Have students form groups of four randomly as they come in by drawing their names from a hat.
2. Briefly explain the objective of the course. Administer "use-of-IBSM measure"/demographic survey/"attitude-toward-Bible-interpretation measure". Make sure that the students need to respond to the sheet by following your direction.** Collect them.
3. Explain the overall content of the course briefly. Use transparency T.1. for the explanation.
4. Have students answer the question B in handout in groups. Explain the answers briefly. Tell students that "the purpose of these questions is to let us know the importance of studying the Bible."
5. Have students do question C in groups.
6. Have students respond to four questions per each group, and each member of the group answer one question. Explain them Dansereau's (1992) method and how to apply it in group. Let them respond to the questions by using Dansereau's method. Each member in group will be a recaller after reading a or some verse(s). Other members of the group will be the listeners. Then, another student will become a recaller and the rest will be the listeners. In this way, all students will experience both roles. Ask each group to share their thoughts with the whole class. Make brief comments on students' answers as needed. Emphasize Dansereau's method, recaller/listener.
7. Form base groups randomly by drawing their names from a hat. Select checker for each base group. Explain the role of the base group and checker.

8. Have small- and whole-group review and summarize: (1) overall content of the course, and (2) the reasons for studying the Bible.

9. For the last of the class hour, let the base groups process the group effectiveness and have whole class group processing.

* Move from student to student as the student works on his/her assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.

* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

** Tell students to start and end their responses as you direct. Let them respond to demographic survey and attitude section first for five minutes. Then, tell them start to interpret the three passages given for five minutes for each, thus fifteen minutes total. Collect sheets.

**Control Group C:** Lecture.

Title: The Joy of Discovery.

Topic: The importance of discovering the meaning of the Biblical passages for the life of the believers.

Treatment: lecture.

Day 1 (60 minutes)


Objective: The students will demonstrate an understanding of the importance of discovering the meaning of the Bible passages through the IBSM.

Materials:

* "Use-of-IBSM measure"/"demographic survey/"attitude-toward-Bible-interpretation measure"

* 1.C. handout

* 1.C. transparencies T.1.

Procedure:

1. Briefly explain the objective of the course. Administer pretest/demographic survey/"attitude-toward-Bible-interpretation measure". Make sure that the students need to respond to the sheet by following your direction.** Collect them.

2. Explain the overall content of the course briefly. Use transparency T.1. for the explanation.

3. Have students answer question B on the handout individually. Explain the answers briefly. Tell students that "the purpose of these questions is to let us know the importance of studying the Bible."

4. Have students do question C individually.
5. Have students solve the question D individually. Make brief comments on individual student's answers as needed.

6. Spend the rest of the class time to review and summarize: (1) overall content of the course, and (2) the reasons for studying the Bible. But do not encourage student-student interaction.

* Move from student to student as the student works on his/her assignment. Help students as they ask without overdirecting them.

* Do not encourage students interact one another when they review, summarize the content, and receive feedback from you.

** Tell students to start and end their responses as you direct. Let them respond to demographic survey and attitude section first for five minutes. Then, tell them start to interpret the three passages given for five minutes for each, thus fifteen minutes total. Collect sheets.
(b) Observation, the first step of the IBSM (part 1).

Objective: The student will demonstrate an understanding of the importance and use of the concept of observation by responding to the questions on the handout during the class.

Materials:
* handout for the lecture
* transparency for this subunit

Lecturing: The instructor will lecture on the importance of concept of observation and the way to apply this step in interpreting the Bible. Then, the instructor will model how to do it by using a passage which has a "middle" level of difficulty.

Each treatment groups will have handout dealing with the content of the subunit. All groups will answer the questions in the handout. While the experimental groups solve the problems in groups, the students in the control group will work on the problems individually.

Group work (only for experimental groups A and B): Experimental groups A and B will analyze, reinforce, and summarize the lecture content presented. Also, they will follow the steps of Dansereau's method as they read the same passage the instructor used in the lecture.

Positive interdependence: Experimental groups A and B will work on tasks such as answering the questions on the handout as groups. Then, they will share their answers with the rest of the class.

Group goal (only for experimental groups A and B): The members of each group must reach consensus for the answers to the questions on handout. Both members must work together to solve the problems.

Individual accountability (only for experimental groups A and B): Each person in a group must be able to summarize the content of the subunit and be able to explain the reasons for studying the Scriptures. Group members need to make sure each individual member can do this. Instructor will move from group to group checking individual's understanding.

Group processing (only for experimental group B): The teacher will allow at least 10 minutes for small-groups to evaluate their group work, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing. The students will reflect on a group session by (a) describing what member actions were helpful and unhelpful and (b) making decisions about what actions to continue or change. The checker will lead the group processing by using "group processing principles" which are contained in appendix B of this proposal.

Instructions for teachers of each treatment group:
Experimental Group A: Cooperative learning without group processing.

Title: Observation, the first step of IBSM.

Topic: The importance of observation in interpreting the Scriptures and the way to apply it in understanding the Scriptures.

Treatment: cooperative learning without group processing.

Day 1 (60 minutes)

Teacher: Timothy T. Chong.

Objective: The students will demonstrate an understanding of the importance and use of the concept of observation by responding to the questions on the handout during the class.

Materials:

* 2.A. handout
* 2.A. transparency T.1.

Procedure:

1. Have students sit with their group members.
2. Show transparency T1 and explain the importance of careful observation.
3. Briefly explain the objective of the course.
4. Explain the definition of observation. Also tell them why observation must be done before interpretation or application.
5. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Gal. 5:16-21 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class. Write their thoughts on the left hand side of the black board.
6. Explain the three steps in observation. Tell students use section C of the handout for personal notes.
7. Have each group review and summarize: (1) the definition of observation and (2) the three steps in observation.
8. Have them re-do Gal. 5:16-26 by using the steps they've just learned. Tell them work together by using the technique of recaller/listener. Ask each group to share their thoughts with the whole class. Write their answer on the right hand side of the black board, and let the students see the difference the lists they made before and after knowing the observation steps. Make brief comments on students' answers as needed.
9. Review with the whole class.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.

* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check
to see whether all members of each group have signed their names on the bottom of the handout.

**Experimental Group B:** Cooperative learning with group processing.

**Title:** Observation, the first step of IBSM.

**Topic:** The importance of observation in interpreting the Scriptures and the way to apply it in understanding the Scriptures.

**Treatment:** cooperative learning without group processing.

**Day 1 (60 minutes)**

**Teacher:** Roger C. Kang.

**Objective:** The students will demonstrate an understanding of the importance and use of the concept of observation by responding to the questions on the handout during the class.

**Materials:**
- *2.B. handout*
- *2.B. transparency T.1*

**Procedure:**
1. Have students sit together with their group members.
2. Show transparency T1 and explain the importance of careful observation.
3. Briefly explain the objective of the course.
4. Explain the definition of observation. Also tell them why observation must be done before interpretation or application.
5. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau’s method, recaller/listener technique. Let two persons in each group process Gal. 5: 16-21 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau’s method. Ask each group share their opinions with the whole class. Write their thoughts on the left hand side of the black board.
6. Explain the three steps in observation. Tell students use section C of the handout for personal notes. Let them work as a group.
7. Have them re-do Gal. 5:16-26 by using the steps they’ve just learned. Tell them work together by using the technique of recaller/listener. Ask each group to share their thoughts with the whole class. Write their answer on the right hand side of the black board, and let the students see the difference the lists they made before and after knowing the observation steps. Make brief comments on students’ answers as needed.
8. Have each group review and summarize: (1) the definition of observation and (2) the three steps in observation.
9. For the last of the class hour, let the groups process the group effectiveness and have whole class group processing.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.

* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the
handout. Move group to group as the students work on their questions. Check
to see whether all members of each group have signed their names on the
bottom of the handout.

Control Group C: Lecture.
Title: Observation, the first step of IBSM.
Topic: The importance of observation in interpreting the Scriptures and the
way to apply it in understanding the Scriptures.
Treatment: lecture.
Day 1 (60 minutes)
Objective: The students will demonstrate an understanding of the importance
and use of the concept of observation by responding to the questions on the
handout during the class.
Materials:
* 2.C. handout
* 2.C. transparency T.1.
Procedure:
1. Show transparency T1 and explain the importance of careful observation. (5
min.)
2. Briefly explain the objective of the course. (2 min.)
3. Explain the definition of observation. Also tell them why observation must
be done before interpretation or application. (5 min.)
4. Have students answer the question B in handout individually. Write their
thoughts on the left hand side of the black board. (10 min.)
5. Explain the three steps in observation. Tell students use section C of the
handout for personal notes. Let them do this individually. (10 min.)
6. Have them re-do Gal. 5:16-26 by using the steps they've just learned
individually. Ask students share their thoughts with the whole class. Write
their answer on the right hand side of the black board, and let the students see
the difference the lists they made before and after knowing the observation
steps. Make brief comments on students' answers as needed. (20 min.)
7. Spend the rest of the class time to review and summarize: (1) the definition
of observation and (2) the three steps in observation. But do not encourage
student-student interaction.

* Note: Move from student to student as the student works on his/her
assignment. Help students as they ask without overdirecting them.

* Do not encourage students interact one another when they review,
summarize the content, and receive feedback from you.
(C) Observation, the first step of the IBSM (part 2).

Objective: The student will demonstrate an understanding of the importance and use of the concept of observation by responding to the questions on the handout during the class.

Materials:
* handout for the lecture
* transparency for this subunit

Lecturing: The instructor will lecture on the importance of concept of observation and the way to apply this step in interpreting the Bible. Then, the instructor will model how to do it by using a passage which has a "middle" level of difficulty.

Each treatment groups will have handout dealing with the content of the subunit. All groups will answer the questions in the handout. While the experimental groups solve the problems in groups, the students in the control group will work on the problems individually.

Group work (only for experimental groups A and B): Experimental groups A and B will analyze, reinforce, and summarize the lecture content presented. Also, they will follow the steps of Dansereau's method as they read the same passage the instructor used in the lecture.

Positive interdependence: Experimental groups A and B will work on tasks such as answering the questions on the handout as groups. Then, they will share their answers with the rest of the class.

Group goal (only for experimental groups A and B): The members of each group must reach consensus for the answers to the questions on handout. Both members must work together to solve the problems.

Individual accountability (only for experimental groups A and B): Each person in a group must be able to summarize the content of the subunit and be able to explain the reasons for studying the Scriptures. Group members need to make sure each individual member can do this. Instructor will move from group to group checking individual's understanding.

Group processing (only for experimental group B): The teacher will allow at least 10 minutes for small-groups to evaluate their group work, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing. The students will reflect on a group session by (a) describing what member actions were helpful and unhelpful and (b) making decisions about what actions to continue or change. The checker will lead the group processing by using "group processing principles" which are contained in appendix B of this proposal.
Instructions for teachers of each treatment group:

Experimental Group A: Cooperative learning without group processing.
Title: Observation, the first step of IBSM (part 2).
Topic: The importance of observation in interpreting the Scriptures and the way to apply it in understanding the Scriptures.
Treatment: cooperative learning without group processing.
Day 1 (60 minutes)
Teacher: Timothy T. Chong.
Objective: The students will demonstrate an understanding of the importance of the concept of observation by responding to the questions on the handouts during the class.
Materials:
   * 3.A. handout
Procedure:
1. Have students sit with their group members.
2. Explain the objective of the course.
3. Explain the four things to be noted in observation. Use section A on the handout for this purpose.
4. Have each group answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Mark 4:35-38 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group to share their opinions with the whole class. Write their thoughts on the left hand side of the blackboard. (10 min.)
5. Explain the three things to be noted when reading stories in the Bible. Tell students use section C of the handout for personal notes.
6. Have them re-do Mark 4:35-41 by considering the three things they've just learned. Tell them work together by using the technique of recaller/listener. Ask each group to share their thoughts with the whole class. Write their answer on the right hand side of the blackboard, and let the students see the difference the lists they made before and after knowing the observation steps. Make brief comments on students' answers as needed.
7. Have each group review and summarize: (1) the four things to be noted in observation and (2) the three things to be noted when reading stories in the Bible.
8. Review with the whole class.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.
* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to
the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

**Experimental Group B:** Cooperative learning with group processing.

**Title:** Observation, the first step of IBSM (part 2).

**Topic:** The importance of observation in interpreting the Scriptures and the way to apply it in understanding the Scriptures.

**Treatment:** cooperative learning without group processing.

**Day 1 (60 minutes)**

**Teacher:** Roger C. Kang.

**Objective:** The students will demonstrate an understanding of the importance and use of the concept of observation by responding to the questions on the handout during the class.

**Materials:**
- 3.B. handout
- 3.B. transparency T.1

**Procedure:**

1. Have students sit with their group members.
2. Explain the objective of the course.
3. Explain the four things to be noted in observation. Use section A on the handout for this purpose.
4. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Mark 4:35-38 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group to share their opinions with the whole class. Write their thoughts on the left hand side of the blackboard. (10 min.)
5. Explain the three things to be noted when reading stories in the Bible. Tell students use section C of the handout for personal notes.
6. Have them re-do Mark 4:35-41 by considering the three things they've just learned. Tell them work together by using the technique of recaller/listener. Ask each group to share their thoughts with the whole class. Write their answer on the right hand side of the blackboard, and let the students see the difference the lists they made before and after knowing the observation steps. Make brief comments on students' answers as needed.
7. Have each group review and summarize: (1) the four things to be noted in observation and (2) the three things to be noted when reading stories in the Bible.
8. For the last of the class hour, let the groups process the group effectiveness and have whole class group processing.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.
* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

**Control Group C: Lecture.**

Title: Observation, the first step of IBSM (part 2).
Topic: The importance of observation in interpreting the Scriptures and the way to apply it in understanding the Scriptures.
Treatment: lecture.
Day 1 (60 minutes)
Objective: The students will demonstrate an understanding of the importance and use of the concept of observation by responding to the questions on the handout during the class.
Materials:
* 3.C. handout

Procedure:
1. Explain the objective of the course.
2. Explain the four things to be noted in observation. Use section A on the handout for this purpose.
3. Have students answer the question B on the handout individually. Ask students share their opinions with the whole class. Write their thoughts on the left hand side of the black board. (10 min.)
4. Explain the three things to be noted when reading stories in the Bible. Tell students use section C of the handout for personal notes.
5. Have them re-do Mark 4:35-41 by considering the three things they've just learned. Tell them work alone. Ask students to share their thoughts with the whole class. Write their answer on the right hand side of the black board, and let the students see the difference the lists they made before and after knowing the observation steps. Make brief comments on students' answers as needed.
6. Spend the rest of the class time to review and summarize: (1) the four things to be noted in observation and (2) the three things to be noted when reading stories in the Bible. But do not encourage student-student interaction.

* Note: Move from student to student as the student works on his/her assignment. Help students as they ask without overdirecting them.

* Do not encourage students interact one another when they review, summarize the content, and receive feedback from you.
(d) Observation (part 3) and interpretation, the second step of the IBSM.

Objective: The student will demonstrate an understanding of the importance and use of the concept of observation as well as interpretation by responding to the questions on the handout during the class.

Materials:
* handout for the lecture
* transparency for this subunit

Lecturing: The instructor will lecture on the importance of concept of observation and the way to apply this step in interpreting the Bible. Also, the instructor will lecture on the importance of interpretation and the way to apply this step in understanding the Bible. Then, the instructor will model how to do them by using passages which has a "middle" level of difficulty.

Each treatment groups will have handout dealing with the content of the subunit. All groups will answer the questions in the handout. While the experimental groups solve the problems in groups, the students in the control group will work on the problems individually.

Group work (only for experimental groups A and B): Experimental groups A and B will analyze, reinforce, and summarize the lecture content presented. Also, they will follow the steps of Dansereau's method as they read the same passage the instructor used in the lecture.

Positive interdependence: Experimental groups A and B will work on tasks such as answering the questions on the handout as groups. Then, they will share their answers with the rest of the class.

Group goal (only for experimental groups A and B): The members of each group must reach consensus for the answers to the questions on handout. Both members must work together to solve the problems.

Individual accountability (only for experimental groups A and B): Each person in a group must be able to summarize the content of the subunit and be able to explain the reasons for studying the Scriptures. Group members need to make sure each individual member can do this. Instructor will move from group to group checking individual's understanding.

Group processing (only for experimental group B): The teacher will allow at least 10 minutes for small-groups to evaluate their group work, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing. The students will reflect on a group session by (a) describing what member actions were
helpful and unhelpful and (b) making decisions about what actions to continue or change. The checker will lead the group processing by using "group processing principles" which are contained in appendix B of this proposal.

**Instructions for teachers** of each treatment group:

**Experimental Group A:** Cooperative learning without group processing.

**Title:** Observation (part 2) and interpretation, the second step of the IBSM.

**Topic:** The importance of observation and interpretation in interpreting the Scriptures and the way to apply them in understanding the Scriptures.

**Treatment:** cooperative learning without group processing.

**Day 1 (60 minutes)**

**Teacher:** Timothy T. Chong.

**Objective:** The students will demonstrate understandings of the importance and use of the concept of observation and interpretation by responding to the questions on the handout during the class.

**Materials:**
- 4.A. handout

**Procedure:**
1. Have students sit with their group members.
2. Explain the objective of the course.
3. Explain the five things to be noted when reading Poetry in the Bible. Use section A on the handout for this purpose.
4. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Psalm 1:1-3 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class.
5. Explain section C and D to the students.
6. Explain the meaning and steps in interpretation to the students by using section E. Tell students use section E of the handout for personal notes.
7. Have them interpret Gal. 5:16-26 by considering the things they've just learned. Tell them work together by using the technique of recaller/listener. Let two persons in each group process Gal. 5:16-21 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class. Make brief comments on students' answers as needed.
8. Have each group review and summarize: (1) the five things to be noted in reading Poetry and (2) the things to be noted in interpretation.
9. Review with the whole class.
* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.

* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

**Experimental Group B:** Cooperative learning with group processing.

Title: Observation (part 2) and interpretation, the second step of the IBSM.

Topic: The importance of observation and interpretation in interpreting the Scriptures and the way to apply them in understanding the Scriptures.

Treatment: cooperative learning with group processing.

Day 1 (60 minutes)

Teacher: Roger C. Kang.

Objective: The students will demonstrate understandings of the importance of the concept of observation and interpretation by responding to the questions on the handout during the class.

Materials:

* 4.B. handout

Procedure:

1. Have students sit with their group members.
2. Explain the objective of the course.
3. Explain the five things to be noted when reading Poetry in the Bible. Use section A on the handout for this purpose.
4. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Psalm 1: 1-3 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class.
5. Explain section C and D to the students.
6. Explain the meaning and steps in interpretation to the students by using section E. Tell students use section E of the handout for personal notes.
7. Have them interpret Gal. 5: 16-26 by considering the things they've just learned. Tell them work together by using the technique of recaller/listener. Let two persons in each group process Gal. 5: 16-21 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions
with the whole class. Make brief comments on students' answers as needed.
8. Have each group review and summarize: (1) the five things to be noted in reading Poetry and (2) the things to be noted in interpretation. Then, review with the whole class.
9. For the last of the class hour, let the groups process the group effectiveness and have whole class group processing.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.

* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

**Control Group C: Lecture.**
Title: Observation (part 2) and interpretation, the second step of the IBSM.
Topic: The importance of observation and interpretation in interpreting the Scriptures and the way to apply them in understanding the Scriptures.
Treatment: lecture/demonstration.
Day 1 (60 minutes)
Objective: The students will demonstrate understandings of the importance of the concept of observation and interpretation by responding to the questions on the handout during the class.
Materials:
* 4.C. handout
Procedure:
1. Explain the objective of the course.
2. Explain the five things to be noted when reading Poetry in the Bible. Use section A on the handout for this purpose.
3. Have students answer the question B on the handout individually. Ask students share their opinions with the whole class. Write their thoughts on the left hand side of the black board.
4. Explain section C and D to the students.
5. Explain the meaning and steps in interpretation to the students by using section E. Tell students use section E of the handout for personal notes.
6. Have them interpret Gal. 5: 16-26 by considering the things they’ve just learned. Tell them work alone. Ask students share their opinions with the whole class. Make brief comments on students' answers as needed.
8. Have individual students review and summarize: (1) the five things to be noted in reading Poetry and (2) the things to be noted in interpretation.  
9. Review with the whole class. But do not encourage student-student interaction.

* Note: Move from student to student as the student works on his/her assignment. Help students as they ask without overdirecting them.

* Do not encourage students interact one another when they review, summarize the content, and receive feedback from you.
(E) Application, the third step of the IBSM.

Objective: The student will demonstrate an understanding of the importance and use of the concept of application by responding to the questions on the handout during the class.

Materials:
* handout for the lecture
* transparency for this subunit

Lecturing: The instructor will lecture on the importance of concept of application. Then, the instructor will model how to do them by using a passage which has a "middle" level of difficulty.

Each treatment groups will have handout dealing with the content of the subunit. All groups will answer the questions in the handout. While the experimental groups solve the problems in groups, the students in the control group will work on the problems individually.

Group work (only for experimental groups A and B): Experimental groups A and B will analyze, reinforce, and summarize the lecture content presented. Also, they will follow the steps of Dansereau's method as they read the same passage the instructor used in the lecture.

Positive interdependence: Experimental groups A and B will work on tasks such as answering the questions on the handout as groups. Then, they will share their answers with the rest of the class.

Group goal (only for experimental groups A and B): The members of each group must reach consensus for the answers to the questions on handout. Both members must work together to solve the problems.

Individual accountability (only for experimental groups A and B): Each person in a group must be able to summarize the content of the subunit and be able to explain the reasons for studying the Scriptures. Group members need to make sure each individual member can do this. Instructor will move from group to group checking individual's understanding.

Group processing (only for experimental group B): The teacher will allow at least 10 minutes for small-groups to evaluate their group work, emphasize positive feedback, make the processing specific rather than vague, maintain student involvement in processing, and communicate clear expectations as to the purpose of processing. The students will reflect on a group session by (a) describing what member actions were helpful and unhelpful and (b) making decisions about what actions to continue or change. The checker will lead the group processing by using "group processing principles" which are contained in appendix B.

Instructions for teachers of each treatment group:
Experimental Group A: Cooperative learning without group processing.

Title: Application, the third step of IBSM.

Topic: The importance of application and the way to apply them in each person's life.

Treatment: cooperative learning without group processing.

Day 1 (60 minutes)

Teacher: Timothy T. Chong.

Objective: The students will demonstrate understandings of the importance and use of the concept of application by responding to the questions on the handout during the class.

Materials:
* 5.A. handout
  * 5.A. transparency T.1.

Procedure:
1. Have students sit with their group members.
2. Explain the objective of the course.
3. Explain the definition of application. Use section A on the handout for this purpose.
4. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Mark 4:35-38 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class.
5. Explain the steps in application to the students by using section C. Tell students use section C of the handout for personal notes.
6. Have them observe and interpret Mark 4:35-41. Then have them apply the truth of the passage to their lives by considering the things they've just learned. Tell them work together by using the technique of recaller/listener. Let two persons in each group process Mark 4:35-38 and be recallers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class. Make brief comments on students' answers as needed.
7. Have each group review and summarize: (1) the definition and the four steps of application and (2) the importance of application.
8. Review with the whole class.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.

* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page
of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

**Experimental Group B:** Cooperative learning with group processing.

**Title:** Application, the third step of IBSM.

**Topic:** The importance of application and the way to apply them in each person's life.

**Treatment:** cooperative learning with group processing.

**Day 1 (60 minutes)**

**Teacher:** Roger C. Kang.

**Objective:** The students will demonstrate understandings of the importance and use of the concept of application by responding to the questions on the handout during the class.

**Materials:**
- 5.B. handout
- 5.B. transparency T.1.

**Procedure:**
1. Have students sit with their group members.
2. Explain the objective of the course.
3. Explain the definition of application. Use section A on the handout for this purpose.
4. Have students answer the question B on the handout in groups. Have each group work together by using Dansereau's method, recaller/listener technique. Let two persons in each group process Mark 4:35-38 and be recellers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class.
5. Explain the steps in application to the students by using section C. Tell students use section C of the handout for personal notes.
6. Have them observe and interpret Mark 4:35-41. Then have them apply the truth of the passage to their lives by considering the things they've just learned. Tell them work together by using the technique of recaller/listener. Let two persons in each group process Mark 4:35-38 and be recellers. Let others in group process the rest portion of the passage and become listeners. Ask them to use the IBSM while they engage in Dansereau's method. Ask each group share their opinions with the whole class. Make brief comments on students' answers as needed.
7. Have each group review and summarize: (1) the definition and the four steps of application and (2) the importance of application. Review with the whole class.
8. For the last of the class hour, let the groups process the group effectiveness and have whole class group processing.

* Note: Move from group to group as they work on their assignment. Check to see if each student performs his/her tasks. Help students as they ask without overdirecting them.

* Distribute only one handout for each group so that the group works together with limited resource.
* Have each group reach consensus for the answers to the questions on handout. All members of each group must work together to respond to the questions. Ask each group member write his/her name on each page of the handout. Move group to group as the students work on their questions. Check to see whether all members of each group have signed their names on the bottom of the handout.

Control Group C: Lecture.
Title: Application, the third step of IBSM.
Topic: The importance of application and the way to apply them in each person's life.
Treatment: lecture/demonstration.
Day 1 (60 minutes)
Objective: The students will demonstrate understandings of the importance and use of the concept of application by responding to the questions on the handout during the class.
Materials:
   * 5.C. handout
Procedure:
1. Explain the objective of the course.
2. Explain the definition of application. Use section A on the handout for this purpose.
3. Have students answer the question B on the handout individually. Have each student group work alone. Ask students share their opinions with the whole class.
4. Explain the steps in application to the students by using section C. Tell students use section C of the handout for personal notes.
5. Have them observe and interpret Mark 35:41. Then have them apply the truth of the passage to their lives by considering the things they've just learned. Tell each student work alone. Ask students share their opinions with the whole class. Make brief comments on students' answers as needed.
6. Have each student review and summarize individually: (1) the definition and the four steps of application and (2) the importance of application.
7. Review with the whole class. But do not encourage student-student interaction.

* Note: Move from student to student as the student works on his/her assignment. Help students as they ask without overdirecting them.

* Do not encourage students interact one another when they review, summarize the content, and receive feedback from you.
Lessons for the course: "Living By the Book"

First subunit lesson:

The Joy of Discovery

A. The Three parts in Inductive Bible Study Method

1. Observation: "What do I see?"

2. Interpretation: "What does it mean?"

3. Application: "How does it work?"

B. Put a "0" beside each statement that is made in the Bible, and an "X" beside each one that is not.

__ 1. To miss the Lord's Supper is to sin.

__ 2. Money is the root of all evil.

__ 3. The epistle of Thomas consists of one chapter like Judas and Philemon.

__ 4. The Lord's Supper has to be observed on Sunday only.

__ 5. Baptism has nothing to do with salvation.

__ 6. The Bible says that man's toil was caused by the sins of Adam and Eve.

__ 7. Only deacons and elders may serve the Lord's Supper.

__ 8. The Bible gives a set pattern for worship services.

__ 9. A Christian must not have non-Christian friends.

__ 10. There is no place for religion in politics.

__ 11. Eve committed sin by eating an apple.

__ 12. The verse, "Heaven helps those who help themselves," is in the gospel of John.
13. The Beatitude in the gospel of Matthew was spoken by Jesus, and the


15. It is not that Jonah swallowed whale, but rather that a whale swallowed
Jonah.

C. Where can you gain the correct view of God? (Heb. 1: 1-3).

D. Why should we study the Bible?

1. We should study the Bible, because


2. We should study the Bible, because

(Ps. 119: 105).

3. We should study the Bible, because


4. We should study the Bible, because

(Eph. 4:13).

5. We should study the Bible, because

(Eph. 6:17).

6. We should study the Bible, because

(1 Jn. 5:3).
7. We should study the Bible, because

__________________________________________________________ (2 Tim. 3:16-17).

8. We should study the Bible, because

__________________________________________________________ (Lk. 11:28).

9. We should study the Bible, because

__________________________________________________________ (Josh. 1:8).

10. We should study the Bible, because

__________________________________________________________ (2 Pet. 3:18).

E. Review and summarize the followings:

1. The Three Parts of Inductive Bible Study Method:

2. Why we should study the Bible:

F. (Only for the experiment group B) Discuss with your "Base Group" members about the followings.

1. Behaviors which are recommendable:

2. Behaviors to be reinforced:
Second subunit lesson:

Observation (part 1): "What do I see?"

A. What is "Observation"?

1. It is like a job detector collecting any evidences, doctor diagnosing a patient's illness, one reading a first love letter repeatedly.

2. Why should we observe first in Inductive Bible Study Method?

B. Write down everything that you can observe in Gal. 5: 16-26.

1.
2.
3.
4.
5.
6.
7.

C. Follow these steps when you observe!

1. First, have an attitude that you will find the treasures of the Scriptures as if you were a gold mine worker.

2. Second, become a detector, and collect any evidences.

   * How to collect evidences? : Look for the followings
     a. What is the literary form of the passage?
     b. What are the important terms?
     c. What are the literary structures?
     d. What is the atmosphere?

3. Third, write an hypothesis based on the evidences you collected.
D. Review and summarize the followings:

1. What is "Observation"? Why should we do the observation prior to do other steps in Inductive Bible Study Method?

2. What are the three steps in observation, and the four things to notice?

E. Write down everything that you can observe in Gal. 5: 16-26 by applying the three steps and four things to notice in observation.

F. (Only for the experiment group B) Discuss with your "Base Group" members about the followings.

1. Behaviors which are recommendable:

2. Behaviors to be reinforced:
Third subunit lesson:

Observation (part 2): "What do I see?"

A. What are the four things we remember to observe biblical passages?

1. the literary form of the passage -- In general, there are five forms in the Bible:
   
   a. letter
   b. narrative
   c. poetry
   d. prophecy
   e. parables

2. the important terms -- repeated words, phrases, or ideas.

   * The fact that "in" appears twelve times in Ephesians 1 turns out to be significant.

3. the literary structures -- connectives and linking words, contrasts and comparisons, cause-effect, question-answer, climax, and summary.

4. the atmosphere -- the color of the scene by historical, geographical, and cultural context.

   ** Let's go back to the biblical time and relive it!

B. Write down everything that you can observe in Mark 4:35-41 by applying the four things as mentioned above.

C. Narrative: In the Bible, narrative is the dominant form as a whole.
We need to know how to interact with stories as a literary form. In other words, we need to talk about plot, characters, and setting.

1. setting (when, where)
   - immediate setting --
   - broader setting --

2. characters (who)
   Storytellers in the Bible usually let the characters' actions do the talking.
   Be creative in imagining the modern-day counterparts to biblical characters wherever appropriate.

3. plot (what, how, why)

D. Write down everything that you can observe in Mark 4:35-41 by applying the three things as mentioned above.

E. Review and summarize the followings:
1. What are the four things we should remember when observing biblical passage?

2. What are the stories in the Bible and what are the three things we should remember when reading the stories?

F. (Only for the experiment group B) Discuss with your "Base Group" members about the followings.

1. Behaviors which are recommendable:

2. Behaviors to be reinforced:
Fourth subunit lesson

Observation (part 3) and interpretation -- "What does the text say?"

A. Poetry: Some books of the Bible are wholly poetic: Psalms, the Song of Solomon, Proverbs, and Lamentations. Others are mainly poetic, such as Job, Ecclesiastes, Isaiah, and numerous other prophetic books. Even the most heavily theological parts of the Bible, such as the New Testament epistles, make continuous use of poetic language.

* When reading poetry, we need to note the followings:
  1. Poets think in images.
  2. The readers
     a. need to see and hear and touch what the poet names.
     b. need to determine whether the connotations of an image in its context are positive or negative.
     c. need to meditate on why a poet has used a particular image where it appears.
  3. Poetry is based on a principle of comparison: A is in some sense like B.
     Ps. 119:105, 84:11, 1:3.
  4. Poetry is a form of fiction: "it is as if"; exaggeration for the sake of effect.
     Ps. 42:3, Matt. 6:3.
  5. Poems are organized as a succession of related episodes or events. The best framework to have in mind when dividing a poem into an outline is the framework of theme and variation.
a. theme -- "Blessed is the man .."

b. variations in Ps. 1.

* Draw horizontal lines in the text with a pencil to divide the poem.

B. Write down everything that you can observe in Psalm 1 by applying the five things as mentioned above.

C. Visionary Writing --

1. Of what familiar theological fact or event in salvation history is this a picture?

2. Keep in mind that it is folk literature. We need to allow ourselves to be transported into the strange world that is presented to us. Visionary writing is a form of fantasy.

3. Visionary writing uses a principle of symbolism.

D. Parables --

1. We must begin with the parables as stories.

2. We need to identify the details in the parables that are intended to be interpreted allegorically or symbolically. The essential technique in the parables is that of double meaning. (But, not all of the details in a parable are necessarily intended to be translated into another meaning.)

3. We need to identify the themes or ideas that a parable embodies.
4. We need to determine how the themes in a parable apply to the original audience. Then we can analyze how it applies today.

E. What is interpretation?

1. In observation, we excavate. In interpretation, we erect.

2. After examining you, a doctor diagnose your symptom. Interpretation is like doctor's diagnosis.

3. In interpretation, we find the meaning of the author of the text.

F. Why must we interpret Scripture?

The answer is that time and distance have thrown up barriers between us and the biblical writers, which block our understanding. We need to appreciate what those roadblocks are.

1. language barrier

2. cultural barrier

*** What is available to help you interpret Scripture accurately? ***

1. Atlases -- use it to overcome geographic barriers

2. Bible dictionaries -- use it to overcome language barriers

3. Bible handbooks -- use it to overcome cultural barriers

4. Commentaries -- use it to overcome language, cultural, and literary barriers

5. Concordance -- somewhat like an index to the Bible.
Do word studies.
G. The task of interpretation follows the order given below:

1. Attempt to ascertain what the passage meant to the original author and his audience.

2. Bring the original message of the text forward to our age and situation without distorting the author's original meaning.

* the receivers' situation (problem) -------------- the writer's answer (solution)

  who                                      why

  to whom

  when

  where

  what

  how                                      how

  why

H. Interpret Gal. 5:16-26 by applying the things as mentioned above.
I. Review and summarize the followings:

1. What are the things we should remember when reading Poetry?

2. What are the things we should remember when reading visionary writings?

3. What are the things we should remember when reading parables?

4. Why must we interpret Scripture, what are the resources that help us overcome many barriers in interpretation, and what are the things we need to remember to know the author's intention?

J. (Only for the experiment group B) Discuss with your "Base Group" members about the followings.

1. Behaviors which are recommendable:

2. Behaviors to be reinforced:
Fifth subunit lesson

Application -- "How can I practice the truth of the text?"

A. What is application?

1. "What would you do about it?"

   ** Observation plus interpretation without application equals abortion.

2. Two dangers of not applying truth:

   a. life without application produces ____________________________
      (Jas. 1:22-25).

   b. life without application produces ____________________________ (Lk. 6:46-49).

B. Find out the truth from Mk. 4:35-41. Apply the truth to your relationship to
   God, to others, to yourself, and to Satan.

C. The task of application follows the order given below:

   1. Find out the truth of the passage through observation and
      interpretation.

   2. Set your objectives in order to accomplish change. Clearly defined objectives help us see truth as actions, not abstractions. (Consider these things when you find them in the Scripture: does the Scripture expose your sin, give you God's promise, God's commands, or give you an example to follow?)
3. Come up with a plan. Come up with specific ways to achieve an objective and then think through what you need to do to run the plan. (When, where, and how am I going to apply it?)

4. Follow through. Get started!

D. Find out the truth from Mk. 4:35-41. Apply the truth to your relationship to God, to others, to yourself, and to Satan. Apply the four steps described above for translating good intentions into life-changing action.

E. Review and summarize the followings:

1. What is application and what are the dangers when we do not apply our understanding of the Scripture to our lives?

2. What are the four steps in application?

F. (Only for the experiment group B) Discuss with your "Base Group" members about the followings.

1. Behaviors which are recommendable:

2. Behaviors to be reinforced:
1. Did your group focus on the task?
2. Did your group try to reach the goal set for the group?
3. What barriers hindered your group?
4. Did your group stay on task?
5. Did your group encourage alternative or minority opinions?
6. Did your group summarize and check the understanding of each group member?
7. Did your group encourage all members to participate in the group task?
8. Did your group encourage individuals to support their positions/answers?
9. Did your group operate under the premise that all group members are equal?
APPENDIX C

USE-OF-IBSM MEASURE
There are three Bible passages below. Describe the meaning of each passage. Write down everything you think about as you interpret each passage. In other words, keep a running log of your thoughts. Respond to each passage for five minutes.

APPENDIX D

ANALYTIC SCORING GUIDE: EVALUATION CRITERIA

FOR A STUDENT'S USE OF THE IBSM
0 = Student is not using the steps of IBSM to interpret the passage.

1-2 = Student is using "observation", the first step of IBSM, to interpret the passage; 1 point = low quality use; 2 points = high quality use.

1-2 = Student is using "interpretation", the second step of IBSM, to interpret the passage; 1 point = low quality use; 2 points = high quality use.

1-2 = Student is using "application", the third component of IBSM, to interpret the passage; 1 point = low quality use; 2 points = high quality use.
APPENDIX E

PRETEST AND POSTTEST MEASURE OF STUDENTS' ATTITUDE TOWARD BIBLE INTERPRETATION
Please mark an "X" or circle the response that indicates your opinion.

1. The best way to study the Bible is to read someone else's interpretation.
   Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree
   1  2  3  4  5

2. The content of the Bible is somewhat abstract which makes it difficult for lay persons to understand it.
   Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree
   1  2  3  4  5

3. I understand a Bible passage best when a knowledgeable church leader explains it to me.
   Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree
   1  2  3  4  5

4. Only biblical scholars and seminarians can define the exact meaning of the biblical passages.
   Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree
   1  2  3  4  5

5. I feel adequately trained/prepared to interpret the Bible for myself.
   Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree
   5  4  3  2  1

6. If one wants to understand the meaning of the Scriptures well, s/he must approach them in a logical, step-by-step fashion.
   Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree
   5  4  3  2  1
7. I feel confident in interpreting Bible passage for myself.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

8. Acquiring a deep understanding of the Bible requires very high intelligence.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>5</td>
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</table>

9. I often become confused/lost when reading a difficult Bible passage.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

10. True/deep understanding of the Bible comes when a person constructs its meaning for himself/herself.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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</tbody>
</table>
APPENDIX F

POSTTEST-ONLY MEASUREMENT OF STUDENTS' ATTITUDE TOWARD IBSM
Please mark an "X" or circle the response that indicates your opinion.

1. I do not know what to do in using IBSM to interpret the Biblical passages.

   Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
   1                2                3                4                5

2. I want to apply IBSM to my personal Bible study often.

   Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
   5                4                3                2                1

3. IBSM is helpful to my personal Bible study, because it gives a way to interpret the passages clearly.

   Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
   5                4                3                2                1

4. I can interpret Bible passages better without using IBSM.

   Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
   1                2                3                4                5

5. IBSM seems easy to apply to my personal Bible study.

   Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
   5                4                3                2                1

6. It seems that the use of IBSM is easier for those who know the Bible well.

   Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
   1                2                3                4                5
APPENDIX G

DEMOGRAPHIC SURVEY
Demographics: Answer the question by filling in the blank or writing a few sentences.

** Please write your first name here:

________________________________________________________

A. What is your gender?  ___ M    ___ F

B. What is your age?    ____ years old.

C. How long have you studied Bible in Sunday school?    ____ years and
       ____ months.

D. Have you ever experienced learning in groups?

       ____ 1. Yes    ____ 2. No

If your answer is "No", please describe your previous experience(s) below.
APPENDIX H

POSTTEST-ONLY MEASURE OF STUDENTS' SATISFACTION
WITH THE LEARNING EXPERIENCE
1. In this class, other students care about how much I learn.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

2. The way we learned in the class makes me want to put forth my best effort.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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</tbody>
</table>

3. My instructor is supportive to my learning.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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</tbody>
</table>

4. I think my classmates respect me.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
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<td>2</td>
<td>1</td>
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</table>

5. The instruction for this class was a good match with my personal style.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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</table>

6. My classmates care for one another.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
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<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

7. The atmosphere of this class was positive.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tbody>
<tr>
<td>5</td>
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</table>

* Please write a short statement in below for the question, "What can/will you do with what you learned from this "Living By the Book" course?":


APPENDIX I

ORAL INTERVIEW QUESTIONS TO ASCERTAIN TEACHERS' AND STUDENTS' AFFECTIVE REACTION TO THE INSTRUCTIONAL APPROACH
"Teachers' and Students' Satisfaction Toward Instructional Method Measure"

1. How would you describe the classroom climate during the course?

2. What did you like best about how the class was taught?

3. What did you like least about how the class was taught?

4. How would you change this class in terms of how it was taught? Why?

5. Is there anything you would like to comment on pertaining to the teaching/learning you experienced in this course?
APPENDIX J

PARTICIPANT CONSENT FORM
I freely agree to participate in the research study, "Living By the Book: How to Use the Inductive Bible Study Method," a classroom learning to be conducted during the Spring 1995. The study, I understand, will be on five consecutive Sundays 11:00 am - noon.

I understand that the purpose of the study is to investigate adult learners' use and attitude toward the Inductive Bible Study Method. Also, I understand that I will engage in seatwork activities to reinforce my understanding of the content of the course.

I know that the data to be collected will be used for fulfillment of Luke Kyungwhan Pak's dissertation at University of North Texas, Denton, Texas.

I understand the purpose and procedures of this study. It is clear that there are no risks to me during and after the course. I will allow the researcher to use the data gathered through pre-test, post-test, and survey questions.

I understand that the researcher will keep written records confidential and that the records will not be available to others. I also understand that written records will be coded for referencing and only the researcher will know the participants' identities.

I further understand that I may withdraw my consent and discontinue participation in the project at any time without prejudice to me.

Signature:__________________________

Date:__________
Table 1. Correlational Coefficients Indicating Internal Consistency Reliabilities of the Three Attitudinal Measures

<table>
<thead>
<tr>
<th>Question</th>
<th>Attitude-toward-Bible-interpretation measure</th>
<th>Attitude-toward-IBSM-measure</th>
<th>Students' satisfaction toward-learning-experience measure</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>.37</td>
<td>.71</td>
<td>.70</td>
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<tr>
<td>10</td>
<td>.23</td>
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<td></td>
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</tbody>
</table>
Table 2. Demographic Information on All Subjects

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Lecture-demonstration with cooperative learning elements without group processing</th>
<th>Lecture-demonstration with cooperative learning elements with group processing</th>
<th>Lecture-demonstration with individualistic learning elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Average age</td>
<td>43.06</td>
<td>44.31</td>
<td>45.38</td>
</tr>
<tr>
<td>Average number of years in United States</td>
<td>14.50</td>
<td>14.64</td>
<td>13.87</td>
</tr>
<tr>
<td>Years in studying the Bible</td>
<td>7.94</td>
<td>6.44</td>
<td>8.13</td>
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<tr>
<td>Experience in small group learning:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 3. Means and Standard Deviations for the Use-of-IBSM Measure (For Testing Hypotheses 1 and 2)

<table>
<thead>
<tr>
<th>Group</th>
<th>Question #1</th>
<th>Question #2</th>
<th>Question #3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Post-test</td>
<td>Pre-Post-test</td>
<td>Pre-Post-test</td>
</tr>
<tr>
<td>lecture-demonstration plus cooperative learning elements without group processing (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtained M</td>
<td>1.13</td>
<td>1.38</td>
<td>1.31</td>
</tr>
<tr>
<td>Adjusted M</td>
<td>2.88</td>
<td>3.06</td>
<td>3.06</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.91</td>
<td>3.13</td>
<td>2.97</td>
</tr>
<tr>
<td></td>
<td>.89</td>
<td>.89</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>1.36</td>
<td>1.57</td>
<td>1.61</td>
</tr>
<tr>
<td>lecture-demonstration with cooperative learning elements with group processing (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtained M</td>
<td>1.06</td>
<td>1.38</td>
<td>1.13</td>
</tr>
<tr>
<td>Adjusted M</td>
<td>2.38</td>
<td>2.94</td>
<td>3.00</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.46</td>
<td>3.00</td>
<td>3.08</td>
</tr>
<tr>
<td></td>
<td>.57</td>
<td>.62</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>.81</td>
<td>1.00</td>
<td>1.46</td>
</tr>
<tr>
<td>Lecture-demonstration with individualistic learning elements (C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtained M</td>
<td>1.31</td>
<td>1.63</td>
<td>1.19</td>
</tr>
<tr>
<td>Adjusted M</td>
<td>2.50</td>
<td>2.50</td>
<td>2.50</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.41</td>
<td>2.40</td>
<td>2.51</td>
</tr>
<tr>
<td></td>
<td>.87</td>
<td>1.15</td>
<td>.66</td>
</tr>
<tr>
<td></td>
<td>1.59</td>
<td>1.51</td>
<td>1.41</td>
</tr>
</tbody>
</table>
Table 4. Means and Standard Deviations for the Attitude-Toward-Bible-Interpretation Measure

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>lecture-demonstration with cooperative learning elements without group processing (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtained M</td>
<td>3.06</td>
<td>3.05</td>
</tr>
<tr>
<td>Adjusted M</td>
<td>.48</td>
<td>.49</td>
</tr>
<tr>
<td>S.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lecture-demonstration with cooperative learning elements with group processing (B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtained M</td>
<td>3.24</td>
<td>3.26</td>
</tr>
<tr>
<td>Adjusted M</td>
<td>.33</td>
<td>.45</td>
</tr>
<tr>
<td>S.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture-demonstration with individualistic learning elements (C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtained M</td>
<td>3.23</td>
<td>3.28</td>
</tr>
<tr>
<td>Adjusted M</td>
<td>.45</td>
<td>.51</td>
</tr>
<tr>
<td>S.D.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5. Posttest Means and Standard Deviations for the Three Groups on the Attitude-Toward-IBSM Measure

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>lecture-demonstration with cooperative learning elements without group processing (A)</td>
<td>3.30</td>
<td>.59</td>
</tr>
<tr>
<td>lecture-demonstration with cooperative learning elements with group processing (B)</td>
<td>3.18</td>
<td>.64</td>
</tr>
<tr>
<td>Lecture-demonstration with individualistic learning elements (C)</td>
<td>3.39</td>
<td>.61</td>
</tr>
</tbody>
</table>
Table 6. Posttest Means and Standard Deviations for the Three Groups on the Students’-Satisfaction-Toward-Learning-Experience Measure

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>lecture-demonstration with cooperative learning elements without group processing (A)</td>
<td>3.59</td>
<td>.57</td>
</tr>
<tr>
<td>lecture-demonstration with cooperative learning elements with group processing (B)</td>
<td>3.84</td>
<td>.53</td>
</tr>
<tr>
<td>Lecture-demonstration with individualistic learning elements (C)</td>
<td>3.50</td>
<td>.36</td>
</tr>
</tbody>
</table>
Table 7. Frequency of Students and Teachers' Responses for Oral Interview Question #1: "How Would You Describe the Classroom Climate During the Course?" (for Revealing Contrast Group and Gender Differences)

(M: Male, F: Female, and T: Total)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>(student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* very serious</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>* lively</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>* much better as</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>class progressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* satisfying</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>* systematic and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* encouraging</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>* stimulating for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* uncomfortable to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>share opinions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* difficult to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>(teacher)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* very serious</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>* students' participation became</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>better as the class progressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* need more time to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cover the content</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 8. Frequency of Students and Teachers’ Responses for Oral Interview Question #1: "How Would You Describe the Classroom Climate During the Course?" (for Revealing Contrast Group and Age Differences)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40  41-50  51-60 &gt;60</td>
<td>&lt;40  41-50  51-60 &gt;60</td>
<td>&lt;40  41-50  51-60 &gt;60</td>
</tr>
<tr>
<td><strong>(student)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* very serious</td>
<td>0 1 1 0</td>
<td>1 1 0 0</td>
<td>2 0 0 0</td>
</tr>
<tr>
<td>* lively</td>
<td>0 0 0 0</td>
<td>1 1 0 0</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>* much better as class progressed</td>
<td>3 2 2 0</td>
<td>1 0 3 1</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>* satisfying</td>
<td>2 1 0 0</td>
<td>3 1 0 0</td>
<td>0 2 0 0</td>
</tr>
<tr>
<td>* systematic and organized</td>
<td>1 0 0 0</td>
<td>1 1 0 0</td>
<td>1 1 0 0</td>
</tr>
<tr>
<td>* encouraging</td>
<td>1 0 0 0</td>
<td>3 1 0 0</td>
<td>3 1 1 0</td>
</tr>
<tr>
<td>* stimulating for learning</td>
<td>2 0 0 0</td>
<td>1 1 1 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>* nothing special</td>
<td>0 0 1 0</td>
<td>1 0 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>* uncomfortable to share opinions</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>0 0 0 1</td>
</tr>
<tr>
<td>* difficult to understand</td>
<td>1 0 1 3</td>
<td>0 1 0 0</td>
<td>0 0 0 1</td>
</tr>
<tr>
<td><strong>(teacher)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* very serious</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>* students' participation became better as the class progressed</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>* need more time to cover the content</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 9. Frequency of Students and Teachers' Responses for Oral Interview Question #2: "What Did You Like Best about How the Class Was Taught?" (for Revealing Contrast Group and Gender Differences)

(M: Male, F: Female, and T: Total)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>Gender (student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* opportunity to apply what I've learned</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>* Question/Answer session</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>* detailed explanation</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>* hand-outs</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>* listener-recaller method</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>* discussion for agreement</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>* group dynamics</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>* structure helping group participation</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>* cooperative and encouraging atmosphere</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Gender (teacher)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* listener-recaller method</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>* systematic and organized method</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>* teacher-student interaction</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 10. Frequency of Students and Teachers’ Responses for Oral Interview Question #2: "What Did You Like Best about How the Class Was Taught?" (for Revealing Contrast Group and Age Differences)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40  41-50  51-60  &gt;60</td>
<td>&lt;40  41-50  51-60  &gt;60</td>
<td>&lt;40  41-50  51-60  &gt;60</td>
</tr>
<tr>
<td>Age (student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* opportunity to apply what I’ve learned</td>
<td>0 0 0 0 0</td>
<td>0 0 0 0 0</td>
<td>2 0 0 0 0</td>
</tr>
<tr>
<td>* Question/Answer session</td>
<td>0 0 0 0 0</td>
<td>0 0 0 0 0</td>
<td>1 0 0 0 0</td>
</tr>
<tr>
<td>* detailed explanation</td>
<td>1 0 0 0 0</td>
<td>0 0 0 0 0</td>
<td>1 0 0 0 0</td>
</tr>
<tr>
<td>* hand-outs</td>
<td>0 0 0 0 0</td>
<td>0 0 0 0 0</td>
<td>1 0 0 0 0</td>
</tr>
<tr>
<td>* listener-recaller method</td>
<td>1 2 1 0 0</td>
<td>2 0 1 0 0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>* discussion for agreement</td>
<td>4 0 0 0 0</td>
<td>2 3 1 0 0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>* group dynamics</td>
<td>4 1 0 0 0</td>
<td>3 1 1 0 0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>* structure helping group participation</td>
<td>2 0 0 0 0</td>
<td>3 3 1 0 0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>* cooperative and encouraging atmosphere</td>
<td>1 0 0 0 0</td>
<td>3 2 0 0 0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>(teacher)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* listener-recaller method</td>
<td>1 1 0 0 0</td>
<td>1 1 0 0 0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>* systematic and organized method</td>
<td>1 1 1 1 1</td>
<td>1 1 1 1 1</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>* teacher-student interaction</td>
<td>1 1 1 1 1</td>
<td>1 1 1 1 1</td>
<td>0 0 0 0 0</td>
</tr>
</tbody>
</table>
Table 11. Frequency of Students and Teachers' Responses for Oral Interview Question #3: "What Did You Like Least about How the Class Was Taught?" (for Revealing Contrast Group and Gender Differences)

(M: Male, F: Female, and T: Total)

<table>
<thead>
<tr>
<th>Gender (student)</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>* too busy to complete tasks within the time allotted</td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>* group discussion</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>* difficult</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>* pressure to participate in group work</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender (teacher)</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>* not having enough time to cover the content and instructional method</td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 12. Frequency of Students and Teachers' Responses for Oral Interview Question #3: "What Did You Like Least about How the Class Was Taught?" (for Revealing Contrast Group and Age Differences)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40</td>
<td>41-50</td>
<td>51-60</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(student) * too busy to complete tasks within the time allotted</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>(teacher) * not having enough time to cover the content and instructional method</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 13. Frequency of Students' and Teachers' Responses for Oral Interview Question #4: "How Would You Change This Class in Terms of How It Was Taught?" (for Revealing Contrast Group and Gender Differences)

(M: Male, F: Female, and T: Total)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>Gender (student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* will give preview material</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>* will give more time</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>* will give more examples for practicing what I learn</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>* nothing particular</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

| Gender (teacher) |                   |                                           |               |
| * will have more time for each session | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| * will give homework | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
Table 14. Frequency of Students' and Teachers' Responses for Oral Interview Question #4: "How Would You Change This Class in Terms of How It Was Taught?" (for Revealing Contrast Group and Age Differences)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40  41-50  51-60  &gt;60</td>
<td>&lt;40  41-50  51-60  &gt;60</td>
<td>&lt;40  41-50  51-60  &gt;60</td>
</tr>
<tr>
<td><strong>Age</strong> (student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* will give preview material</td>
<td>1  0  1  0</td>
<td>0  0  0  0</td>
<td>0  0  0  0</td>
</tr>
<tr>
<td>* will give more time</td>
<td>2  3  3  0</td>
<td>2  2  6  0</td>
<td>0  0  0  0</td>
</tr>
<tr>
<td>* will give more examples for practicing what I learn</td>
<td>1  0  0  0</td>
<td>1  0  0  0</td>
<td>0  1  0  0</td>
</tr>
<tr>
<td>* nothing particular</td>
<td>1  3  0  0</td>
<td>0  0  0  0</td>
<td>3  3  1  0</td>
</tr>
<tr>
<td><strong>Age</strong> (teacher)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* will have more time for each session</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>* will give homework</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 15. Frequency of Students' and Teachers' Responses for Oral Interview Question #5: "Is There Anything You Would Like to Comment on Pertaining to the Teaching/Learning You Experienced in This Course?" (for Revealing Contrast Group and Gender Differences)

(M: Male, F: Female, and T: Total)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>(student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Listener-recaller method was effective</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*This method is not for church setting</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>*This method is very interesting and challenging</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>*Teacher's role is important</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>*Teaching with more familiar people could have been more effective</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Group processing is a &quot;must&quot; to do</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>*Group work is great for learning</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>(teacher)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Group discussion was excellent</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>*This method is very helpful to encourage one another and to build security</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>*Group processing is powerful</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>*Pressure given for participation was effective</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 16. Frequency of students’ and teachers’ responses for oral interview question #5: "Is there anything you would like to comment on pertaining to the teaching/learning you experienced in this course?" (for revealing contrast group and age differences)

<table>
<thead>
<tr>
<th>Response</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40 41-50 51-60 &gt;60</td>
<td>&lt;40 41-50 51-60 &gt;60</td>
<td>&lt;40 41-50 51-60 &gt;60</td>
</tr>
<tr>
<td>Age</td>
<td>(student)</td>
<td>(student)</td>
<td>(student)</td>
</tr>
<tr>
<td>&lt;40</td>
<td>1 0 1 0</td>
<td>1 0 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>41-50</td>
<td>0 0 0 1</td>
<td>0 0 0 1</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>51-60</td>
<td>2 0 0 0</td>
<td>2 1 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>&gt;60</td>
<td>2 2 0 0</td>
<td>1 3 0 0</td>
<td>0 0 0 0</td>
</tr>
</tbody>
</table>

*Listener-recaller method was effective

* This method is not for church setting

* This method is very interesting and challenging

* Teacher’s role is important

* Teaching with more familiar people could have been more effective

* Group processing is a “must” to do

* Group work is great for learning

<table>
<thead>
<tr>
<th></th>
<th>(teacher)</th>
<th>(teacher)</th>
<th>(teacher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40</td>
<td>3 1 0 0</td>
<td>1 0 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>41-50</td>
<td>1 1 0 0</td>
<td>0 1 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>51-60</td>
<td>0 0 0 0</td>
<td>2 0 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>&gt;60</td>
<td>3 1 0 0</td>
<td>1 0 0 0</td>
<td>0 0 0 0</td>
</tr>
</tbody>
</table>

* Group discussion was excellent

* This method is very helpful to encourage one another and to build security

* Group processing is powerful

* Pressure given for participation was effective

<table>
<thead>
<tr>
<th></th>
<th>(teacher)</th>
<th>(teacher)</th>
<th>(teacher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40</td>
<td>1 1 1 0</td>
<td>1 1 1 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>41-50</td>
<td>0 1 1 0</td>
<td>0 1 1 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>51-60</td>
<td>0 1 1 0</td>
<td>0 1 1 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>&gt;60</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
</tr>
</tbody>
</table>
Table 17. Frequency of students’ and teachers’ responses for the question: “What can/will you do with what you learned from this ‘Living By the Book’ course?” (for revealing contrast group and gender difference)

(M: Male, F: Female, and T: Total)

<table>
<thead>
<tr>
<th>Responses</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>* want to use IBSM to my everyday reading of the Scriptures</td>
<td>3 3 6</td>
<td>3 4 7</td>
<td>2 7 9</td>
</tr>
<tr>
<td>* Want to apply the understanding from individual study of the Bible to my behavior</td>
<td>1 1 2</td>
<td>1 1 2</td>
<td>1 6 7</td>
</tr>
<tr>
<td>* IBSM is not so helpful to my understanding of the Scriptures</td>
<td>2 0 2</td>
<td>0 2 2</td>
<td>0 0 0</td>
</tr>
</tbody>
</table>
Table 18. Frequency of students’ and teachers’ responses for the question: “What can/will you do with what you learned from this ‘Living By the Book’ course?” (for revealing contrast group and age difference)

<table>
<thead>
<tr>
<th>Responses</th>
<th>Experimental group A (without group processing)</th>
<th>Experimental group B (with group processing)</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40 41-50 51-60 &gt;60</td>
<td>&lt;40 41-50 51-60 &gt;60</td>
<td>&lt;40 41-50 51-60 &gt;60</td>
</tr>
<tr>
<td>* want to use IBSM to my everyday reading of the Scriptures</td>
<td>2 3 1 0</td>
<td>2 3 2 0</td>
<td>2 5 1 1</td>
</tr>
<tr>
<td>*Want to apply the understanding from individual study of the Bible to my behavior</td>
<td>1 1 0 0</td>
<td>1 1 0 0</td>
<td>2 4 0 1</td>
</tr>
<tr>
<td>*IBSM is not so helpful to my understanding of the Scriptures</td>
<td>0 0 1 1</td>
<td>1 1 0 0</td>
<td>0 0 0 0</td>
</tr>
</tbody>
</table>
REFERENCES


Handbook of cooperative learning methods (pp. 51-65). Westport, CT: Greenwood Press.


