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The development and evaluation of a job aid for lesson planning for volunteer teachers

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THE DEVELOPMENT AND EVALUATION OF A JOB AID FOR LESSON PLANNING FOR VOLUNTEER TEACHERS

by

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DEDICATION

This dissertation is dedicated to my father, Alton L. Walker. He instilled in me a desire to be all that I can and a belief that I could accomplish whatever I set out to achieve. I have been guided by his wisdom and strengthened by his love all my life. If I can gain a portion of the respect and love he has earned in his ninety-plus years on a third-grade education, I will be successful.

It is also dedicated to volunteer teachers in religious and service organizations. They receive too little recognition for the countless hours they give to the enrichment of others through educational programs.

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Overview of the Problem

A teacher, in basic terms, is one who teaches. According to *Webster's Dictionary* (1963), a teacher is one who imparts knowledge, causes one to know a subject, guides the study of a subject, or shows how something is done. Synonyms include educator, instructor, professor, trainer, and tutor. Usually, educator and professor are used as specific terms implying a special educational degree. Teacher, trainer, and tutor are used to describe function, not educational credentials. To be a certified, professional teacher, one is required to have special training in the field. That special training includes course work in the theories of instruction and learning, the basics of the subject matter to be taught, presentation techniques, and actual practice in applying those learnings.

The majority of professional teachers work in public or private institutions: K-12 schools, colleges and universities, corporate training, and the military. Some of those institutions and organizations require completion of a four-year college degree as a prerequisite for teaching. Others require practical experience or extensive knowledge in the subject matter to be taught.

There are also a number of organizations which have no requirements for teachers. These organizations are staffed by volunteers, people who are willing to teach but have no formal training or prior experience. Such organizations include YMCA/YWCAs, Boy Scout and Girl Scout programs, community programs, religious institutions, and in some cases, schools that bring in parents to assist in classrooms. Businesses and corporations, in attempts to cut training costs or to provide visible

management support for special programs, processes, or initiatives, also put non-trained employees into service as teachers.

In most of the institutions, both community-based and business, the volunteer or volunteered teacher is given materials to use for teaching. These educational materials, often called a "Teacher/Instructor Guide," provide direction for presenting the specifics of the lesson, class, or course. These materials may offer background information, content, teaching strategies, methods, and learning activities. However, a Teacher/Instructor Guide is not a manual on how to teach. Usually, it is assumed that the teacher already knows the basics of teaching.

Frequently, people find themselves in teaching positions without understanding the basics of teaching--theoretical knowledge, practical experience, and/or expert knowledge of the subject matter. Whether they have, in a moment of weakness, volunteered for the duty or because of job responsibilities are required to teach, the needs are similar. Short of enrolling in the nearest college for an intensive teacher education program, what are the options for the volunteer, or volunteered, teacher?

The obvious solution is to send the volunteer or volunteered teacher to a formal training program in the basics of teaching. Unfortunately, that solution doesn't work well for at least three reasons: lack of money to send people to such classes, lack of time to attend classes, and/or lack of classes.

If classes are not an option, alternative solutions are needed to prepare volunteer teachers for the teaching task. What are possible alternatives? Performance technologists might suggest such alternatives as computer-aided instruction, video-based instruction, self-instruction, an apprenticeship, and job aids. Of these five possible solutions, four of

them demand substantial amounts of time and three require substantial expenditures. The only alternative that requires little of either time or money is job aids.

A job aid is "a repository for information, processes, or perspectives that is external to the individual and that supports work and activity by directing, guiding, and enlightening performance" (Rossett & Gautier-Downes, 1991, p. 4). The authors state that job aids "lend information, direction, and guidance, so that individuals are able to remain cool, confident, and competent" (p. 18). Job aids save money and time by eliminating, in many cases, the need for more formal training. Job aids are a good option when there is little time or few resources to devote to training.

Teaching, however, is not one discrete task that could be guided by one job aid. It would take multiple job aids to cover the wide range of tasks that are necessary to teach a single lesson. If one is to design a job aid for volunteer teachers, then the first step is to sort through the component tasks of the teaching performance--tasks, methods, and practices that professional teachers rely on--and select one task on which to focus the job aid.

Many studies have been conducted to determine the characteristics and practices of good teachers. An analysis of 31 such studies by Feldman revealed commonalities across the studies (Centra, 1990-1992). The studies examined good teaching practices as viewed by teachers and students. Of the practices identified, one consistently receiving high ranking was the teacher's preparation/planning for the instruction.

Robert Gagné, one of the major contributors to the science of learning and instruction over the past fifty years, identifies planning for instruction as one of two steps necessary for the accomplishment of instruction (the other step being delivery of

instruction) (Gagné & Driscoll, 1988).

Batten, Marland, and Khamis conducted a study to identify characteristics and practices of successful teachers. Their findings are reported in *Knowing How to Teach Well: Teachers Reflect on their Classroom Practice* (1993). Of the thirteen elements identified by study participants as critical to successful teaching, specifically creating structured lesson plans, or planning, was consistently given high priority. The researchers observed that the most successful teachers seemed to have developed a method, a set of procedures, for planning to teach any lesson.

Planning for instruction, defined as decisions teachers make about organizing, implementing, and evaluating instruction prior to the actual instructional presentation, is also identified by Burden and Byrd (1994) as one of the most critical tasks that teachers undertake. Burden and Byrd identify the following benefits to be gained from such planning:

- A sense of direction, providing a sense of confidence and security to the teacher
- Better continuity of content, materials, and activities
- A concrete framework for use during class time to help the teacher recall lesson objectives, content, and activities
- A positive effect on student learning

The development of a job aid that could help people through the process of planning for teaching could be an alternative approach to formal training classes. Gagné defined nine key events which he successfully used to guide instructional designs. Those events could be adapted for use in developing learning sequences to create lesson plans.

Gagné's Nine Events of Instruction is a developed set of procedures, applicable to

teaching any lesson, prescribing a step by step process for teaching. Though intended for use by the designer of instructional materials, Gagné's Events of Instruction may also be appropriate for the teacher who will carry out a lesson (Gagné & Driscoll, 1988). The Events might provide a guidance tool to simplify and clarify existing instructional materials created for professional teachers that may be overwhelming to the volunteer teacher. The Events could provide the basis for a job aid that would enable the untrained individual to plan for teaching.

Specific Performance Problem

Frequently, people find themselves in circumstances where they are asked to act as a teacher, even though they have inadequate preparation to do so. Some create the circumstances themselves by volunteering to teach in some organization. Others could be called volunteered teachers, in that they are required to teach through the expectations of their management. This scenario of volunteer and volunteered teachers can be witnessed in a number of institutions, including businesses, Scouting programs, community programs, and religious classes.

The volunteers are supplied with Teacher/Instructor Guides, students, and a classroom, and are then expected to successfully conduct a class and guide learning. The problem that this study proposes to investigate is whether these volunteer (or volunteered) teachers can be prepared to deliver instruction through the use of a job aid.

One of the largest groups of volunteer teachers can be found in churches. They staff religious education programs for children and adults. They may be in classes on the primary day for the church members to gather, most often Sunday, or at any time during the week.

There are many churches in any geographical area. In the category of "churches" in the Yellow Pages for the geographic area immediately north of Detroit, Michigan, there are over 375 listings. If you credit each church from the list as having only one educational program, staffed by five teachers per program, the population soars to over 1800. An actual population count may yield far more than that.

The majority of those churches purchase curriculum materials. Like other instructional materials, church curriculum materials come with a Teacher/Instructor Guide written for use by the professional teacher. Typical materials contain background information to provide subject matter knowledge; lesson content in a story format; and suggestions for crafts, worksheets, or other activities. Objectives for each lesson are included in some curriculum materials, though not consistently. The order of information presented may vary from publisher to publisher, as does the general format of the Teacher/Instructor Guide. The key components of a sound lesson are assumed to be contained in each unit within the materials, although that is sometimes debatable. It is often confusing for the volunteer teacher to sort through the detailed information contained in those Teacher Guides without some guidance.

Some churches, especially the larger ones with a professional educator on staff, attempt to provide that guidance through some type of teacher training. The training sessions are often a source of frustration for professional church educators because such sessions are poorly attended. Volunteers have such constraints on their time that adding expectations to their teaching duties through additional meetings is futile. Smaller churches, with no money for a professional educator, may not be able to offer any training options. In both situations, the volunteer teacher is left unprepared to teach a class. An

alternative approach to the training problem is needed for both large and small churches. One such approach is a performance support tool, a job aid.

Purpose of the Study

This study has a dual purpose:

1. To chronicle the development and process for the creation of a job aid for planning for teaching based on a simplified version of Gagné's Events of Instruction
2. To evaluate whether the job aid will facilitate a volunteer teacher's ability to plan for teaching

Questions to be Answered by the Study

Specific questions to be answered by the study include :

1. What is the complete process for developing a job aid to support the planning process for volunteer teachers?
2. Is a job aid, used in conjunction with published curriculum materials, sufficient to guide volunteer teachers through a planning process?
3. Is additional instruction necessary to prepare volunteer teachers to use the job aid?
4. Does the job aid enhance the teaching experience, helping volunteer teachers to remain "cool, confident, and competent"?

Significance of the Study

In one sense, this study is simply research on the development and effectiveness of a specific intervention. Richey and Nelson (1996), however, give credence to developmental research, suggesting that it is one way to investigate concerns within the field of Instructional Technology at a given time. Two current concerns in the

Instructional Technology field are how to support or improve performance in an efficient, low-cost, and time-effective way and how to prepare non-trained individuals to function as teachers. Job aids fulfill the efficient, low-cost, time-effective criteria. This study also provides evidence that job aids are one method which may be used to help prepare non-trained individuals, specifically volunteer teachers, for a teaching role. Additionally, since job aids provide support for the volunteer teacher, the study may offer some guidelines for designers and developers of instruction, in particular those who create Teacher/Instructor Guides that are used primarily by volunteer teachers.

The study has applications for a wide population: all volunteer teachers who have little or no training in teaching, including Scout leaders, YMCA/YWCA workers, school aides, community program workers, and teachers in church programs. The population also includes all those in the corporate world who are "volunteered" to teach because of position expectations and have no time and/or money to prepare for the task.

Assumptions Underlying the Study

The study is based on the following assumptions:

1. Although only a small percentage of the potential population of volunteer teachers tested the job aid, they are representative of the total population.
2. The needs of volunteer teachers in one type of institution that utilizes volunteer teachers, are similar to the needs of volunteer teachers in other institutions.
3. Because churches do not measure learning gains, some benefits of the planning job aid can only be assumed. The evaluations are limited to the teacher's assessment of benefits gained, focusing primarily on increased confidence and improved ability in using Teacher/Instructor Guides.

4. Planning is only half of the equation for accomplishing instruction. The second half, delivering instruction, is beyond the scope of this study. To study planning apart from the rest of the instructional process is a valid approach to understanding the impact of job aids.

Definition of Terms

The following definitions are offered to provide common understanding of the terms associated with this study:

Instructional Technology is the "theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (Seels & Richey, 1994, p. 129).

A job aid, also called a performance support tool, is any kind of reference material that is provided to help perform a task. It may reduce the need to rely on memory or it may provide information the performer has not learned. A job aid can be used before, during, or after a performance (Rossett, 1991).

Gagné's Nine Events of Instruction are a list of nine events that should be present in instructional material or provided by the teacher/instructor to help guide the learners' internal events necessary for learning (Gagné, 1985).

Performance Technology, also know as Human Performance Technology (HPT), is a systematic method for dealing with human performance problems by examining them systemically. It includes analysis to determine the problem, and design, development, implementation, and evaluation of a solution/intervention (Stolovich & Keeps, 1992, pp. 6-7).

A Teacher or Instructor Guide is the material provided for teachers/instructors to

use as a guide for presenting educational materials. Contents may include, but are not limited to, additional subject information, learning activities, discussion help, and/or evaluations that are not present in student versions of the materials.

Volunteer teachers, as used in this paper, are those who have agreed to teach a class without remuneration for their services. Most have had no formal training in teaching methodology.

Chapter Summary

Frequently there are circumstances in which people are asked to function as a teacher without adequate formal training. These individuals are found in community service organizations, churches, and businesses. Many of them have received little or no special training to prepare them for the job they have undertaken. A job aid to guide them through the process of planning for the instruction they are asked to deliver, would provide a performance support tool. Its use would improve their effectiveness in several ways. It would focus their planning, allowing for more effective use of their time. It would provide a structure for the class time. It would, perhaps, make them feel more confident about their own abilities.

The organization of this study includes a review of related literature and research in Chapter 2. The value of planning for teaching, the validity of Gagné's Nine Events of Instruction, and the effectiveness of job aids are examined in the review. Chapter 3 discusses the methodology of the research study, covering sample population selection, instruments, and analysis. The findings of the study are presented in Chapter 4. A final overview of the study, conclusions and recommendations are covered in Chapter 5.

CHAPTER 2

Review of Related Literature

The purpose of this study is to examine the effectiveness of a job aid, based on Gagné's Events of Instruction, for planning for teaching for volunteer teachers. Three basic premises are blended together in this study. The first premise is that planning a lesson improves the implementation of a lesson. The second premise is that Gagné's Events of Instruction are valid and appropriate for planning a lesson. The third premise is that these concepts can be blended into an instrument, a job aid, which can be effective for volunteer teachers. Each premise (the value of planning for teaching, the validity of Gagné's Events of Instruction, and the effectiveness of job aids) calls for specific explorations of the existing literature.

The Value of Planning for Teaching

Teaching is a complex process involving multiple characteristics, qualities, and methods. The components in the teaching process have provided topics for a staggering number of studies attempting to identify key strategies for effective teaching. A 1975 investigation reported that 10,000 studies had been conducted on the topic of teacher effectiveness (Haertel, Walberg, & Weinstein, 1983). Certainly, it would be foolish to single out one success factor as the critical component. In the volumes of research recorded however, there are consistent references to practices that make for effective teaching. One of those practices is that of planning for teaching.

Planning is defined as the process of deciding what and how students will learn (Borich, 1992, p. 78). Planning involves selecting the events that will happen during the implementation of the lesson.

An article challenging teachers to be the best they can be by Mustain (1990) centers on eight areas that she perceives as consistent variables in research on best teaching practices. Planning is among the eight variables, and could actually be considered a component of accomplishing several of the other eight variables, such as communicating goals and objectives, classroom management, and feedback. She cites planning as "a crucial link in the process of turning goals into reality" (p. 69). She credits proper planning as a method for reducing class time spent on non-learning activities, including the time spent in correcting learner behaviors.

Several studies have examined the opinions of teachers and students to identify teaching success factors. One such study, conducted in Australia by Batten, Marland, and Khamis (1993), gathered input from both teachers and students to determine the practices that make for successful teaching. High priority was given, by both teachers and students, to the critical task of planning for lessons. Planning provides the structure which "leads to a smooth flowing lesson" (p. 24).

A similar study was conducted by Richardson (1989) in the West Indies. Using a sample of elementary and high school students and teachers, he collected data to determine the characteristics of an effective teacher. Of the characteristics identified, properly planned lessons by the teacher was one of the top four most important characteristics.

A study by Clark and Yinger (Glatthorn, 1993) reported three basic purposes for planning instruction: to meet the psychological needs of the teacher, to prepare for the instruction, and to guide the teaching and learning process. Glatthorn suggests that lesson planning helps students achieve learning objectives, provides a framework for effective

use of class time, offers an organized structure for learning, and increases student motivation to learn.

The previously mentioned studies focused on planning as a success factor of experienced teachers. A number of other studies examined the factors for success of novice, pre-service, or student teachers, often in the quest of identifying how to improve teacher training.

Ellwein, Graue, and Comfort (1990) interviewed 47 students enrolled in a teaching program in a mid-Atlantic university. Participants were asked to describe, in detail, one successful and one unsuccessful lesson they had conducted. They were then asked to provide explanations for the success or failure of the lessons. In descriptions of successful lessons, common characteristics mentioned frequently included increased student interest and participation. One study participant reported, "It was just an ultimate lesson because it was planned well" (p. 7).

Explanations for failed lessons included poor planning, implementation issues, and behavior management. In half of the failures described, half of the participants indicated a need for better organization or structure, well-formulated goals, and back-up plans, all of which should be part of lesson planning. "Janet's focus on faulty planning and implementation is unmistakable. . . . Terry attributed her physical education lesson's failure primarily to her lack of planning" (p. 9).

Byra and Coulon (1994) also conducted a study to examine the effect of planning on the instructional behaviors of teachers in a teacher education program. The participants were in their third year of college, had completed basic courses in the core curriculum, and had some formal classroom experience. All participants were involved in both

conditions of the study. In the first condition, the novice teachers were given the lesson topic, a standardized lesson plan format, and ample time to prepare for the lesson. In the second condition, the novice teachers were given the lesson topic two minutes before the lesson took place. All lessons were videotaped and later assessed using three data collection instruments.

Significant differences were discovered in several areas. Teachers spent more time preparing students for the specific lesson and in engaging learners in lesson content in the planned condition than in the unplanned condition. Demonstrations to enhance learning were given in 82% of the planned lessons, but in only 50% of the unplanned lessons. Learners spent less time off-task in the planned condition than in the unplanned condition. Teachers provided specific feedback more often in the planned condition. It was also noted that higher levels of stress and anxiety were evident in the teachers in the unplanned situations.

Findings suggest that planning seemed to have a positive effect on the quality of the lessons presented by the novice teachers. Byra and Coulon conclude that planning is essential for novice teachers to achieve effective teaching behaviors, such as maintaining learner attention, demonstrating key points, and giving congruent feedback.

A similar study was conducted by Herman (1985), though his focus was on successful and unsuccessful student teachers, not just singular lessons. His primary purpose was to follow-up on an investigation into transfer of learning from a teaching methods course to methods applications by student teachers in a middle school setting. His was a more in-depth study, focusing on discovering the differences between nine successful and nine unsuccessful student teachers. The success criteria was grade point

average of participants. Using a 31-question survey, Herman explored possible differences in goals, personal preferences and opinions, and quality of planning.

Significant differences were noted in responses concerning the quality and quantity of lesson planning and time spent in planning. In fact, the successful student teachers spent an average of 60 minutes in planning a lesson, while the unsuccessful teachers averaged 93 minutes. That difference suggests that some direction or skill in planning might make a difference in the outcome of the planning.

Findings by Byra and Sherman (1993) support the idea that help in planning is needed by less experienced or novice teachers. The study involved 12 pre-service teachers. Six of them were beginning their third year of college; six were near the end of their final year. Data was collected by observer-interviewers who recorded actions and the verbalized thought process during the 90 minutes each participant was allotted for planning a specific lesson.

Study results indicate that more and less experienced pre-service teachers differ in decision-making strategies used during planning. Based on the number of information requests made by those with greater experience, 44 versus 21, the researchers propose that the student teachers with more experience had a better concept of the information needed to be known in order to develop an effective lesson plan. In the area of planning decisions, the more experienced teachers were able to plan in much greater detail, making 166 decisions versus 97. The researchers concluded that more experienced teachers plan more effectively, plan differently, and plan in much greater detail than those with less experience.

Glatthorn (1993) is even more emphatic in his concern for providing specific help

for lesson planning to novice teachers. He writes that "novices should be provided with a very structured process and form. . . ." (p. 6).

These studies confirm that planning for instruction is a vital component in effective teaching. Planning provides benefits for the teacher, in terms of preparedness for classroom management, maintaining focus on the specific topic, and improvement in self-confidence. Students also benefit from teacher planning in that they are provided an organized structure for the learning process. Further evidence is then given by some of the studies to indicate that guidance in planning is also needed, especially for less experienced teachers.

The Validity of Gagné's Events of Instruction

Instructional theory has been defined as "an integrated set of principles, based upon learning theory, other relevant theories, and sound replicable research, that permits one to predict the effects of specific instructional conditions on a learner's cognitive processing and the resulting learned capabilities" (Smith & Ragan, 1996, p. 728). It is predictive and prescriptive, in that, as Bruner says, it "sets forth rules concerning the most effective way of achieving knowledge or skill" (Richey, 1984, p. 74-75).

Smith and Ragan (1996) propose that Gagné's work is exemplary of instructional theory and has had a tremendous impact on work done by others in the field. Gagné, and Gagné in collaboration with others, refined his ideas over the years. The evolution of his work can be traced through the four editions of his *Conditions of Learning* (Gagné, 1985). Gagné states that there are two themes that dominate his work, the first being varieties in learning outcomes, and the second dealing with "the factors that make a difference to instruction" (Gagné, 1985, p. xiv). The first theme is detailed in the

Conditions of Learning and the second in the Events of Instruction. Basically, there are two major thrusts to both the Conditions and the Events, one focusing on the organization of content or learning tasks, as in instructional design, and the other providing a structure for the delivery of instruction (Richey, 1984).

Gagné specifically applies the Events to both aspects, indicating that the Events are appropriate whether in the design phase of the instruction or in the planning phase conducted by the teacher using existing materials that are being adapted for classroom lessons (Gagné & Driscoll, 1988). While it is the latter that is most pertinent to this study, the two are often intertwined and hard to separate.

Gagné (1985) defines instruction as external events that are planned to support the internal processes of learning. The teacher, the person who manages instruction, is responsible for planning, designing, selecting, and supervising the arrangement of those external events. The external events, which are laid out by Gagné as the Nine Events of Instruction, formulate the events of a lesson. Each event supports one or more of the internal processes of learning.

Gagné first proposed his learning theory, identifying the internal process of learning. Then he developed the Nine Events of Instruction to supply external support to facilitate the internal learning processes. Gagné and Driscoll (1988) link each event back to an internal process for learning and document each component with research studies. Table 1 shows how the external events relate to the internal learning theories (Gagné, 1985). Though Gagné suggests that the events generally follow a presentation order, he acknowledges that the sequence may be altered (Gagné, 1985; Gagné & Driscoll, 1988).

Table 1

Gagné's Events of Instruction with Related Internal Learning Theories

External Events	Internal Learning Theories
1. Gaining attention	Reception
2. Informing learners of the objectives	Expectancy
3. Stimulating recall of prior learning	Retrieval to working memory
4. Presenting the stimulus	Selective perception
5. Providing learning guidance	Semantic coding
6. Eliciting performance	Responding
7. Providing feedback	Reinforcement
8. Assessing performance	Retrieval and Reinforcement
9. Enhancing retention and transfer	Retrieval and Generalization

Smith and Ragan (1996) point out that the events as a total entity have not been subjected to extensive research. That may be due, in part, to Gagné's position that all events do not need to be evident in all situations. Individual concepts, however, such as feedback, practice, objectives, motivation, and transfer, have been thoroughly tested. Since the events summarize key points in the instructional process which have been validated time and again in research studies, the Events of Instruction are accepted, generally, as theoretically sound (Richey, 1996).

The Events of Instruction have been used to create instruction in almost every

delivery medium, from stand-up instruction to computer-based instruction to instructional video (Richey, 1996). Several current studies use the Events as a measuring tool to test the effectiveness of specific programs (Sweeters, 1994; Al-Hadlaq, 1995).

Sweeters (1994) used the Events of Instruction as a measure for testing the effectiveness of multimedia learning tools. In an examination of tutorials, educational databases, learning nodes, simulations, and educational games, he concludes that the tutorial is the only tool which satisfies most of the Events of Instruction. Other electronic tools provide less instruction and necessitate additional intervention from a teacher or another learning system.

Al-Hadlaq (1995) also used the Events of Instruction as a metric in an analysis of 25 instructional software packages. He suggests that the Events of Instruction should be used when evaluating instructional software and should serve as a guideline for producing or revising instructional software.

The Events of Instruction are not limited to one particular instructional medium, but are applicable to a variety of instructional media. Neither is the use of the Events of Instruction limited to a particular classroom setting. The events are applicable in a traditional classroom setting, but also are applicable in other classroom situations. Flynn (1992) conducted a study to test two aspects of the Events of Instruction in a cooperative learning situation. His purpose was to test the validity of the Events in that environment and to prove that different individuals, groups, or instructional materials could provide the events of instruction. Findings of the study confirmed both propositions.

Tomic (1980), in a discourse on the topic of cues, suggests that Gagné's Events of Instruction are rather like instructional cues. He defines instructional cues as "part of the

quality of instruction [materials] or the quality of teaching including both information to be given to the learners as regards to what is to be learned and the directions for providing the adequate absorption and processing of the information included in the learning materials" (p. 5). Tomic contends that the cues, or events, may be supplied by the instructional materials, but if not present there, should be provided by the teacher.

Gagné supports that view when he indicates that the events are appropriate whether in the design phase of the instruction or in the planning phase conducted by the teacher using existing materials that are being adapted for classroom lessons (Gagné & Driscoll, 1988). It is the planning phase by the teacher, adapting existing materials, that is the focus of using the Events in this study.

The Effectiveness of Job Aids

The third component of this review investigates job aids. A job aid is a device that is used on the job to improve performance, replacing the need for skill or knowledge. Harless, known as the "father of job aids," defines a job aid as a mechanism that stores information external to the user; guides the performance of work; and meets requirements of accessibility during the actual performance, prompts the performer on when to perform the task, and reduces the quantity of information to be recalled (Harless, 1986). Since Harless' initial work with job aids, there has been some evolution in the concept. A more recent definition states that a job aid is "a repository for information, processes, or perspectives that is external to the individual and that supports work and activity by directing, guiding, and enlightening performance" (Rossett & Gautier-Downes, 1991, p. 4).

Romiszowski (1990) says that a job aid can be any kind of reference material or

tool that is available and useable on-the-job; increases the effectiveness and efficiency of the performer; and reduces the performer's dependence on prior learning, whether skills or knowledge.

Job aids are not new, but are getting renewed focus with the current emphasis on Performance Technology. With that renewed focus comes a broadened expectation for what can be accomplished through the use of job aids. Rossett (1991) suggests that, while job aids have traditionally been viewed as a means of prompting performance, their use is much expanded. She classifies them as performance support tools, used to influence the way people face challenges, think through a process, and perform.

Traditionally, job aids were used during the actual performance. For example, an airline pilot might use a check list job aid in preparation for take off. Currently job aids may be used before a task or even after a task. They might guide the decision-making process, provide coaching on how to approach or prepare for a task, or help evaluate the performance. Rossett (1991) credits this expanded view of job aids to two factors: the move in learning psychology from a behavioral to a cognitive perspective and increased expectations of employees.

The primary benefit of any job aid is that it helps get a job done and get it done correctly. Additionally, job aids provide a means for summarizing, clarifying, and using large amounts of information. Job aids provide a quick, effective method to translate tediously detailed documentation to a concise, user-friendly tool (Cline & Pearlstein, 1993). Job aids are an effective way to summarize large volumes of information that may change rapidly (Tilaro & Rossett, 1993). Carlisle and Coulter (1990) credit job aids as "the least expensive and quickest way to solve human performance deficiencies" (p. 30).

A study conducted by Grau (Snow & Newby, 1989) even credits job aids with increased job satisfaction.

Job aids come in a variety of formats. They may take the form of a list, worksheet, decision tree or table, flow chart, visual diagram, or a picture (Carlisle & Coulter, 1990). They have been used in numerous settings for a wide range of tasks. Performance consultants create job aids for an array of uses by clients. One can find job aids throughout most businesses. Job aids are commonly used to communicate emergency procedures. They are often found at a copying machine as a guide for trouble shooting. Job aids may be posted on the assembly line to provide a quick job reference for the assembly worker. Performance consultants create job aids for their personal use as well.

Thiagarajan (1990a) provides a check list job aid for instructional designers. Tessmer (1991) uses two job aids to guide designers through the environmental analysis stage of a front end analysis. A rather detailed worksheet job aid has been created by Buzinski (1987) to assist consultants in quoting training costs. The TIFAID, Test Information Format Job Aid, is a job aid to guide instructional developers in the design of tests (Llaneras, Arrington, Swezey, & Faust, 1993).

There is a limited amount of research on the topic of job aids. Much of what exists dates back to the 1970s and 1980s. Duncan (1986) reports that studies conducted between 1958 and 1972 on job aid usage in the military showed an overwhelming success in reducing training time, decreasing dependence on highly skilled personnel, reducing the need for manpower, and facilitating cross-training.

The lack of current studies may be a condition that is inherent to the process of job aid development as it follows the methodology typical of performance technology. As

Thiagarajan (1990b) states, performance technology interventions are empirical, depending on repeated evaluation and revision. In the evaluation and revision process, one would expect that a job aid would be improved until it was effective. And, in the event that it never proved effective, its use would be discontinued.

As evidenced by the numerous references in the last few pages, job aids are useful, less costly to produce than training courses, and provide time savings. These statements are obviously supported by some evaluation criteria, but not by formal research. Romiszowski's (1990) conclusions about job aids are typical. He credits job aids with "significant improvements in job performance and the resultant productivity and significant reductions in training time and costs (savings in excess of 50% have often been reported)" (p.23), but no data are produced to back up the statements.

Smalley (1991), in her master's thesis, examined the effects of job aids on instructional designers' behavior in producing learning programs. Her findings indicate that using the job aid she created did enable designers to produce performance-based instruction and helped achieve it in a timely manner.

A discourse on job aids would not be complete without some mention of the more recent developments in job aids, the more sophisticated versions known as expert systems. An expert system is "a computer program that simulates intelligent problem-solving behavior within a narrow area of expertise--an artificial decision maker" (Grabinger, Jonassen, & Wilson, 1992, p. 366). One of the descriptors used for an expert system is a job aid. The caution is also given that while expert systems function as job performance aids, particularly in decision-making tasks, they simply support the performance. They do not make the decision, leaving that as a function of the performer.

Actually, that is all that can be expected of job aids, to provide performance supports.

Two examples of expert systems fit with the topic of this research and are a blend of the three components discussed in detail: planning for teaching, Gagné's Nine Events, and job aids. The first and third components are blended in one example, an expert system called Instructor's Plan (IP). Its creators describe IP is a planning tool for pre-service and in-service school teachers. IP guides the planning process with an emphasis on learning outcomes and strategies. Formative evaluations of the product indicate that it reduces planning time and that it improves lesson quality (Wilkins, Cook, & Green, 1990).

The second example provides a blend of all three components. PLANalyst is an expert system, a job performance aid to "guide the development of lesson plans" (Dodge, 1994, p. 174). The rationale for the development of PLANalyst is similar to that presented in this paper.

Novice teachers have little knowledge in planning a lesson. Novice teachers fail to prepare learners for the lesson by stating objectives or relating the lesson to prior learning. Novice teachers need a planning tool to assist them in the planning process. Using Gagné's Nine Events of Instruction, the computer program guides the user through the process of planning a lesson. The program has been tested by 200 undergraduate students in a teaching program and graduate students in instructional design at a west-coast university. Unfortunately, studies have focused primarily on the functionality of the software, resulting in findings such as, "the program seemed to run slowly" and "too time-consuming to be practical" (p. 180).

PLANalyst is, in essence, an automated, more complex version of the job aid

created for this study. However, its value as a tool, specifically a planning tool, has not been investigated. As an expert system job aid, it also adds a level of complexity that may be beyond the range of interest and ability of the designated population of this study, volunteer novice teachers. A simple pen and paper job aid is still appropriate for this population.

Chapter Summary

Based on the existing literature, each of the three components in this study: planning for teaching, Gagné's Events of Instruction, and job aids, have made valid contributions to the field of education. There are several generalizations that can be derived from this review.

Planning is an important part of teaching. Planning results in a better design for teaching and learning. It appears to give teachers an edge of confidence and provides an in-class guide for teaching and learning. Gagné's Events of Instruction summarize key points in the learning process. They offer a theoretically sound, logical guide for planning. A job aid can provide an effective tool to assist in the performance of a task. A job aid should provide adequate support to guide a teacher through the planning process.

By combining the three components: planning for teaching, Gagné's Events of Instruction, and the effectiveness of job aids, the foundations are in place to test the benefits of a theoretically-based performance support tool.

CHAPTER 3

Research Methodology

The purpose of this study is to chronicle the development process for the creation of a job aid for planning for teaching (based on a simplified version of Gagné's Nine Events of Instruction) and to evaluate whether the job aid will facilitate a volunteer teacher's ability to plan for teaching. The dual purpose, development and evaluation, requires dual methodologies. A developmental methodology is used to chronicle the development process. An experimental design methodology is applied to evaluate the effectiveness of the job aid on a volunteer teacher's ability to plan for teaching.

This chapter explains the structure and methodology of both aspects of this study. Methodologies for the developmental component are discussed. The chapter then describes the design of the experimental component of the study: population, sampling procedures, treatments, instruments, data analysis procedures, and limitations of the design.

Design of the Developmental Study

The general purpose of the study is to find a practical solution to specific problems in a specific situation. Those problems are how to support and improve instructional performance in an efficient, low-cost, and time-effective way, and how to coach non-trained individuals for instructional success as volunteer teachers. Developmental research, a method of applied research which contributes to the "immediate solution of practical problems" (Richey & Nelson, 1996), appears suitable for the intent of this study.

Developmental methodology is utilized in the study. Developmental research

methodology is defined by Seels and Richey (1994, p. 127) as "the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet the criteria of internal consistency and effectiveness." Richey and Nelson (1996) further classify developmental research methodologies into two types. Type 1 developmental research is a study of the design and development of an instructional program or product. Type 1 developmental research efforts concentrate on a specific problem in a specific situation, chronicling the design and development of a solution to the problem. (Type 2 developmental research efforts focus on one aspect, for example the design process, of previously developed instruction.)

The Type 1 developmental research methods used to create the intervention, or the treatment materials, for this study follow a basic instructional system design model: assess, design, develop, implement, and evaluate (Seels & Richey, 1994, p. 31). The design model is not necessarily linear, and neither is the process for this development project. All steps are included, but with movement back and forth between the steps.

Design of the Experimental Study

The experimental component of the study involves evaluation of various differential effects associated with the development and use of a job aid upon the performance of volunteer teachers in planning for instruction. The primary design is that of a quasi-experimental study. In her discussions on research designs, Mertens (1998) explains that "quasi-experimental designs are those that are 'almost' true experimental designs, except that the participants are not randomly assigned to groups" (p. 77).

A quasi-experimental design provides a research basis for the unique nature of this population that eliminates random sampling as a viable option. The design is

depicted in Figure 1.

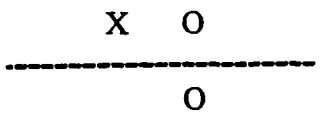

Figure 1. Design of the Study: X represents the experimental treatment, O the observation. A dotted line indicates that participants are not randomly assigned to groups.

The evaluation phase of this study involves administering a treatment to the experimental group and comparing their performance results to the performance of the control group, a standard experimental design classified by Campbell and Stanley (1963, p. 25) as Design 6: The Posttest Only Control Group Design.

Population

The population for this study is defined as volunteer teachers, people who have chosen to give of their time without remuneration for their services in a teaching role. The population also includes people in businesses and corporations who have job responsibilities that require time spent in a teaching role. (Often these business people are not volunteer, but volunteered teachers.)

The target population for this study is volunteer teachers in religious education programs. The sample population is selected from churches that use volunteers to staff religious education programs and includes those teaching during the first three months of 1998.

Sampling Procedures

In order to select specific churches for participation in the study, a typical-case sampling method is applied (Mertens, 1998). Mertens suggests that "typical cases can be identified by recommendations of knowledgeable individuals . . . that suggest this case is

indeed average" (p. 262).

A list of potential typical candidates is obtained from the district educator in the regional office of the Presbyterian Church. In an attempt to achieve broader representation, consideration is given to church location--urban, suburban, small-town--and size of church--small (membership of 200 or less), medium (membership of 200-800), and large (membership over 800).

Curriculum materials, denominational or non-denominational, used by churches are another consideration. Denominational materials are often developed with a stronger focus on content, with less attention paid to processes to be used by the volunteer teacher. Non-denominational materials generally seem to have a built-in structure for planning that helps guide the volunteer teacher. A summary of the selection criteria is shown in Table 2.

After being granted permission from the Wayne State University College of Education and the Behavioral Investigation Committee to contact participants for this study, each of the 14 churches listed in Table 1 were contacted. Initial contacts were made by telephone.

At 12 of the 14 churches, the contact person was a professional church educator and at two churches, the minister. After a brief introduction and explanation of the study, arrangements were made to meet face-to-face with the contact person in 10 of the 14 churches. One church requested a presentation to the Church Education Committee and one church requested a meeting with a group of the volunteer teachers. At three churches, all discussions were conducted by phone.

Table 2

Sample Selection Criteria

Church	Location	Size	Curriculum
Allen Park Presbyterian	Suburban	Medium	Denominational
First Presbyterian, Birmingham	Suburban	Large	Non-denominational
First Presbyterian, Brighton	Small town	Medium	Denominational
First Presbyterian, Dearborn	Suburban	Large	Non-denominational
First Presbyterian, Royal Oak	Suburban	Large	Non-denominational
Greenfield Presbyterian	Suburban	Small	Denominational
Grosse Pointe Memorial	Suburban	Large	Denominational
Highland Park Baptist	Suburban	Large	Non-denominational
Jefferson Avenue Presbyterian	Urban	Small	Denominational
Mount Clemens Presbyterian	Suburban	Medium	Denominational
Northbrook Presbyterian	Suburban	Large	Non-denominational
Orchard Lake Presbyterian	Suburban	Medium	Denominational
Trinity Lutheran Pembroke Pines, FL	Suburban	Medium	Denominational
Westminister Presbyterian	Urban	Medium	Non-denominational

Of the 14 churches contacted, 12 agreed to participate in the study. A willingness to participate was dictated by particular circumstances rather than a lack of interest. In one of the churches, there were only three teachers, all of whom had many years of experience and who apparently rely on past experiences rather than current planning. In

the other church, volunteer teachers were working with a new curriculum which is formatted in a manner similar to the job aid, eliminating the need for additional support. Not all volunteer teachers at any of the churches were available to participate. Table 3 lists a summary of the planned sample population.

Table 3

Summary of Planned Sample Population

Church	Location	Size	Curriculum	Expected Participants
First Presbyterian, Allen Park	Suburban	Medium	Denominational	9
First Presbyterian, Birmingham	Suburban	Large	Non-denominational	4
First Presbyterian, Brighton	Small Town	Medium	Denominational	6
First Presbyterian, Dearborn	Suburban	Large	Non-denominational	5
First Presbyterian, Royal Oak	Suburban	Large	Non-denominational	5
Greenfield Presbyterian	Suburban	Small	Denominational	4
Grosse Pointe Memorial Presbyterian	Suburban	Large	Denominational	3
Mount Clemens Presbyterian	Suburban	Medium	Denominational	15
Northbrook Presbyterian	Suburban	Large	Non-denominational	3
Orchard Lake Presbyterian	Suburban	Medium	Non-denominational	2
Trinity Lutheran	Suburban	Medium	Denominational	8
Westminster Presbyterian	Urban	Medium	Non-denominational	4
			Total Expected Participants	68

Of the 12 churches expected to participate in the study, ten are located in a suburban area in a large metropolitan setting, one in an urban area, and one in a small town. Six of the churches are of medium size (200-800 membership), five are large congregations (membership over 800), and one is small (200 or less). Six of the churches use curriculum materials published by their denomination and six use non-denominational materials. It was expected that 68 participants, predominantly volunteer teachers from Presbyterian churches located in suburban areas in southeastern Michigan, would comprise the sample population.

Instruments

Three instruments are used in this study. Two of them are very similar in content, but aimed at different target populations. The first instrument, the Church Educator's Questionnaire, is intended to be completed by the professional educator in each church. (A copy of the questionnaire may be found in Appendix A.) The second instrument, the Volunteer Church Teachers Questionnaire, is intended to be filled out by all volunteer teachers participating in the treatment group. (A copy of the questionnaire may be found in Appendix B.)

Information requested in both questionnaires includes: (a) demographics, (b) ratings of curriculum materials used, (c) needs of volunteer teachers, and (d) previous experience or training opportunities. Both instruments are used at the beginning of the experimental treatment period.

The third instrument, a Self-Assessment Evaluation, is used by the members of the treatment group at the end of the treatment. It is an assessment of the ease of use and effectiveness of the job aid. The five questions are answered by placing a mark on a

continuum. The continuum varies from question to question. Participants are also asked to write additional comments to further describe any changes in student participation and student attentiveness, and for overall evaluative comments. (A copy of the Self-Assessment Evaluation may be found in Appendix B.)

All instruments were validated by expert review (instructional technology professionals and church educators) as part of the formative evaluation during the development process. Reliability was established through two field tests conducted with small groups of volunteer teachers who had extensive experience in the field of church education and one field test with a group of volunteer teachers who had less than a year of experience.

Both questionnaires are distributed to the treatment group only, with no attempt made to gather data from the control group or from an expanded population.

Treatments

The intent of the study is to establish three different groups within the sample population. The three groups would provide: (a) a control group to provide measurements of ability to plan for instruction without the assistance of the job aid; (b) a treatment group to use the job aid with only written documentation to explain its use and to provide examples; and (c) a treatment group to receive a brief orientation session along with the written documentation. Lesson plans in each of the groups would be developed from curriculum materials supplied by the churches in which the volunteer teachers are teaching.

Research studies are uniquely impacted by the willingness of subjects to participate. For the third group, only two people agreed to attend a brief orientation

session on using the job aid. Most participants were willing to use the job aid, but not willing to attend a 30-minute orientation meeting. Therefore, the study focuses on two groups, a control group and one treatment group.

A study packet was created for each participant in the treatment group. Each packet contained the following documents:

1. An introductory letter, stating the purpose of the study, identifying the contents of the packet, and providing directions for participation in the study
2. A study consent form
3. A Volunteer Church Teachers Questionnaire
4. Directions for using the job aid
5. Two job aids
6. A sample of the job aid
7. A Self-Assessment Evaluation
8. A thank you note

The church contact person distributed the packets to participants and collected all the completed study materials. Study packets were prepared for 68 participants. (A sample packet is included in Appendix B.)

Participants in the treatment group were asked to use the job aid to create at least one lesson plan and were encouraged to use it for additional plans.

Participants in the control group are from three of the churches involved in the study. A random Sunday within the three-month experimentation period is chosen to visit each church. Volunteer teachers are asked if they would be willing to participate in the study by contributing a copy of their lesson plan for that day. There are 20 expected

participants in the control group.

Data Analysis Procedures

Data analysis will be conducted for each type of data collected: (a) lesson plans created without the use of job aids by members of the control group, (b) lesson plans created by members of the treatment group using the job aid, (c) questionnaires completed by professional church educators and volunteer church teachers, and (d) the Self-Assessment Evaluation for volunteer teachers in the treatment group. Each type of data will require different analytical approaches.

Lesson plans from both the control group and the treatment group are to be assessed using the same criteria and grading scale. The assessment process involves using an established criteria based on Gagné's Events of Instruction (1985) to evaluate each component in the lesson plan.

The assessment criteria is based on eight of Gagné's Events of Instruction, the eight that are represented in the job aid. Points are also awarded for plans written on a separate paper rather than in the margins of the materials, and for any evidence that the plan is used as a guide during the actual presentation of the lesson. The criteria by which the lessons are to be judged includes the following categories:

Category 1. An identified method for gaining students' attention

Category 2. Lesson objectives specified in the plan

Category 3. Some mention of how the lesson ties to previous learning

Category 4. An outline or notes to summarize the content of the lesson

Category 5. Questions written or identified to be used to provide learning guidance

Category 6. Activities to provide practice

Category 7. Some evidence of plans to provide feedback to the students

Category 8. A means of enhancing retention and transfer of learning

Category 9. Plans written on a separate paper rather than in the margins of the curriculum materials

Category 10. Evidence that the plans were used for a guide during the actual presentation of the lesson

A grading system is used to award points based on the quality of each component. The component is given 2 points if some evidence of the category is included; 3 points for fair quality; 4 points for good quality; and 5 points for excellent quality. If the category is not included, 1 point is recorded for that component. If participants have no written plans, a score of 10 is recorded. The maximum number of points awarded any set of lesson plans is 50.

A relational analysis will be conducted using the two-tailed *t* statistic to compare the scores of the lesson plans from the treatment group and the control group. The statistical software to be used is SPSS, version 8.0.

The questionnaires completed by professional church educators and volunteer church teachers are to be analyzed by similar methods. The demographic information will be summarized. Question 3 on the Volunteer Church Teachers Questionnaire is the same as question 4 on the Church Educator's Questionnaire. Descriptive statistical analysis is run on that question for both questionnaires. Answers to all other questions are to be compiled, sorted, and analyzed for supporting description and information.

The final component of the evaluation, a Self-Assessment Evaluation for volunteer teachers in the treatment group, focuses on the effectiveness of using the job

aid. Components assessed include: (a) ability to use the job aid, (b) impact of the job aid on planning, (c) student participation, (d) student attentiveness, (e) improvements in ability to use curriculum materials, and (f) teacher confidence level.

Limitations of the Design

There are three design or methodological limitations of this study.

1. The study focuses only on the planning aspect of instruction, not the overall instruction or the context in which the instruction is delivered.
2. Because of the limited size of the population sample, the results of the study cannot be generalized beyond the sample population and the institutions participating in the study.
3. Due to the limited willingness of participants within the population to attend an orientation session, the relative effectiveness of the job aid as a stand-alone instrument versus the effectiveness of the job aid with additional training cannot be evaluated.

Chapter Summary

This chapter described the methodologies and procedures undertaken for this study. The designs for the developmental and experimental components of the study, population and sample, sampling procedures, treatments, instruments, data analysis procedures, and limitations of this study are discussed.

Chapter 4 presents the results of the developmental and experimental components of the study. It begins with discussions on the development process and proceeds with the results of data collected from the control group and the treatment group, as well as the results of the assessments and the evaluation of the job aid.

CHAPTER 4

Results

The major focus of this study is to examine the effects of a job aid on a volunteer teacher's ability to plan for teaching using educational materials developed for professional educators. There are four sources of data: (a) a Volunteer Church Teachers Questionnaire, (b) a Church Educator's Questionnaire, (c) lesson plans created by the treatment and the control groups, and (d) a Self-Assessment Evaluation completed by the treatment group at the end of the treatment.

This chapter presents the results of the developmental study as well as the results of the experimental study. It is organized into two major sections. In the first section, discussions focus on the processes of assessment, design, and development of the treatment materials (job aid and supporting documents). The second section describes the results of the experimental component of the study. Topics include descriptive information on the sample population, a summary of the opinions and practices expressed by the treatment group, the results of the assessment of the effects of the job aid, an analysis of the lesson plans created by the control and treatment groups, and the results of an additional, informal test group.

Developmental Study

The developmental methods used to create the intervention, or the treatment materials, for this study followed a basic instructional system design model: assess, design, develop, implement, evaluate (Seels & Richey, 1994, p. 31). While all components of the design model were addressed during the developmental methodology stage, they are described in this section in chronological order: informal assessment,

intervention design, intervention development, intervention evaluation plan design and development, formal assessment design and development, and implementation design and development.

Informal Assessment

The first step in creating an intervention to improve performance is to determine that a performance problem exists. An informal analysis of volunteer teacher needs was conducted over a fifteen-year period. It was conducted informally, without extensive data collection, but it was an extensive observational analysis. As a professional church educator, the researcher recruited and supervised approximately 300 different volunteer teachers in a variety of religious education programs over a ten-year period. Aware that most of them were untrained in the techniques of teaching, arrangements were made for at least three short training sessions every year. The training sessions included how to use the curriculum materials, background information on lesson content, ideas for activities to enhance the learning, tips on presenting a lesson, and learner characteristics. Additional reference materials on teaching were also made available.

Typically, about half of the volunteer teachers attended any given session. The volunteer teachers, many of whom were working in full-time positions in other fields, did not have time to fit anything else into their weekly schedules. They were concerned about their lack of knowledge for their teaching role, but they were unable to do anything about it. A more time-efficient method to provide performance support was needed but not available.

A review of existing curriculum materials was also included in this long-term assessment. In religious education, most of the main-line denominations publish

denomination-specific materials. There are also a number of independent publishers producing non-denominational materials. The quality of the materials--content, background information, clearly defined objectives, activities, order of presentation--varies by publisher.

The long-term assessment of needs of volunteer teachers was continued in a different setting after a career change from religious education to corporate training. The setting for the informal assessment changed during the past five years to a large automotive manufacturing corporation, but observations are similar. Managers are periodically required to teach (volunteered teachers) but are not prepared for the task. A favored approach for teaching certain company-wide programs has been the LUTI (Learn, Use, Teach, Implement) method. Managers are expected to learn the subject matter for the course and teach it to their employees. Thus it cascades through the ranks within the organization. Materials provided to these volunteered teachers are heavy in content, but weak in teaching methodology.

A current company program emphasizes the need for all management to function as leader-teachers. The program requires upper management to teach a three-day workshop to all salaried personnel in the company. Upper management has been provided a limited experience in the course content. However, no guidance is provided for the basics of teaching methodologies.

The materials, developed by an outside vendor, provide in-depth content information, but do not deal with the basics of teaching methodologies. Even the training professionals within the organization find the materials challenging to sort out. It is no wonder that upper management personnel are requiring assistance in order to meet the

challenge of the required teaching role.

Recent personal experience with individuals who were volunteered to teach in the business arena, as well as past experiences with volunteer teachers in churches, provided first-hand information on their frustrations and concerns.

Volunteer teachers are unsure of how to prepare for the lesson, how to use the materials provided, and how to manage classroom time. They are unsure of their abilities and nervous about the teaching task. In many cases, they are overwhelmed and confused by the materials they are given to use. A common concern of volunteer teachers in both religious and corporate settings is how to use materials developed for professional teachers to prepare for teaching a lesson.

Intervention Design

The driving force behind this study was an intention to provide assistance to volunteer teachers. There were no pre-conceived ideas of the form that assistance might take. Two needs had been identified through the long-term informal assessment:

1. Volunteer teachers are not given training to sufficiently equip them for performing as teachers.
2. The curriculum materials with which they are provided do not offer consistent support for use in planning and implementing lessons.

The most obvious solution, to offer training in teaching methodologies and in making the best use of the materials provided, is not a viable option due to constraints of time and money.

The first exploration into a solution for the performance problem was to focus on the curriculum materials. It might be possible to develop curriculum materials so that they

would provide guidance through the presentation of a lesson. That solution was rejected because of scope. There are far too many curriculum developers and publishers to influence all of them. The volunteer teachers have no choice but to work with what they are given.

One decision made at this point in the development process was to narrow the focus to one arena. The needs were obvious in religious education and in the business world. Perhaps due to a longer association in religious education or to the perception that more change could be effected in that area, the decision was made to focus the intervention on volunteer teachers in churches.

It was also time to discuss the problem with someone currently in the field of church education. In those discussions, the church educator suggested that there must be something one could create, some kind of tool, that would help volunteer teachers no matter what curriculum materials they were expected to use. With a performance consultant perspective on the problem, the idea of a job performance aid began to take shape. A job aid could provide a cost- and time-effective solution that could be applicable to any curriculum.

The next step required determining the right content for a job aid that would provide the guidance needed to help volunteer teachers work through a lesson. Gagne's Events of Instruction had proven to be invaluable in the past for designing instruction, and several teacher training sessions had even been built with the Events of Instruction as the central teaching point. After investigating several other possibilities, it was decided that the Events of Instruction provided the appropriate format. The job aid would be developed around Gagné's Nine Events of Instruction.

In considering the purpose of the job aid and the context in which it would be used, the eighth event, assessing performance, presented a problem. Churches do not assess the performance of students. The decision was made to eliminate that event from the job aid. Gagné (1985) even acknowledged that it is not always necessary that all events be included in every lesson.

Intervention Development

Once the decision was made on the content for the job aid, preliminary ideas on a format were formulated and the first draft of the job aid was completed. That first draft consisted of the eight events from Gagné in simplified wording, spaced over two pages to allow space for writing in plans. Subsequent revisions by the researcher refined questions to accompany each event to clarify and explain its meaning for the volunteer teacher.

Formative evaluation was employed throughout the development phase of the job aid. Tessmer (1993) lists four primary types of formative evaluation: expert review, one-to-one evaluation, small group try out, and field testing in a realistic situation. All four types were utilized by the researcher during the development of the job aid, as well as during the development of assessment and evaluation instruments and support materials for the implementation.

The first phase of formative evaluation was an expert review. The job aid was reviewed by a church educator for a check on applicability in the church setting. The second step, a pilot test, was conducted with a small group. However, before pilot testing the job aid, to more closely simulate the expected conditions for use by volunteer teachers, a set of directions were created. The job aid was then pilot tested by two professional teachers and two volunteer teachers using similar curriculum materials.

There were modifications in the format of the job aid to add more space for writing and to provide boxes for separating each event. One of the lesson plans created in the pilot was used as a sample job aid to provide additional guidance in lesson planning to volunteer teachers. No revisions were required on the directions.

Intervention Evaluation Plan Design and Development

Another element to be included in the design of an intervention is a plan for evaluating that intervention. This intervention was a method for planning for instruction. The most strenuous test of that plan would be to test the effectiveness of the implementation of that plan via the use of lesson plans. Two possible ways to evaluate the implementation of a lesson plan would be (a) to evaluate differences in instruction conducted without a plan versus instruction conducted using the plan, and (b) to assess differences in learning gains of the students as teachers worked with or without a lesson plan.

Due to the unique constraints of religious education, it was not possible to use either method. To evaluate the instruction of the volunteer teachers without and with a lesson plan would be intrusive to the classroom. It would be unfair to volunteer teachers, already unsure of their abilities, to judge the quality of their instruction. Neither was it possible to test the learning gain of the students. Students receive no evaluations in most religious education programs.

With those constraints in mind, it was necessary to limit the evaluation to differences as assessed by the volunteer teacher. Areas to be evaluated could focus on the volunteer teachers' ability to use the job aid to create a lesson plan, whether the job aid made using the curriculum materials easier, and if the job aid lesson plan made the

volunteer teacher feel more confident about the task of teaching.

After identifying the components to be evaluated, the process of developing the evaluation instrument was begun. Components of the first draft of the evaluation included: (a) ability to use the job aid, (b) whether it made a difference in the planning task, (c) if the job aid was used in class as a guide for instruction, (d) whether the job aid made it easier to use the Teacher/Instructor Guide, and (e) if the job aid made the volunteer teacher feel more confident.

Different qualifiers were used for each question. All were on a continuum response scale with 3 points identified. After going through several iterations, a draft was used by two of the volunteer teachers who participated in piloting the job aid. No changes were required at that time.

The evaluation instrument was then used in the field test for the job aid. Although the evaluation was adequate for the participants, the researcher concluded that additional information was needed. Two sub-questions were added so that respondents could provide descriptions for differences perceived in student participation and student attentiveness. The evaluation instrument was then complete.

Formal Assessment Design and Development

Though an informal assessment can identify problems, hard data is also needed. Therefore, a more formal assessment was included as more detailed plans for this study were defined. The volunteer teachers needed an opportunity to voice their own opinions, concerns, and frustrations. The professional educators who recruit and supervise the volunteer teachers needed a means of expressing their observations. It was hoped to confirm the informal assessment of the needs of volunteer teachers.

The first step in designing the instruments for a more formal assessment was to identify the information needed. Basic demographic information--formal training for teaching, years of experience as a volunteer teacher, age group taught, curriculum materials used--would be needed to provide descriptive information about the volunteer teachers. It would be useful to have a additional insight into their frustrations and concerns. It would also be useful to gather the opinions of the volunteer teachers on the curriculum materials they were using.

The questionnaires for the professional church educators and the volunteer teachers went through a series of iterations. Both started as a scrap paper list of desired information. Those lists were then formalized into question format on a computer printout. The questions concerning curriculum materials were closed questions, with five rating options provided for each curriculum component. The five rating options were first stated as single words. All other questions on the questionnaires were open-ended.

The questionnaire for the professional church educator started with requests for demographic information. The professional church educators were then asked to rate curriculum materials in specific areas, including objectives, lesson content, learning activities, background information, and ease-of-use. They were asked to describe training sessions offered for volunteer teachers. The final questions required church educators to identify specific observations about the concerns and frustrations of volunteer teachers.

The questionnaire for volunteer teachers was quite similar to the one for the professional church educators. Common items included demographic information, the series of questions requiring a rating of the components of the curriculum materials, and identification of specific needs and concerns. Volunteer teachers were also asked to

summarize the actions they normally take to prepare for teaching a lesson.

Before pilot testing the questionnaires, both were reviewed by a professional church educator. Suggestions for improvement included format changes and the addition of a brief descriptive statement to the curriculum materials rating scale options.

The questionnaires were then trial-tested in the field by two church educators and two volunteer teachers. No changes were made at that time.

Implementation Design and Development

Upon completion of the materials for the performance intervention, including the volunteer teachers and church educators questionnaires, the job aid, directions for using the job aid, a sample job aid, and an evaluation instrument, it was necessary to complete plans for the implementation of the intervention.

Early in the design and development process, some thought was given to the need for a brief video to introduce the job aid, to provide brief discussion on the importance of planning, and to offer instructions for using the job aid. After careful consideration, the idea was discarded. Producing a video would negate the cost-efficient benefit of job aids.

The implementation goal was to provide sufficient support materials to allow the job aid to stand on its own. Keeping in mind that the implementation was the experimental study for this dissertation, an additional consideration was that the researcher would have no direct contact with the participants. All contacts with the study participants would be made by the church educator or minister.

The first question was how to package the job aid and supporting materials. The decision was made to use a pocket folder, creating a job aid packet for each volunteer teacher. In addition to the intervention materials, three other items were created to support

the implementation. The first was a set of directions to identify packet contents and to explain how to use the packet. Second, a study consent form was included to comply with the requirements of the Wayne State University Behavioral Investigation Committee. The third item, a handwritten thank you note, was included in an attempt to provide personal contact between the researcher and the participating volunteer teachers.

Summary of Developmental Study

The process used to design and develop the intervention was typical of other instructional design projects. A basic instructional systems design model was followed, from assessment to design to development to plans for implementation and evaluation. Once job aid packets were complete, the developmental study was complete.

The informal assessment occurred over a long period of time, fifteen years. The formal process of the design and development of the intervention, along with supporting materials for the implementation took place over a twelve-month period. Figure 2 presents a sequence of the events in the developmental process.

Experimental Study

Sample Population

The sample population was expected to consist of volunteer teachers from 12 churches located primarily in southeast Michigan. Both the treatment and control groups would be from the sample population. An anticipated 20 volunteer teachers were to be in the control group and 48 in the treatment group. Of the 68 expected participants in the sample population, the final sample consisted of 43, or 63% of the expected group.

The actual sample population came from 10 churches, not the 12 anticipated. Of the two non-participating churches, one church did not participate due to health problems experienced by the church educator, and the completed materials from the other church were lost in the mail.

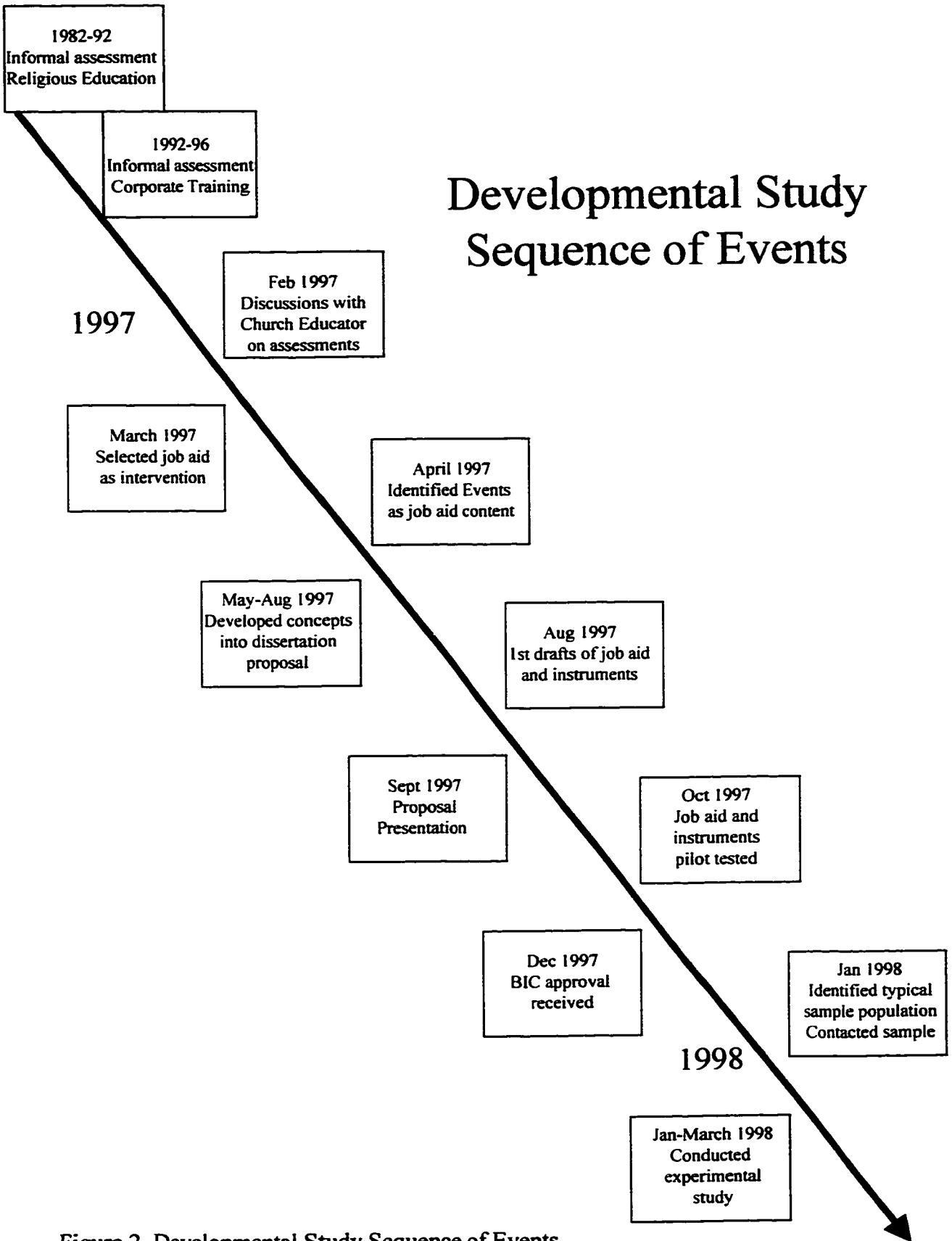

Figure 2. Developmental Study Sequence of Events

Of the 10 participating churches, eight are located in suburban areas, one in an urban area, and one in a small town setting. Five of the ten churches are large (membership over 800), four are of medium size (200-800 membership), and one is a small church (less than 200). Half of the sample population use curriculum materials produced by their denomination; half use non-denominational curriculum materials. A summary of the sample population, including a breakout of the control and treatment groups, is provided in Table 4.

Table 4

Summary of Actual Sample Population

Church (Presbyterian)	Expected Participants	Actual Participants	Control Group: W/M	Treatment Group: W/M
Allen Park	9	3		2/1
Birmingham	4	5	2/0	3/0
Brighton	6	4		3/1
Dearborn	5	3		2/1
Royal Oak	5	4	3/1	
Greenfield	4	3		3/0
Grosse Pointe	3	5	4/0	1/0
Mount Clemens	15	13	1/0	12/0
Northbrook	3	1		1/0
Westminster	4	2		1/1
Totals	68	43	10/1	28/4

Control Group

The control group consisted of participants from four of the ten churches. One of the four churches participated in the control group only. The other three churches represented in the control group provided participants for both control and treatment groups. Of the 20 anticipated participants in the control group, only 11 were obtained.

The ratio of women to men was ten to one, or 90.1% women. Of the 11 participants, one was teaching pre-schoolers, two were teaching in grades K-2, three in third grade, three in grades five and six, and two in senior high. No other descriptive information was gathered on the control group.

Treatment Group

There were 32 participants in the treatment group, representing nine of the ten participating churches. The ratio of women to men in the treatment group was 28 to 4, or 87.5%. These percentages, though low in male representation, are typical of the population of church teachers.

Descriptive data was collected for the treatment group only. The primary source of descriptive information was obtained through the Volunteer Church Teachers Questionnaire, with 31 of the 32 participants completing the questionnaire.

In the treatment group, 76% were teaching in a Sunday School program and 24% in a mid-week program. Of the 25 responding to the question asking for age group taught, four were teaching pre-schoolers, ten teaching grades K-3, six teaching in grades 4 and 5, three were teaching grades 6 through 8, and two were teaching adults.

Twenty-eight of the participants filled in number of years of experience in volunteer teaching. The largest number, eleven, had zero to three years experience; seven

participants indicated 4-7 years experience; seven participants indicated 8-12 years experience; and three participants had more than 13 years experience as volunteer teachers.

Of the 31 respondents, nine had received formal training in teaching methodologies. The other 22 had received no formal training in teaching methodologies.

Assessment of Curriculum Materials

In addition to the descriptive demographic information, the Volunteer Church Teachers Questionnaire and the Church Educator's Questionnaire were used to collect opinion data concerning curriculum materials used by treatment group participants. The questions in this area asked participants to rate curriculum materials on a five-point scale in five areas: (a) objectives, (b) lesson content, (c) learning activities, (d) background information, and (e) ease-of-use. Of the 31 questionnaires returned by volunteer teachers, 15 rated curriculum material objectives as excellent; 14, good; and 2, fair. Lesson content was rated excellent by 16 participants, good by 14 participants, and fair by 1. Learning activities were rated excellent by 11 participants and good by 20 participants. Nine of the participants felt the background information included in the curriculum materials was excellent, and 22 felt it was good. In rating curriculum materials for ease-of-use, 15 rated them as excellent, 15 rated them as good, and 1 rated them as fair. No responses were recorded for the two lowest ratings. Figure 3 shows a graphic display of the data concerning opinions of the curriculum materials.

Four professional church educators in the participating churches also responded to the five questions rating curriculum materials. Their ratings were slightly lower, but none used the two lowest ratings for any category. One rated objectives as excellent; two rated

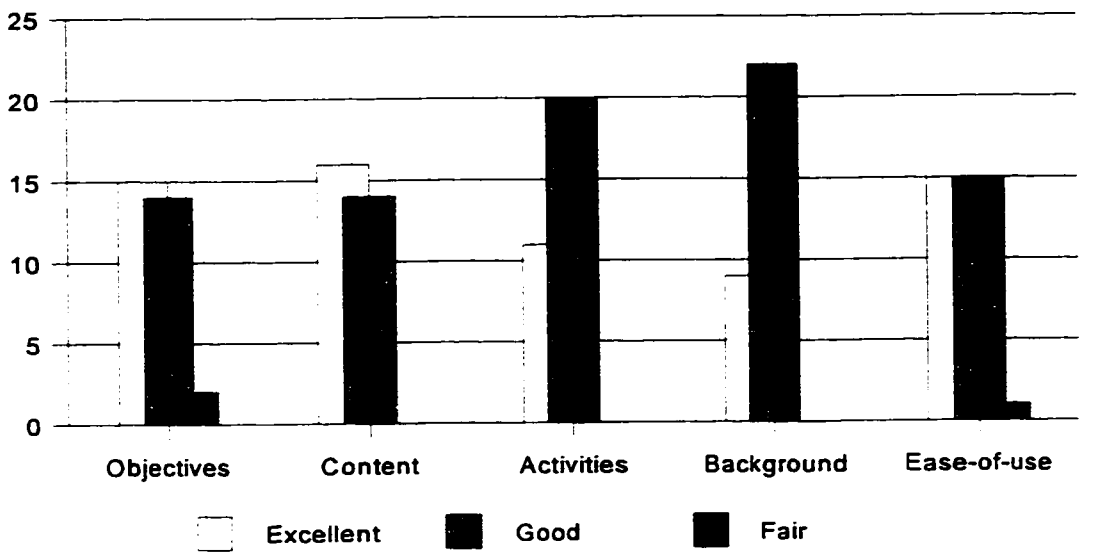

Figure 3. Volunteer teacher opinions of curriculum materials with number of respondents on the vertical axis and the five curriculum material components grouped on the horizontal axis.

them good. Content received three ratings of good and one rating of fair. Learning activities were rated as one excellent, two good, and one fair. One felt background information was excellent; three felt it was good. Opinions on ease-of-use were split, two as excellent, and two as good. Figure 4 displays a graph of Church Educator opinions on curriculum materials.

Another way of describing the results of the ratings of curriculum materials was to assign a point value to each response: excellent, 5 points; good, 4 points; fair, 3 points. Using this rating scale, volunteer teachers rated the curriculum materials as 4.4 out of 5 points. Church educators rated materials at a 4.15 out of 5 points.

Responses to two of the open-ended questions on the survey fit with the discussions on assessment of curriculum materials. These written responses show less favorable opinions of the curriculum materials than the rating scale responses. The first

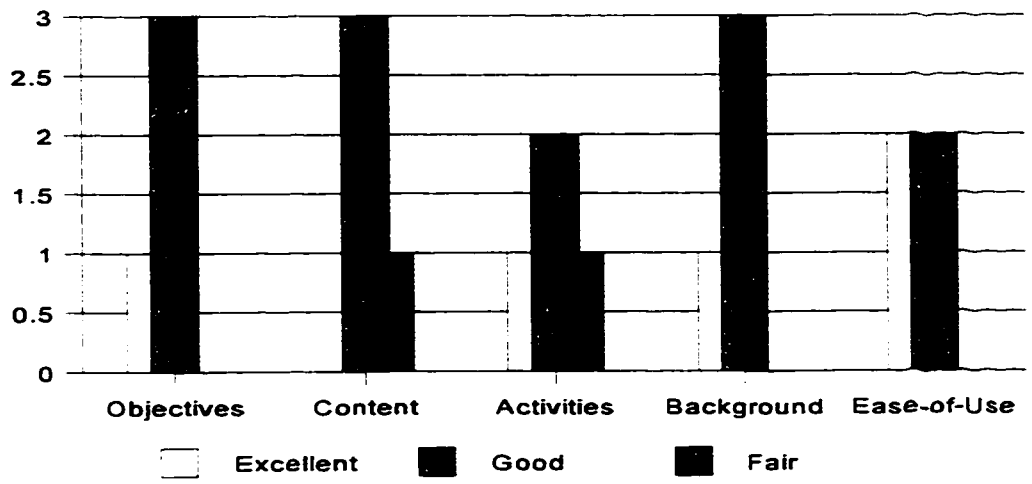

Figure 4. Church educator opinions on curriculum materials with number of respondents represented on vertical axis and the five curriculum material components grouped on the horizontal axis.

question was what would make you a better, more confident teacher. Nine of the 56 (16.1%) items identified concerned the need for better curriculum materials. The other question dealt with frustrations and concerns about teaching. Five volunteer teachers mentioned frustrations with curriculum materials: hard-to-understand Teacher Guides, lack of age-appropriate content, and inadequate activity suggestions.

Volunteer Teacher Planning Practices

Planning practices of volunteer teachers (treatment group only) were collected through the Volunteer Teachers Questionnaire. Responses to the question on actions taken to plan for a class session revealed similarities among all volunteer teachers. Twenty-three participants responded. Only one reported no action. Twenty indicated they read the curriculum materials provided. Six acknowledged making a decision on learning activities. Thirteen mentioned that they gather supplies needed for the lesson.

In response to what they include in written plans, 19 volunteer teachers indicated

they do not prepare written plans. Seven stated that they make a few notes to indicate an order for the class time, and two said they add written notes within the curriculum materials.

Volunteer Teacher Affective Needs

Two questions on both the Volunteer Teachers and the Church Educator's Questionnaires were directed at identifying affective needs of volunteer teachers. The 28 volunteer teachers who responded to what would make them a better, more confident teacher, identified 56 needs. Three needs were mentioned repeatedly. Ten comments indicated additional time spent in planning would improve abilities and confidence. Nine of the comments referred to a need for improved curriculum materials. The third item, listed 7 times, was greater subject matter knowledge.

The related question on the Church Educator's Questionnaire was, from the perspective of the professional church educator, what do volunteer teachers in your church need to feel more successful. In 11 needs identified, four dealt with a concern for better support from the church staff, parents of students, the students, and the members of the church. Two responses mentioned the need for additional training.

When asked to identify two things that cause frustration or concern about volunteer teaching in the church program, 45 items were identified by 29 volunteer teachers. The top two items were both mentioned 12 times. One was that the length of the class session was too short, and one was behavioral problems exhibited by the students. The only other item that got as many as five mentions related to frustrations caused by curriculum materials: hard-to-understand Teachers' Guide, lack of age-appropriate content, and inadequate activity suggestions.

From the church educators' perspective, sources of frustration and concerns for volunteer teachers included length of class session as too short, and inconsistent student attendance.

Additional Information from Church Educators

The Church Educator's Questionnaire included two questions about training sessions available for volunteer teachers. Of the four educators responding, three indicated they offer one training session per year for volunteer teachers: one reported offering two sessions. When asked to report the percentage of volunteer teachers attending the training sessions, the average of the attendance rate reported was 52.5%.

Self-Assessment Evaluation Volunteer Church Teacher

Participants in the treatment group were asked to complete an evaluation form at the end of the treatment experience to report their perceptions of the effects of using the job aid. Thirty of the 32 treatment group participants returned the evaluation, though responses were not recorded for all items.

Question 1 asked the volunteer teacher to complete the sentence, "I was able to use the job aid to plan a lesson . . . ." with response options of (a) unassisted, (b) need more information, and (c) I don't really understand it. Of 29 replies, 28 (96.6%) indicated an ability to use the job aid unassisted, and one (3.4%) suggested the need for more information.

Question 2 asked the volunteer teacher to complete the sentence, "Using the job aid as a guide for planning made the task . . . ," with response options of (a) much easier, (b) a little easier, and (c) made no difference. Of 29 replies, 14 (48.3%) indicated that using the job aid for planning made the task much easier, 13 (44.8%) described the task

as a little easier, and 2 (6.9%) said the job aid made no difference in the planning task.

Question 3 asked the volunteer teacher to indicate whether the job aid was used as an in-class guide, with response options of (a) yes, (b) some of the time, and (c) not at all. In 29 replies, 11 (37.9%) reported they had used the job aid as an in-class guide, 10 (34.5%) reported using the job aid some of the time, and 8 (27.6%) reported not using the job aid at all as an in-class guide.

Treatment group participants who used the job aid as an in-class guide were then asked to further describe the effects of the job aid. On the topic of student participation in class, 11 (57.9%) noticed no difference in the level of student participation. However, 8 (42.1%) indicated a difference in level of student participation during class. Written comments from those eight included:

- I had more students involved in the project
- Made me more aware of how to get them more involved
- Made the lesson more organized
- I was more focused and I think the students were also

On the topic of student attentiveness, 10 (52.6%) reported no differences in levels of student attentiveness. However, 9 (47.4%) noticed a difference in levels of student attentiveness. Written comments of those nine included:

- Better planning, more organized, keeps students attentive
- I was better prepared--less time fumbling--children stayed focused

Question 4 asked the volunteer teachers in the treatment group to complete the sentence "The job aid made the Teacher/Instructor Guide . . . ," with response options of (a) much easier to use, (b) a little easier to use, and (c) made no difference at all. In 27

replies, 10 (37.0%) said the job aid made the Teacher/Instructor Guide much easier to use, 14 (51.9%) said the job aid made it a little easier, and 3 (11.1%) said it made no difference in using the Teacher/Instructor Guide.

Question 5 asked the volunteer teachers in the treatment group to complete the sentence "By using the job aid, I feel . . . ," with response options of (a) more confident, (b) a little more confident, and (c) no difference. Of the 27 replies, 19 (70.4%) responded more confident, 4 (14.8%) indicated a little more confident, and 4 (14.8%) said it made no difference in their level of confidence. A summary of responses to the five basic questions is shown in graph format in Figure 5.

Volunteer teachers in the treatment group were also given an opportunity to write additional comments at the end of the evaluation form. There were 22 additional responses, including:

- This lesson was hard to put together. The job aid helped a lot.
- It's [the job aid] straightforward, everything is right there for you to see and if you need a sub, it's available for them.
- The job aid gave me extra work before presenting the lesson, but was worth the effort, the children got much more out of these two lessons. I will use the job aid on future lessons!
- By using the job aid I was able to have the class run a little smoother; everything I wanted to bring out was outlined and in the order I wanted to present it.
- This was a great tool! This is how I need to set up my lessons for my "regular" teaching as well.
- The format [job aid] served as a template for the two weeks I used it. Easy to follow and kept the kids attention a little longer!

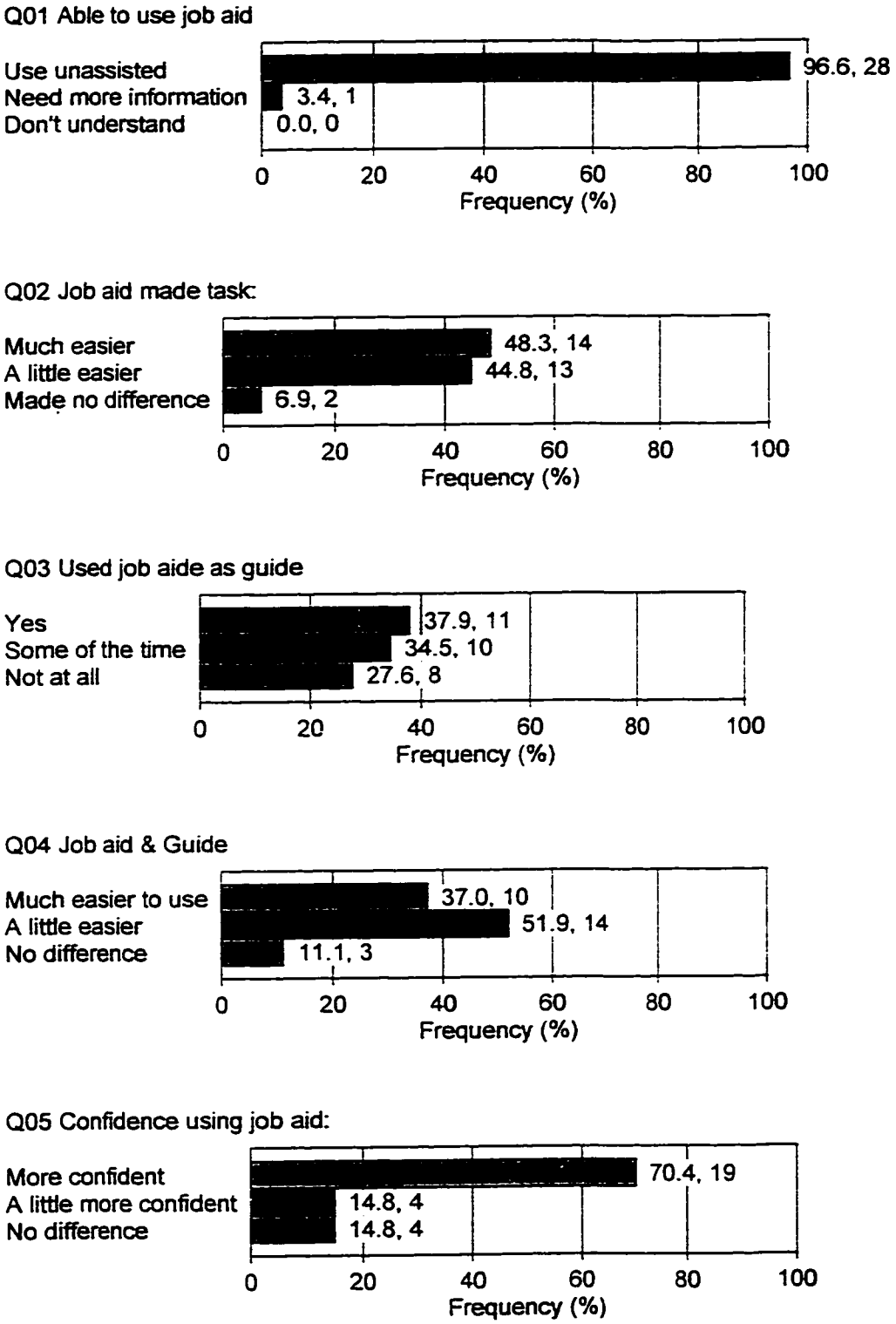

Figure 5. Summary of evaluation question responses, one graph per question, with response options depicted on the vertical axis and number of responses shown on the horizontal axis.

Lesson Plan Analysis

Lesson plans from both the control group and the treatment group were assessed using the same criteria and grading scale. The criteria by which lesson plans were judged was composed of the eight events of Gagné's Nine Events of Instruction that were used in the lesson planning job aid with two additions. The ten categories included:

Category 1: An identified method for gaining students' attention

Category 2: Lesson objectives specified in the plan

Category 3: Some mention of how the lesson ties to previous learning

Category 4: An outline or notes to summarize the content of the lesson

Category 5: Questions written or identified to be used to provide learning guidance

Category 6: Activities to provide practice

Category 7: Some evidence of plans to provide feedback to the students

Category 8: A means of enhancing retention and transfer of learning

Category 9: Plans written on a separate piece of paper rather than in the margins of the curriculum materials

Category 10: Evidence that the plans were used for a guide during the actual presentation of the lesson

A grading system was used to award points based on the quality of each component. A category was awarded 2 points if there was some evidence of the category, 3 points for fair quality, 4 points for good quality, and 5 points for excellent quality. If there was no evidence of a category, 1 point was recorded. If participants had no written plans, a score of 10 was recorded. The maximum number of points awarded any set of lesson plans was 50.

Simple descriptive statistical analysis was conducted on the scores using SPSS version 8.0 software. Scores on lesson plans from the control group provided a mean of 19.64 with a standard deviation of 8.62. Scores on lesson plans from the treatment group provided a mean of 39.50 with a standard deviation of 5.77. A *t* test was run for all categories and for the total scores. Four show significance at $p < .05$, five show significance at $p < .005$. Category 10 (evidence that plans were used as an in-class guide for instruction), shows no difference. A summary of the comparison of the control group and treatment group scores is shown in Table 5.

Additional Test Group

An opportunity arose to share the job aid with the training manager in a large automotive assembly plant, who gave it to five trainers in the plant. Two of the trainers had participated in a train-the-trainer session for the classes they are teaching; the other three had no formal training. Experience in the classroom ranged from three weeks to two years. The following information is the training manager's summary of his test with the job aid. A complete copy of the training manager's report is included in Appendix E.

> First the two formally trained . . . have about eight months experience. One is salaried and one is hourly. They both were very impressed with the simplicity and ease of the design. It was helpful to them when modifying a curriculum to the plant and a new zone within the plant. The hourly employee is more of a natural public speaker who sometimes gets himself in a bind as he felt the need to answer the question from his peers whether he was fully aware his answer was correct. He told me that using the job aid slowed him down and prompted him to seek another look before finalizing his prep for the lesson. I was amazed as this showed

Table 5

Comparison of Category Mean Scores and Standard Deviations between Control and Treatment Groups Using Two-Tailed T-Test

	Control Group (n = 11)		Treatment Group (n = 32)		
Topic	Mean	Std. Dev.	Mean,	Std. Dev.	p
Category 1 [b]	2.36	1.5	3.69	.86	*
Category 2 [a]	1.36	.67	4.22	.79	**
Category 3 [b]	2.27	1.79	3.81	.90	*
Category 4 [b]	2.36	1.50	4.53	.72	*
Category 5 [b]	1.91	1.88	4.09	.82	*
Category 6 [b]	2.09	1.22	4.31	.74	**
Category 7 [a]	1.36	.92	3.84	1.02	**
Category 8 [a]	1.64	1.29	3.94	.72	**
Category 9 [a]	1.64	.92	4.13	.61	**
Category 10 [a]	1.64	.92	4.13	.61	
Total Score [a]	19.64	8.62	39.50	5.77	**

*p < .05, **p < .005

[a] Equal population variances assumed based on Levene's test

[b] Equal population variances not assumed based on Levene's test

me he had really reached some developmental maturity and cognition from using the job aid. His presentations were more prepared and he seemed more comfortable on the platform.

The second trainer who is salaried and took on the responsibility to formalize and set-up a standard set of teaching guides for our PIT team used the job aid in accomplishing this task. She liked the idea of a process which the aid provided. She is typically more disciplined to process as an engineer and supervisor but commented she liked the simple design and thought it served as an excellent tool for thought starting ideas.

The third guy admitted after remarking that he did not find it very useful that he really did not use it and only looked it over.

The fourth PIT team member I asked to use it was the new member with no formal training and had not been an instructor for more than three weeks. He loved it and it made great sense to him as it was not complex and step by step. He remarked it was like baking, "Just follow the recipe." . . .

In closing I would like to comment that this training professional was impressed with the aid as it could be immediately put into action. It was almost self-contained in that if you started at step one and answered the questions in order you finished up with a complete lesson guide. It was so simple that it made me envious I had not thought of it myself. . . . I will share it with my technical train-the-trainers as we begin developing new training and I think it is a great coaching tool and can be used stand alone. . . .

Chapter Summary

This chapter has presented the results of both components of this study. It began with a descriptive chronology of the developmental process. Results of the experimental component of the study were then presented. The quantitative data reports were enhanced

with descriptions provided by the qualitative data. Additional information gained from a separate trial of the job aid in the business arena was also included.

Conclusions and discussions of the data, along with implications and recommendations for future use and studies are discussed in the final chapter.

CHAPTER 5

Summary, Findings, Conclusions, and Recommendations

This chapter summarizes the results of this research study, reviewing purpose, key elements, and actions. Conclusions, based on the findings of the data analysis, are discussed, as well as implications of the study findings. Finally, recommendations are made for use of the information discovered and for further studies on this and related topics.

Summary of Study

This study has a dual purpose:

1. To chronicle the development and process for the creation of a job aid for planning for teaching based on a simplified version of Gagné's Events of Instruction
2. To evaluate whether the job aid will facilitate a volunteer teacher's ability to plan for teaching

The dual purpose, development and evaluation, requires dual methodologies. A developmental methodology is employed to chronicle the development process. An experimental design methodology is applied to evaluate the effectiveness of the job aid on a volunteer teacher's ability to plan for teaching.

The study is conducted and data gathered toward the goal of seeking answers to four questions. Those four questions include:

1. What is the complete process for developing a job aid to support the planning process for volunteer teachers?
2. Is a job aid, used in conjunction with published curriculum materials, sufficient to

guide volunteer teachers through a planning process?

3. Is additional instruction necessary to prepare volunteer teachers to use the job aid?

4. Does the job aid enhance the teaching experience, helping volunteer teachers to remain "cool, confident, and competent"?

The target population for this study is volunteer teachers in religious education programs. A typical-case sampling method is applied to select the sample population. Attempts are made to achieve broader representation in the sample by considering church location, size, and type of curriculum materials used. The sample population consists of volunteer teachers, teaching during the first three months of 1998, in ten churches located in southeast Michigan.

Data was collected in four ways: a) a Volunteer Church Teachers Questionnaire, b) a Church Educator's Questionnaire, c) evaluation of lesson plans created by the treatment and control groups, and d) a Self-Assessment Evaluation completed by the treatment group at the end of the treatment. The data analysis included an analysis of all data collected. The quantitative data was supplemented by the qualitative data. Data reports are included in Appendixes C and D.

Discussion of Findings

Research Question 1

What is the complete process for developing a job aid to support the planning process for volunteer teachers?

The complete process for developing the job aid is like the development process for any intervention that closely follows an instructional system design model. A basic model--assess, design, develop, implement, and evaluate--is followed (Richey, 1994).

For the assessment component, past experiences are key sources of information. Fifteen years of observations and informal interviews with members of the target population in the religious education field and with volunteered teachers in business, members of the general population of this study, provide first-hand research on the needs of the population.

A more formal assessment is conducted just prior to the treatment, with the treatment group only, to confirm the researcher's personal observational findings about curriculum materials and lack of training for volunteer teachers. The data (rating of 4.3 on a 5 point scale) do not indicate a problem with poorly designed curriculum materials, though opinions expressed in conversations indicate some problems with curriculum materials. One explanation may be that volunteer teachers, most of whom have little if any training in the fundamentals of education, do not have sufficient skills to evaluate curriculum materials.

Stronger concerns about curriculum materials are reflected in qualitative data. Concerns about the curriculum materials are reported by eight of the 31 (25.8%) respondents in open-ended questions on the Volunteer Church Teachers Questionnaire.

Opinions on curriculum materials expressed by church educators through the Church Educator's Questionnaire were better than expected. However, in one-on-one conversations with church educators, opinions expressed verbally rate curriculum materials much lower than this data indicate.

Two sources of data support the lack of training issue. Twenty-one of 30 volunteer teachers report having no formal training for teaching. Data gathered from church educators suggest that when training sessions are offered, attendance is low,

averaging only 52.5% of the volunteer teachers.

Though the assessment data does not reflect a problem with curriculum materials, it appears that the curriculum materials which are provided for volunteer teachers do not offer consistent support for use in planning and implementing a lesson. The quality of curriculum materials is mixed. Volunteer teachers are not given training to sufficiently equip them for performing as teachers and when training is made available, attendance is typically low. Volunteer teachers need performance support, like the job aid, which can be used as a stand-alone, self-instructional tool.

The design phase required the identification of one specific teaching practice that might affect change in the performance of volunteer teachers. Once planning was identified as the practice on which to focus an intervention, it was necessary to select the form the specific intervention would take. A job aid was selected as the intervention for three reasons. Job aids provide a cost- and time-effective intervention; they may be used as a stand-alone, self-instructional tool; and they have a history of successful usage.

Once the design phase was completed, including the design of the job aid as well as a design for the evaluation of the job aid, the development phase was begun.

Formative evaluation methods were used throughout the development phase for the job aid, assessment and evaluation instruments, and implementation support materials. Formative evaluation methods included review by experts, one-to-one evaluation, small group try out, and field testing in a realistic situation (Tessmer, 1993).

Though the implementation and evaluation phases were carried out during the experimentation period, plans were fully developed during the developmental period. The primary focus in preparing for implementation of the intervention was packaging the

job aid and support materials so they would stand alone. The researcher had no direct contact with participants in the treatment group. It was vital that the job aid and support materials be self-explanatory. (A detailed response to this question is included in Chapter 4, Developmental Study.)

Research Question 2

Is a job aid, used in conjunction with published curriculum materials, sufficient to guide volunteer teachers through a planning process?

Based on the results of the data analysis generated by the comparison of lesson plans created by the control group and lesson plans created by the treatment group, findings suggest that the job aid provides sufficient guidance. A mean of 19.64 (possible score of 50), with a standard deviation of 8.62, was calculated for lesson plans created by the control group. A mean of 39.50 (possible score of 50), with a standard deviation of 5.77, was calculated for lesson plans created by the treatment group. A relational analysis conducted using the two-tailed *t* statistic shows significance in four of the ten categories at a $p < .05$ level, and in five of the ten categories at a $p < .005$ level.

No significance is shown in one category, indicating there is no difference between the treatment and control groups in using lesson plans as a guide during the actual presentation of the lesson. This may be more an indication of personal practice than a function of the job aid.

Volunteer teachers using the job aid to plan for teaching have varied backgrounds in the area of previous training. Seven reported having a college degree, four reported having attended one or two workshops, and seven reported no previous training. Eleven reported having less than three years experience in volunteer teaching, while ten had eight

years or more as volunteer teachers. Past training and years of experience did not seem to make any difference in the lesson plan created with the use of the job aid or in the effectiveness of the job aid.

The job aid was used by volunteer teachers working with pre-schoolers, elementary school age students, middle grades and high school youth, and adults. The obvious difference between lesson plans created for different age groups was level of complexity. Plans created for pre-schoolers usually had one objective and limited content. Plans for older youth and adults had several objectives and more content. The effectiveness of the job aid did not seem to be influenced by the age group of the class.

Volunteer teachers in five of the churches were using curriculum materials published by their denomination; five were using non-denominational curriculum materials. There were no differences in the lesson plans reflecting differences in curriculum materials. Though the lesson plans from the additional test group from the automotive assembly plant were not collected and judged, those volunteer teachers reported success in using the job aid for planning for teaching technical training materials.

Research Question 3

Is additional instruction necessary to prepare volunteer teachers to use the job aid?

Referring again to the data created by the analysis of lesson plans, the treatment group, using the job aid and support materials without additional instruction, achieved a mean score of 39.50 out of a possible 50 points. In response to the first question on the Self-Assessment Evaluation analysis, "I was able to use the job aid to plan a lesson . . . unassisted, need more information, or I don't really understand it," 28 of 29 (96.6%)

responders indicate an ability to use the job aid unassisted. One of 29 suggests the need for more information, and no one indicates that they did not understand it. A comment by one of the users in the additional test group from the automotive assesmbly plant stated, "It was like baking, 'Just follow the recipe.'"

Due to the unwillingness of participants within the sample population to attend an orientation session, it was not possible to determine whether additional improvements in abilities to plan lessons would have resulted from a brief training session on using the job aid.

Research Question 4

Does the job aid enhance the teaching experience, helping volunteer teachers to remain "cool, confident, and competent"?

The final question on the Self-Assessment Evaluation asks participants in the treatment group to complete the statement, "By using the job aid, I feel . . . more confident, a little more confident, or made no difference in my level of confidence." In 19 of 27 (70.4%) replies, participants indicate that using the job aid made them feel more confident, 4 of 27 (14.8%) indicate that it made them feel a little more confident, and 4 of 27 (14.8%) indicate it made no difference in their level of confidence.

Conclusions

Conclusion: Question 1

What is the complete process for developing a job aid to support the planning process for volunteer teachers?

The development process for the job aid used as the intervention for volunteer teachers is very much like the development process for any other intervention that relies

on an instructional system design model for guidance. Instructional design models continue to offer guidance for the creation of interventions to improve performance, whether the intervention is a lengthy training program or a simple job aid. As Seels and Richey (1994) state, "In ISD, the process is as important as the product because confidence in the product is based on the process" (p. 31).

Conclusion: Question 2

Is a job aid, used in conjunction with published curriculum materials, sufficient to guide volunteer teachers through a planning process?

The job aid, used in conjunction with published curriculum materials, appears to be sufficient to guide volunteer teachers through a planning process, producing better quality lesson plans than the control group did without the intervention treatment. Formal training, years of experience, age group taught, use of denominational or non-denominational curriculum materials seem to have no effect on the results of the use of the job aid.

Conclusion: Question 3

Is additional instruction necessary to prepare volunteer teachers to use the job aid?

The data suggests that the job aid is sufficient as a stand-alone intervention. Additional instruction does not appear to be necessary to prepare volunteer teachers to use the job aid.

Conclusion: Question 4

Does the job aid enhance the teaching experience, helping volunteer teachers to remain "cool, confident, and competent"?

Findings suggest that the job aid did enhance the teaching experience, helping the

majority of the volunteer teachers in the treatment group to feel more confident. Eighty-two percent of the participants in the treatment group indicated that the job aid increased their level of confidence. The job aid seemed to provide support toward making the volunteer teachers feel somewhat "cool, confident, and competent."

Implications

There are implications from this study about the use of job aids, the design of Teacher/Instructor Guides, and possible career opportunities for instructional designers.

Job Aids

Performance technologists and instructional designers may not be utilizing job aids to their full potential as a stand-alone substitute for training classes. The tendency is to provide the job aid as a tool to be used as a supplement to a training program or after a briefing on how and when to use the job aid. With careful preparation to package the job aid in a self-instructional format, the need for training or a briefing on its use may be eliminated.

Job aid usage is applicable to a variety of tasks, even more complex ones. The process of planning for instruction is a complex process. However, by providing a tool to simplify the process slightly, even volunteer teachers with no experience in classroom teaching were able to plan a lesson of some quality.

Teacher/Instructor Guides

It has long been a practice of instructional designers to analyze the audience who will be receiving the intended instruction. Perhaps emphasis also needs to be given to the audience of users of the Teacher/Instructor Guides. If the guides are to be used by teachers who have little background on teaching methodologies, instructional designers

might build in job aid formats to provide more support for guiding the instructional performance.

Career Opportunity

The variance in quality of curriculum materials in religious education may indicate that it is an area that has not had much influence from instructional design practices. There may be career opportunities for professional instructional designers with publishers of religious educational materials, both denominational and non-denominational.

Recommendations for Further Studies

Directly Related Studies

Recommendations for further studies directly related to this study include:

- Testing the job aid for planning for teaching with an orientation session to look at possible higher levels of confidence and/or planning ability gains
- Testing the job aid for planning for teaching with a volunteer teacher population in areas outside of religious institutions, such as community organizations, scouting programs, and community education programs
- Formal testing of the job aid for planning in the business arena to follow up on the early indications reporting positive results from the additional trial in the automotive assembly plant
- Development and testing of job aids directed at providing performance support for other components of teaching, such as delivery of instruction

Indirectly Related Studies

Religious education is one area within the field of education that has received

little attention from researchers. The list of literature related to religious education is a short one. In addition to the special needs that result from the practice of using a volunteer workforce, largely untrained in teaching methodologies, there are other opportunities for research explorations as well.

One such topic is the matter of how to teach beliefs. Beliefs are part of the domain of affective knowledge. A closely related topic, attitudes, has been the subject of extensive research, but less attention has been given to how beliefs are learned. Current practices in religious education focus on gaining factual knowledge, concentrating on Bible stories as the means of achieving a behavioral objective. It may be that factual knowledge is not enough to transmit beliefs.

Another concern is the primary format used for religious education, Sunday School. Typically, Sunday School involves classes by age groupings for approximately one hour each Sunday. The effectiveness of the program has not been subject to much scrutiny. Studies regarding the length of time for classes, alternative programs offered during the week, or mixed age groupings are all possibilities.

Chapter Summary

This final chapter has reviewed the major components of the study. Organized by the four study questions, discussions on findings and conclusions were presented. Based on the data and observations gained by the researcher during the course of study, implications of the study were offered. Finally, the chapter presented recommendations for related studies. Thus concludes this study focusing on the development of a job aid for volunteer teachers on planning for teaching and the evaluation of its effects.

APPENDIX A

CHURCH EDUCATOR'S QUESTIONNAIRE

Church Educator's Questionnaire

Church:	Name:
Approximate size of church:	Education:

1. Check the programs offered by your church
   ___ Sunday Church School
   ___ Weekday Educational Program
   ___ Other - Please identify _____

2. Volunteer staff in teaching positions at your church

   ___ # of volunteers with teaching degrees or equivalent experience

   ___ # of volunteers with little or no teaching experience

3. What curriculum materials does your church use? (Publishers)

4. Rate the materials for each category listed below.

   A. Objectives (goals, what students are expected to know/do after the lesson)
   - ☐ **Excellent**, well-written, appropriate objectives and clearly labeled
   - ☐ **Good**, okay, but not sufficient to call excellent
   - ☐ **Fair**, about half the objectives are okay, not clearly labeled
   - ☐ **Poor**, either not reasonable objectives or not called out
   - ☐ **Pretty Awful**, not really clear or appropriate or don't exist

   B. Lesson Content (story, information, ideas presented)
   - ☐ **Excellent**, on target with what I think the students should be learning
   - ☐ **Good**, most of the lessons are what I think the students should be learning
   - ☐ **Fair**, about half of the lessons are good; half are somewhat weak
   - ☐ **Poor**, most of the lessons are weak; most of the teachers add content
   - ☐ **Pretty Awful**, we're looking for a new curriculum

   C. Learning Activities (art, craft, worksheets, learning games)
   - ☐ **Excellent**, we almost always use what the curriculum suggests
   - ☐ **Good**, there's usually one or two that work well
   - ☐ **Fair**, we have to find something else for about half of the lessons
   - ☐ **Poor**, we create most of our own activities
   - ☐ **Pretty Awful**, there are seldom any activities that work well

D. Background Information (additional information for teachers to enhance their knowledge on the topic)

- ☐ **Excellent**, almost more than the teachers need to know
- ☐ **Good**, sufficient to provide a solid background for teachers
- ☐ **Fair**, teachers can get by with what is provided
- ☐ **Poor**, I try to provide the teachers with supplemental information
- ☐ **Pretty Awful**, there really isn't any background information

E. Ease-of-use (well-formated, clear directions for teachers, can follow like a recipe)

- ☐ **Excellent**, even inexperienced teachers can use as is after reading through the lesson
- ☐ **Good**, inexperienced teachers may need to add a few notes
- ☐ **Fair**, experienced teachers can do okay with it, others need some coaching
- ☐ **Poor**, I have trouble with it
- ☐ **Pretty Awful**, I should probably provide lesson plans with the materials

5. Briefly describe any training sessions you provide for volunteer teachers.

6. If you do provide training sessions, what percentage of teachers attend? _____

7. What 3 things do you think your teachers need to feel more successful?

(A)

_____

(B)

_____

(C)

_____

8. What 2 things do your teachers find most frustrating or cause the most concern about teaching in the program?

(A)

_____

(B)

_____

APPENDIX B

SAMPLE TREATMENT PACKET

Contents:

Date

Dear Church School Teacher,

First, thank you so much for participating in this study! I think Rev. _____ has given you some information about this study, but I will try to write down the key points so you can refer back to them. The study is being conducted to gain information and data for my doctoral dissertation. The PhD will be in Education, with Instructional Technology as the major. The plan is to complete the study portion by the end of March so that I can write the paper in April.

The materials you will need for the study are in this packet, except for the Sunday School curriculum materials that you received from the church.

Packet contents:

- **Participation in Study and Permission to Use Your Findings**

  This is an official document that is required for all participants in a study. Its purpose is for me to inform you about the study and for you to give me permission to use your findings. Please sign and return it to Rev. _____ when you complete your part of the study (by March 29).

- **Volunteer Church Teachers Questionnaire**

  Please complete now, but turn it in with the rest of the materials.

- **Job Aid and supporting materials**

  Use for at least 2 lessons.

  - Directions - 1 copy

  - Job Aid - 2 copies
    Please include a copy of your completed job aids with the rest of the packet.

  - Sample Job Aid - 1 copy

- **Self-Assessment Evaluation**

  Complete at the end of the study, just before you turn in your materials.

Again, thank you so much for making time to participate in the study. Your input will be invaluable to me and I hope the job aid will be of some benefit to you! Please feel free to call me, (phone number), if you have any questions or concerns.

Sue W. Johnson

THE DEVELOPMENT AND EVALUATION OF A JOB AID FOR LESSON PLANNING FOR VOLUNTEER, NON-PROFESSIONAL TEACHERS Principle Investigator: Sue W. (Bird) Johnson

Sue W. (Bird) Johnson
Phone Number
Address
City, State, Zipcode

To: Study Participant
From: Sue W. (Bird) Johnson
Date: January 29, 1998
Re: Participation in Study and Permission to Use Your Findings

Dear Participant,

The purpose of this letter is to ask you to participate and to give permission to use your opinions/findings in a research study. Your participation will require using a job aid to guide you through the process of planning your lessons for two class sessions and completing a survey after using the job aid. Your opinions/findings about the job aid will then be incorporated in the research data.

With your permission and release as listed in the items below, I will proceed with the investigation and analysis. Findings from the study will be made available to you.

[redacted]

TITLE OF RESEARCH STUDY

THE DEVELOPMENT AND EVALUATION OF A JOB AID FOR LESSON PLANNING FOR VOLUNTEER, NON-PROFESSIONAL TEACHERS

PRINCIPAL INVESTIGATOR (PI)

Sue W. (Bird) Johnson

PURPOSE

I am being asked to participate in a research study for the purpose of investigating the benefits of using a job aid for lesson planning. My participation will contribute to the practical aspects of the development of performance support tools in the field of Instructional Technology.

PROCEDURE

I am being asked to participate in a study that will require using a job aid as a guide for lesson planning. I will use it to prepare and teach at least two lessons. I will also complete the evaluation survey to offer my opinions and findings on the benefits of the job aid.

THE DEVELOPMENT AND EVALUATION OF A JOB AID FOR LESSON PLANNING FOR VOLUNTEER, NON-PROFESSIONAL TEACHERS Principle Investigator: Sue W. (Bird) Johnson

BENEFITS

I may benefit from this study through the knowledge I will gain on lesson planning and the insights of others who are also testing the job aid.

RISKS

I will encounter no risk from contributing my time, opinions, and findings in this research study.

VOLUNTARY PARTICIPATION/WITHDRAWAL

I understand that participation in this research project is voluntary and that I can withdraw from this study at any time without penalty.

CONFIDENTIALITY

I understand that my confidentiality will be maintained by the assignment of a code number to my data and that the information will only be used for data labeling. No individual references by name will be made to any of the participants in the study.

QUESTIONS

If I have any questions concerning my participation in this study now or in the future, the principal investigator (PI) Sue W. Bird can be contacted at (Office phone) (day) or (Home phone) (evenings).

AGREEMENT TO PARTICIPATE AND PERMISSION TO USE MY OPINIONS/FINDINGS

I have read all of the above information about this research study, including the confidentiality and likelihood of any benefit to me. The content and meaning of the above information have been explained to me and are understood by me. I hereby agree to participate in the study and give my permission for Sue W. (Bird) Johnson to use my findings and opinions on the effectiveness of the job aid for the stated purposes. I will receive a signed copy of this permission form.

_____ _____

Participant Date

Volunteer Church Teachers Questionnaire

Church:	Name:

Your Teaching Experience:

Previous Training/Education:_____

Years Experience:_____

1. Check the programs in which you teach
   - ☐ Sunday Church School
   - ☐ Weekday Educational Program
   - ☐ Other - Please identify _____

2. What curriculum materials are you using? (Publisher/ Age Group)

3. Rate the materials for each category listed below.

   A. Objectives (goals, what students are expected to know/do after the lesson)
      - ☐ **Excellent**, well-written, appropriate objectives, clearly labeled
      - ☐ **Good**, okay, but not sufficient to call excellent
      - ☐ **Fair**, about half the objectives are okay, not clearly labeled
      - ☐ **Poor**, either not reasonable objectives or not called out
      - ☐ **Pretty Awful**, not really clear or appropriate or don't exist

   B. Lesson Content (story, information, ideas presented)
      - ☐ **Excellent**, on target with what I think the students should be learning
      - ☐ **Good**, most of the lessons are what I think the students should be learning
      - ☐ **Fair**, about half of the lessons are good; half are somewhat weak
      - ☐ **Poor**, most of the lessons are weak; I usually have to add content
      - ☐ **Pretty Bad**, I need a new curriculum

   C. Learning Activities (art, craft, worksheets, learning games)
      - ☐ **Excellent**, I almost always use what the curriculum suggests
      - ☐ **Good**, there's usually one or two that work well
      - ☐ **Fair**, I have to find something else for about half of the lessons
      - ☐ **Poor**, I create most of my own activities
      - ☐ **Pretty Awful**, there are seldom any activities that work well

D. Background Information (additional information for teachers to enhance their knowledge on the topic)

- ☐ **Excellent**, almost more than I need to know
- ☐ **Good**, sufficient to provide a solid background
- ☐ **Fair**, I can get by with what is provided
- ☐ **Poor**, I need supplemental information
- ☐ **Pretty Awful**, there really isn't any background information

E. Ease-of-use (well-formated, clear directions for teachers, can follow like a recipe)

- ☐ **Excellent**, I have no problem using it after reading through the lesson
- ☐ **Good**, I sometimes need to add a few notes
- ☐ **Fair**, I could use some help with it
- ☐ **Poor**, I have trouble with it
- ☐ **Pretty Awful**, I need lesson plans with the materials

4. What actions do you take to plan for a class session?

5. If you make notes to use during class time, what do you include in those written plans? **(If you have any written plans from previous lessons, please attach a copy of one of the plans to return with this survey. Hand written notes are sufficient!)**

6. What 3 things would make you a better, more confident teacher ?

(A)

_____

(B)

_____

(C)

_____

7. What 2 things do you find most frustrating or cause you most concern about teaching in the program?

(A)

_____

(B)

_____

Directions

Planning is one of the most important actions you should take as you prepare to teach a lesson. The following pages are a job aid, a tool which will guide you through the planning process. It is to be used with the teaching materials that you have been given previously. A completed job aid is included as a sample to give you further guidance.

1. Read through the job aid so that you are familiar with the components of a well-designed lesson.

2. Using materials that you have been given, read through the lesson you are planning.

3. Review the sample job aid to get a better understanding of the eight steps of a well-developed lesson.

4. Using the job aid as a guide, read the lesson, stopping to fill in the steps that are clearly included in your materials.

5. If there are steps that seem to be missing in your materials, search through the materials again to see if you can find the missing steps.

6. If you still have steps missing, refer to the sample job aid and develop your own ideas to complete the job aid plan.

7. Take the job aid with you to class to follow as you teach your lesson.

PLANNING JOB AID

Lesson Title:_____

Step 1:	**Get students attention!**
What are you going to do to get students to listen and be interested in the lesson? (Example: Show a picture; change the sound of your voice)	
Step 2:	**Tell students what they are going to learn.**
What should the students know or be able to do when class is over?	
Step 3:	**Tie the learning into something the students already know.**
How is the lesson like something the students know about from another place or time?	

Step 4:	**Present the lesson.**
What is the content for today's lesson?	
Step 5:	**Provide learning guidance.**
What questions will you ask to get the students to discuss what they have just heard or done so you can check their understanding?	

Step 6:	**Elicit performance.**
What will the students do in class to practice what the lesson is trying to teach?	
Step 7:	**Provide feedback.**
How will you talk about or review the activity the students have done?	
Step 8:	**Enhance retention and transfer.**
How might the students apply what they have learned today in the coming weeks?	

SAMPLE - PLANNING JOB AID

Lesson Title: Joseph the Dreamer

Step 1:	**Get students attention!**
	What are you going to do to get students to listen and be interested in the lesson? (Example: Show a picture; change the sound of your voice)
Gather in a circle; sing songs; take offering; move to Step 3.	

Step 2:	**Tell students what they are going to learn.**
	What should the students know or be able to do when class is over?
1. Just as God's will controlled Joseph's life, so God's will should control our lives when we trust Him. 2. Identify two ways God revealed His will to Joseph. 3. Give examples illustrating the difficulty of following God's will. 4. Describe how God can make His will known to us.	

Step 3:	**Tie the learning into something the students already know.**
	How is the lesson like something the students know about from another place or time?
Talk about dreams. Do you remember your dreams? Give 2 or 3 children chance to tell about dreams. "Long ago God used dreams to talk to people, as in today's story...."	

Step 4:	**Present the lesson.**

What is the content for today's lesson?

Genesis 37, 39:1-6 - The story of Joseph's early life

1. Father's favorite son
2. Special coat
3. Joseph's 2 dreams - telling how his family will bow down to him one day
4. Brothers' jealousy
5. Being thrown in a well and then sold
6. Being a slave in Egypt - Potiphar

God with Joseph all times

God uses evil as well as good for His good.

(Tell story with feeling!)

Step 5:	**Provide learning guidance.**

What questions will you ask to get the students to discuss what they have just heard or done so you can check their understanding?

1. What parts of story show God's plan (will) for Joseph?

2. Which parts show that following God's plan was not always easy for Joseph?

3. Why did Joseph's brothers sell him?

4. How do you suppose Joseph's father felt about this?

Step 6:	**Elicit performance.**
What will the students do in class to practice what the lesson is trying to teach?	
Have students draw a picture showing what they think are the most important parts of the story of Joseph.	
Step 7:	**Provide feedback.**
How will you talk about or review the activity the students have done?	
Give the students a chance to show their pictures and talk about the parts of the story they have drawn.	
Step 8:	**Enhance retention and transfer.**
How might the students apply what they have learned today in the coming weeks?	
How do we know what God's will is for our lives? Realize it is not easy to know God's plan for us. Joseph didn't understand - Joseph was young, forceful, confident - BUT, Joseph trusted in God! Listen to parents, teachers, etc. Pray - Trust God Do what we know is right, even when it is hard to do. Ask what problems we might have when trying to follow God's will. Do you think God still talks to people today? How?	

Self-Assessment Evaluation
Volunteer Church Teachers

Church: _____ Name: _____

Number of times you used the job aid: _____

For each question, circle the "X" on the line over the description that best fits your response.

1. **I was able to use the job aid to plan my lesson.**

X	X	X
Unassisted	I'd like a little more information	I don't really understand it

2. **Using the job aid as a guide for planning, made the task ...**

X	X	X
Much easier	A little easier	Made no difference

3. **I used the job aid as an in-class guide to present the lesson.**

X	X	X
Yes	Some of the time	Not at all

3a. **If you used the job aid as an in-class guide, did it make any difference in student participation?**

__ NO __YES - **Describe:** _____

_____

3b. **If you used the job aid as an in-class guide, did it make any difference in student attentiveness?**

__NO __YES - **Describe:** _____

_____

4. **The job aid made the Teacher/Instructor Guide ...**

X	X	X
Much easier to use	A little easier to use	Made no difference in use

5. **By using the job aid, I feel ...**

X	X	X
More confident	A little more confident	No difference

ADDED COMMENTS:

Thank you!

Dear Teacher,

Before you began this "study," let me express my appreciation for your participation.

A dissertation cannot be written without conducting a study. A study cannot happen without participants. So, you are a vital part of this whole process. In fact, it couldn't be completed without you!

Thank you so much for your help!

Sincerely,
Sue Bird Johnson

P.S. Please call if you have any questions as you go through this study!

APPENDIX C

RAW DATA AND DESCRIPTIVE STATISTICS

LESSON PLANS RAW SCORES (RATINGS 1 - 10) FOR EACH CATEGORY

	A	B	C	D	E	F	G	H	I	J	K	L
1	Subject	Cat_1	Cat_2	Cat_3	Cat_4	Cat_5	Cat_6	Cat_7	Cat_8	Cat_9	Cat_10	TOTAL
2	C01	1	3	1	1	1	3	1	1	2	3	17
3	C02	1	2	1	2	1	4	1	1	2	3	18
4	C03	3	1	1	4	5	3	1	2	2	3	25
5	C04	5	1	5	3	2	4	4	5	4	3	36
6	C05	4	1	4	4	1	1	1	1	1	3	21
7	C06	3	1	4	3	1	1	1	1	1	3	19
8	C07	4	1	1	1	2	2	1	1	2	3	18
9	C08	1	1	1	1	1	1	1	1	1	1	10
10	C09	1	1	1	1	1	1	1	1	1	1	10
11	C10	1	1	1	1	1	1	1	1	1	1	10
12	C11	2	2	5	5	5	2	2	3	1	5	32
13												
14	T01	3	4	3	5	4	4	4	4	4	3	38
15	T02	3	5	4	5	5	5	5	4	5	5	46
16	T03	4	3	4	4	5	4	2	4	4	5	39
17	T04	3	3	3	4	4	4	4	5	4	3	37
18	T05	3	4	4	5	5	4	3	4	4	3	39
19	T06	4	5	4	5	4	4	3	3	4	5	41
20	T07	2	5	4	5	4	5	3	4	4	1	37
21	T08	5	3	3	4	3	3	4	3	4	5	37
22	T09	5	5	5	5	4	5	5	5	5	5	49
23	T10	3	4	3	4	3	4	4	4	4	1	34
24	T11	4	5	3	5	5	5	5	5	5	5	47
25	T12	3	3	3	3	3	3	2	3	3	3	29
26	T13	3	4	5	4	3	4	4	5	4	1	37
27	T14	4	5	4	5	5	4	3	3	4	3	40
28	T15	3	4	3	5	3	4	3	4	4	5	38
29	T16	4	4	3	4	5	5	3	4	4	3	39
30	T17	3	4	4	4	3	5	4	4	4	1	36
31	T18	4	4	3	5	4	5	4	4	4	1	38
32	T19	3	3	2	3	3	3	2	3	3	1	26
33	T20	4	4	3	3	4	5	4	5	4	1	37
34	T21	4	5	4	5	4	4	2	4	4	3	39
35	T22	4	3	4	5	5	5	5	4	4	3	42
36	T23	5	5	3	5	5	5	4	3	4	5	44
37	T24	3	5	5	5	5	5	5	5	5	3	46
38	T25	5	5	5	5	5	5	5	4	5	3	47
39	T26	2	5	3	3	3	3	4	3	3	1	30
40	T27	5	5	5	5	4	4	5	4	5	5	47
41	T28	5	5	5	5	5	5	5	5	5	5	50
42	T29	4	4	5	5	4	4	5	4	4	3	42
43	T30	4	3	3	5	3	3	3	3	3	1	31
44	T31	3	4	5	5	4	5	5	4	4	1	40
45	T32	4	5	5	5	5	5	4	3	5	1	42
46												0
47												0

Church Educators' Questionnaire Results

CHURCH	BIRMINGHAM	DEARBORN	GREENFIELD	MT. CLEMENS
Size	1850	950	150+	392
Programs	SS, Weekday, Small groups	SS, Weekday	SS, Weekday	SS, Weekday Adult classes
# Experienced Volunteers	18	5	9	12
# Inexperienced Volunteers	9	16	11	15
Curriculum	Logos	Logos	Presbyterian	Presbyterian Assorted segments of others
Training Sessions	1 "gathering" in Fall, letters, personal contact	1 or 2 per year to review curriculum, what additional materials are available, share ideas	1 per year - discussing program goals/ objectives, age-appropriate behaviors, and how to use curriculum	Fall orientation - schedules, curriculum, sample lesson Nov workshop - crafts, games, discipline May - Evaluation meeting
% Attendance	60%	50%	20%	80%
More Successful	- Easy use of materials - Have supplies on hand - Consistency of students	- Encouragement from staff - Backing from congregation - Student response	- More training sessions attended - Parental support	- Better attendance - More time to work on lesson plans - Better subject knowledge
Frustrations/ Concerns	- Lack of consistent attendance - Lack of classroom time	- Lack of opportunity to participate in adult programs - Lack of Biblical knowledge	- Lack of parental involvement - Student attitudes toward church	- Inconsistent attendance - Lack of class time and preparation time

SURVEY FOR VOLUNTEER CHURCH TEACHERS

(1) QO1 Programs you teach

93.5%;	76.3%;	29 Sunday Church School
16.1%;	89.5%;	5 Weekday Educational program
6.5%;	94.7%;	2 Pioneer Club Leader
6.5%;	100.0%;	2 Other*

Replies 31; Forms 31

*3rd grade literature group
* Summer camps

(2) Q03A Objectives

48.4%;	48.4%	15 Excellent	0.0%; 100.0%	0 Poor
45.2%;	93.5%	14 Good	0.0%; 100.0%	0 Pretty Awful
6.5 %;	100.0%	2 Fair		

Replies 31; Forms 31; Mean 1.58; Median 1.54; Std Dev 0.62; Minimum 1.00; Maximum 3.00

(3) Q03B Lesson Content

51.6%;	51.6%	16 Excellent	0.0%; 100.0%	0 Poor
45.2%;	96.8%	14 Good	0.0%; 100.0%	0 Pretty Awful
3.2%;	100.0%	1 Fair		

Replies 31; Forms 31; Mean 1.52; Median 1.47; Std Dev 0.57; Minimum 1.00; Maximum 3.00

(4) Q03C Learning Activities

35.5%;	35.5%	11 Excellent	0.0%; 100.0%	0 Poor
64.5%;	100.0%	20 Good	0.0%; 100.0%	0 Pretty Awful
0.0%;	100.0%	0 Fair		

Replies 31; Forms 31; Mean 1.65; Median 1.73; Std Dev 0.49; Minimum 1.00; Maximum 2.00

(5) Q03D Background Information

29.0%;	29.0%	9 Excellent	0.0%; 100.0%	0 Poor
71.0%;	100.0%	22 Good	0.0%; 100.0%	0 Pretty Awful
0.0%;	100.0%	0 Fair		

Replies 31; Forms 31; Mean 1.71; Median 1.80; Std Dev 0.46; Minimum 1.00; Maximum 2.00

(6) Q03E Ease-of-Use

48.4%;	48.4%	15 Excellent	0.0%; 100.0%	0 Poor
48.4%;	96.8%	15 Good	0.0%; 100.0%	0 Pretty Awful
3.2%;	100.0%	1 Fair		

Replies 31; Forms 31; Mean 1.55; Median 1.53; Std Dev 0.57; Minimum 1.00; Maximum 3.00

(8) Q03a1 Describe:

Replies 9; Forms 30

- Used my outline with help of job aid, I paid special attention to getting attention section.
- More students participated
- Not sure
- Most participated - particularly in acting out of play
- I had more students involved in project
- Made me more aware of how to get them more involved
- Made the lesson more organized
- I was more focused and I think the children were also
- Had job aid in front of me with specific things I wanted to cover

(9) Q03b Difference student attentiveness

47.4%; 47.4%; 9 Yes 52.7%; 100.0%; 10 No

Replies 19; Forms 30

(10) Q03b1 Describe

22.2%; 22.2%; 2 Not sure 77.8%; 100.0%; 7 Other

Replies 9. Forms 30

- Same
- Still had a couple of disinterested students who tend to be trouble sometime
- Better planning, more organized, keeps students attentive
- Got them more involved
- Activity important and also the structure in class is good
- I was better prepared - less time fumbling - children stayed focused
- Attention okay in one class, other had problems

(11) Q04 Job Aid and Guide

37.0%; 37.0%; 10 Much easier to use 11.1%; 100.0%; 3 No difference
51.9%; 88.9%; 14 A little easier

Replies 27; Forms 30

(12) Q05 Confidence using job aid

70.4%; 70.4%; 19 More confident 14.8%; 100.0% 4 No difference
14.7%; 85.2% 4 A little more confident

(13) Comments:

- This lesson hard to put together and the guide helped a lot
- The job aid is a concise referral for points to be covered in class. It makes an easily readable outline to get highlights across in allotted time.
- I use a similar approach when planning for lessons, so most of this was easy to put together. I think it would be beneficial to have a copy of the Planning Job Aid to do our planning. It's straight forward, everything is right there for you to see and if you need a sub, it's available for them
- The second time was better. I took more time to work it out.

- The job aid was able to eliminate a step in my responsibility to CE director. It is planned similar to how I prepare my own lesson plans and I think ti would assist any teacher who lacks confidence in their teaching.
- I don't have any former teaching background and we only have the children for 20 minutes. In this situation the guide really didn't help me.
- I'm used to planning and remembering because this age group needs quick thinking and lots of flexibility.
- Any new ways of looking at lesson planning are appreciated.
- Although I do this process daily in my job, it is beneficial to revisit the process which should be followed.
- By using the job aid, I was able to have the class run a little smoother because everything I wanted to bring out was outlined and in the order I wanted to present it.
- This is a great tool! This is how I need to set up my lessons for my "regular" teaching as well.
- I really enjoyed the structure this job aid presented.
- I have always written lesson plans in detail plus using the plan in Teachers Guide.
- The format created served as a template the 2 weeks I used it. Easy to follow and kept the kids attention a little longer.
- The job aid gave me extra work before presenting the lesson, but is was worth the effort - the children got much more out of these lessons.
- I did like the way the job aid allowed me to bring more focus to each class session.
- I've been teaching the same kids for a couple of years os I'm very comfortable with them.
- Context of lesson plan so long and thorough that it was too much to rewrite.
- It was nice to have thoughts organized. The job aid was confusing to follow.
- Indirectly the tool helped the children because it helped me to stay organized and focused.
- Logos really does all this, but rewriting did help me focus more on the goals of the lesson.
- Excellent tool!

Self-Assessment Evaluation Volunteer Church Teachers

(1) D01 Church name:

10.0%;	10.0%;	3	Allen Park Presbyterian
40.0%;	50.0%;	12	First Presbyterian-Mt.Clemens
13.3%;	63.3%;	4	First Presbyterian_Brighton
10.0%;	73.3%;	3	First Presbyterian_Dearborn
10.0%;	83.3%;	3	Greenfield Presbyterian
6.7%;	90.0%;	2	Northbrook
6.7%;	96.7%;	2	Westminster Church of Detroit
3.3%;	100.0%;	1	Other

Replies 30; Forms 30

- Grosse Pointe Memorial

(2) D02 Name:

Replies 0; Forms 0

- [none]

(3) D03 Number times used

25.9%;	25.9%;	7	1	66.7%;	92.6%;	18	2	7.4%;	100.0%;	2	3

Replies 27; Forms 30; Mean 1.81; Median 2.00; Std Dev 0.56; Minimum 1.00; Maximum 3.00

(4) Q01 Able to use job aid

96.6%;	96.6%;	28	Use unassisted	0.0%;	100.0%;	0	Don't understand
3.4%;	100.0%;	1	Need more information				

Replies 29; Forms 30

(5) Q02 Job aid made task:

48.3%;	48.3%;	14	Much easier	6.9%;	100.0%;	2	Made no difference
44.8%;	93.1%;	13	A little easier				

Replies 29; Forms 30

(6) Q03 Used job aide as guide

37.9%;	37.9%;	11	Yes	27.6%;	100.0%;	8	Not at all
34.5%;	72.4%;	10	Some of the time				

Replies 29; Forms 30

(7) Q03a Notice student participation

42.1%;	42.1%;	8	Yes	57.9%;	100.0%;	11	No

Replies 19; Forms 30

Self-Assessment Evaluation Volunteer Church Teachers

Written Responses/Comments

3a. Student participation

My participation is pretty good to start with. (Bri)

The 5-6 year olds have always been eager to contribute (Dear)

I was more focused and I think the children were also (Dear)

There were more specifics to follow that made the lessons more organized to follow and keep track of (Dear)

Made me more aware of how to get them more involved (AP)

Most participated - particularly in acting out of play (AP)

I had more students involved in projects (AP)

More students participated (MC)

I paid special attention to getting attention (MC)

Because I had job aid in front of me with those very specific things I wanted to cover and questions I wanted to ask (West)

3b. Student attentiveness:

I was better prepared - less time fumbling - children stayed focused (Dear)

Because of the age groups, activity is important, and also the structure in class is good! (Dear)

Got them more involved physically (moved to different parts of room) and in discussions about their feelings (AP)

Better planning - more organized - keeps students attentive (AP)

Still had a couple of disinterested students who tend to be troublesome (AP)

Students were more attentive (MC)

One class we had no discipline problem and attentiveness was good - second class

had a discipline problem and attentiveness suffered (West)

Added Comments:

Allen Park

I have always written a lesson plan in detail plus using the plan in the Teachers' Guide - that way I have it better in mind and I don't have to refer to it very often or sometimes I don't even look at it

I really enjoyed the structure this job aid provided.

Brighton

It was nice to have thoughts organized during the time for teaching. However, when I'm teaching it's hard for me to stay on task unless I have a written schedule of events that take place during class. The job aid was confusing to follow when I was trying to figure out what came next in the lesson.

The only thing I find overwhelming about the job aid is in this specific curriculum the content of the lesson plan is so long and thorough that it was too much to rewrite. Easier to just look at the Teacher Book or Workbook pages. However, I definitely knew what I was talking about when it came time to teach.

I've been teaching the same kids for a couple of years, so I'm very comfortable with them. Confidence and participation are high to begin with.

Dearborn

Although I generally feel confident, I did like the way the job aid allowed me to bring more focus to each lesson. I assume most experienced teachers use something similar. I found it most helpful in preparing the lesson. Once I'm committed to the lesson, I didn't refer to it in class. I had already decided on my course of action.

I realized that our curriculum did not always have ways to check if the students really understood the intent of the lesson. The job aid gave me extra work before presenting the lesson, but it was worth the effort. The children got much more out of these 2 lessons. I will use the job aid on future lessons!

The format created served as a template for the 2 weeks I used it. Easy to follow and kept the kids attention a little longer!

Greenfield

This was a great tool! This is how I need to set up my lessons for my "regular" teaching as well!

Grosse Pointe

Indirectly this tool helped the children because it helped me to stay organized and

focused

Mount Clemens

I feel that the Teacher Guide is excellent in planning my class for Sunday School. It outlines what is to be attained in each session and what goals and objectives are to be met. By using the job aid, I was able to have the class run a little smoother because everything I wanted to bring out was outlined and in the order I wanted to present it.

Although I do this process daily in my job, it is beneficial to revisit the process which should be followed

Any new ways of looking at lesson planning are appreciated

I'm used to planning and remembering because this age group needs quick thinking and lots of flexibility. They will not sit still while I go over next step as written on paper. By team teaching the process is much easier. This is because we each have one part to completely prepare for, not the whole program

The job aid was able to eliminate a step in my responsibility to CE Director. The aid served as our current class lesson report we prepare for future teaching of same lesson. It is planned similar to how I prepare my own lesson plans and I think would assist any teacher who lacks confidence in their teaching.

I don't have any former teaching background and we only have the children for 20 min. In this situation the guide really didn't help me.

I use a similar approach when planning for lessons, so most of this was easy to put together. I think it would be beneficial to have a copy of the planning job aid to do our planning. It's straight-forward, everything is right there for you to see and if you need a sup, it's available for them

Northbrook

This lesson hard to put together. The guide helped a lot!

The job aid is a concise referral for points to be covered in class. It makes an easily readable outline to get highlights across in allotted time.

Westminster

Logos really does all this but rewriting did help me focus more on the goals of the lesson

APPENDIX D

SSPS® ANALYSIS OUTPUT

T-Test

Group Statistics

	SUBJECT	N	Mean	Std. Deviation	Std. Error Mean
TOTAL	1	11	19.64	8.62	2.60
	2	32	39.50	5.77	1.02
CAT_1	1	11	2.36	1.50	.45
	2	32	3.69	.86	.15
CAT_2	1	11	1.36	.67	.20
	2	32	4.22	.79	.14
CAT_3	1	11	2.27	1.79	.54
	2	32	3.81	.90	.16
CAT_4	1	11	2.36	1.50	.45
	2	32	4.53	.72	.13
CAT_5	1	11	1.91	1.58	.48
	2	32	4.09	.82	.14
CAT_6	1	11	2.09	1.22	.37
	2	32	4.31	.74	.13
CAT_7	1	11	1.36	.92	.28
	2	32	3.84	1.02	.18
CAT_8	1	11	1.64	1.29	.39
	2	32	3.94	.72	.13
CAT_9	1	11	1.64	.92	.28
	2	32	4.13	.61	.11
CAT_10	1	11	2.64	1.21	.36
	2	32	2.94	1.64	.29

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
TOTAL	Equal variances assumed	-8.639	41	.000	-19.86	2.30	-24.51	-15.22
	Equal variances not assumed	-7.117	13.218	.000	-19.86	2.79	-25.88	-13.84
CAT_1	Equal variances assumed	-3.599	41	.001	-1.32	.37	-2.07	-.58
	Equal variances not assumed	-2.772	12.326	.017	-1.32	.48	-2.36	-.29
CAT_2	Equal variances assumed	-10.674	41	.000	-2.86	.27	-3.40	-2.31
	Equal variances not assumed	-11.565	20.279	.000	-2.86	.25	-3.37	-2.34
CAT_3	Equal variances assumed	-3.734	41	.001	-1.54	.41	-2.37	-.71
	Equal variances not assumed	-2.732	11.760	.018	-1.54	.56	-2.77	-.31
CAT_4	Equal variances assumed	-6.399	41	.000	-2.17	.34	-2.85	-1.48
	Equal variances not assumed	-4.610	11.609	.001	-2.17	.47	-3.20	-1.14
CAT_5	Equal variances assumed	-5.925	41	.000	-2.18	.37	-2.93	-1.44
	Equal variances not assumed	-4.393	11.897	.001	-2.18	.50	-3.27	-1.10
CAT_6	Equal variances assumed	-7.219	41	.000	-2.22	.31	-2.84	-1.60
	Equal variances not assumed	-5.688	12.604	.000	-2.22	.39	-3.07	-1.38
CAT_7	Equal variances assumed	-7.116	41	.000	-2.48	.35	-3.18	-1.78
	Equal variances not assumed	-7.472	19.036	.000	-2.48	.33	-3.17	-1.79
CAT_8	Equal variances assumed	-7.404	41	.000	-2.30	.31	-2.93	-1.67
	Equal variances not assumed	-5.641	12.197	.000	-2.30	.41	-3.19	-1.41

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
CAT_9	Equal variances assumed	-10.183	41	.000	-2.49	.24	-2.98	-2.00
	Equal variances not assumed	-8.329	13.113	.000	-2.49	.30	-3.13	-1.84
CAT_10	Equal variances assumed	-.556	41	.581	-.30	.54	-1.39	.79
	Equal variances not assumed	-.647	23.745	.524	-.30	.47	-1.26	.66

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
TOTAL	Equal variances assumed Equal variances not assumed	2.043	.161
CAT_1	Equal variances assumed Equal variances not assumed	11.523	.002
CAT_2	Equal variances assumed Equal variances not assumed	1.342	.253
CAT_3	Equal variances assumed Equal variances not assumed	26.563	.000
CAT_4	Equal variances assumed Equal variances not assumed	20.932	.000
CAT_5	Equal variances assumed Equal variances not assumed	4.744	.035
CAT_6	Equal variances assumed Equal variances not assumed	6.995	.012
CAT_7	Equal variances assumed Equal variances not assumed	1.251	.270
CAT_8	Equal variances assumed Equal variances not assumed	3.777	.059

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
CAT_9	Equal variances assumed	2.566	.117
	Equal variances not assumed		
CAT_10	Equal variances assumed	1.971	.168
	Equal variances not assumed		

APPENDIX E

REPORT FROM TRAINING MANAGER

****
* Note printed by SBIRD on 27 Apr 1998 at 10:56:48 *
****

From: RMOCK --DRBN004 Date and time 04/20/98 19:07:02
To: SBIRD --DRBN004

FROM: Robert Mock USAET(UTC -04:00)
Subject: JOB AID
I GAVE OUT THE JOB AID TO FIVE TRAINERS AT ATLANTA ASSEMBLY RANGING FROM THREE MONTH TRAINING EXPERIENCE TO TWO YEARS AS TRAIN THE TRAINER WHEREIN TWO HAD FOR MAL TRAIN THE TRAINER CLASSES.
FIRST THE TWO FORMALLY TRAINED TRAIN THE TRAINER IN CIWG WHOM HAVE BOTH ABOUT E IGHT MONTHS EXPERIENCE. ONE IS SALARIED AND ONE IS HOURLY. THEY BOTH WERE VERY IMPRESSED AT THE SIMPLICITY AND EASE OF THE DESIGN. IT WAS HELPFUL TO THEM WH EN MODIFING A CURRICULIUM TO THE PLANT AND A NEW ZONE WITHIN THE PLANT. THE HO URLY EMPLOYEE IS MORE OF A NATURAL PUBLIC SPEAKER WHO SOMETIMES GETS HIMSELF IN A BIND AS HE FELT HE NEEDED TO ANSWER THE QUESTION FROM HIS PEERS WHEATHER HE WAS FULLY AWARE HIS ANSWER WAS CORRECT. HE TOLD ME THAT USING THE JOB AIDE IT SLOWED HIM DOWN AND PROMPTED HIM TO SEEK ANOTHER LOOK BEFORE FINALIZING HIS PRE P FOR THE LESSON. I WAS AMAZED AS THIS SHOWED ME HE HAD REALLY REACHED SOME DE VEMENTAL MATURITY AND COGNITION FROM USING THE JOB AID. HIS PRESENTATIONS WERE MORE PREPARED AND HE SEEMED MORE COMFORTABLE ON THE PLATFORM.

THE SECOND TRAINER WHO IS SALARIED AND TOOK ON THE RESPONSIBILITY TO FORMALIZE AND SET-UP A STANDARD SET OF IG'S (TEACHING GUIDES) FOR OUR PIT TEAM USED THE J OB AID IN ACCOMPLISHING THIS TASK. SHE LIKED THE IDEA OF A PROCESS WHICH THE AID PROVIDED. SHE IS TYPICALLY MORE DISCIPLINED TO PROCESS AS A ENGINEER A ND SUPERVISOR BUT COMMENTED SHE LIKED THE SIMPLE DESIGN AND THOUGHT IT SERVED A S AN EXCELLENT TOOL FOR THOUGHT STARTING IDEAS.
#3- HE ADMITTED AFTER REMARKING THAT HE DID NOT FIND IT VERY USEFUL THAT HE RE ALLY SIMPLY DID NOT USE IT AND ONLY LOOKED IT OVER. NOW IN FAIRNESS THIS GUY I S A INDEPENDENT TYPE OG GUY WHO IS HARD TO ACCEPT MUCH OF ANYTHING FROM US OLD ACADEMIC TYPES. HE HAS A HS GRAD BUT IS VERY INTELLEGENT BUT LIKES HIS IDEAS. I KNOW I AM INFLUENCING DATA WITH MY SUBJECTIVITY ON CHARACTER BUT AS YOU KNOW WE HAVE A BUNCH OF CHARACTERS DOWN HERE IN "LANTA".
THE FOURTH PIT TEAM MEMBER I ASKED TO USE IT WAS THE NEW MEMBER WITH NO FORMAL TRAINING AND HAD NOT BEEN AN INSTRUCTOR FOR MORE THAN THREE WEEKS. HE LOVED IT AND IT MADE GREAT SENSE TO HIM AS IT WAS NOT COMPLEX AND STEP BY STEP. HE REMA RKED IT WAS LIKE BAKING , "JUST FOLLOW THE RECIPE". HE USED IT TO DEVELOP SOME FPS (MODIFY) FOR PAINT DEPARTMENT WHO HE REPRESENTS. HE FOUNG IT VERY USEFUL AND SIMPLE TO USE.

IN CLOSING I WOULD LIKE TO COMMENT THAT THIS TRAINING PROFESSIONAL WAS IMPRESSE D WITH THE AID AS IT COULD BE IMMEDIATELY PUT IN TO ACTION. IT WAS ALMOST SELF -CONTAINED IN THAT IF YOU STARTED AT STEP ONE AND ANSWERED THE QUESTIONS IN ORD ER YOU FINISHED UP WITH A COMPLETED LESSION GUIDE. IT WAS SO SIMPLE THAT IT MADE ME ENVIOUS I HAD NOT THOUGHT OF IT MYSELF. SUE THIS IS A GREAT TOOL AN D SELF STARTER FOR CURRICULIUM AND LESSON PLANNERS. IT ALMOST LIKE DEHYDRATED M AGER IN A CAN. ITS A ISD HOV LANE. I WILL SHARE IT WITH MY TECHNICAL TRAIN THE TRAINERS AS WE BEGIN DEVELOPING NEW TRAINING AND I THINK IT IS A GREAT COACHING TOOL AND CAN BE USED STAND ALONE.

THANKS FOR THE OPPORTUNITY OF USING THE TOOL AND I HOPE THESE COMMENTS WILL HEL P YOU OUT.

WELL IT'S OFF TO BLI TOMORROW.TAKE CARE AND GOOD LUCK WITH THE PAPER.

IF IT AIN'T FUN,THEN IT AIN'T TRAINING!
Bob Mock

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ABSTRACT

THE DEVELOPMENT AND EVALUATION OF A JOB AID FOR LESSON PLANNING FOR VOLUNTEER TEACHERS

by

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A number of institutions, including community organizations, scouting programs, churches, and even businesses, rely on volunteer teachers to staff educational programs. The volunteer teachers are provided curriculum materials to use, but often do not receive training to sufficiently equip them for the task of teaching. A job aid might provide performance support for one aspect of their teaching responsibilities, the task of planning for teaching.

The purpose of this study is to chronicle the development process for the creation of a job aid for planning for teaching (based on a simplified version of Gagné's Nine Events of Instruction) and to evaluate whether the job aid will facilitate a volunteer teacher's ability to plan for teaching. A developmental methodology is used to chronicle the development process. An experimental design methodology is applied to evaluate the effectiveness of the job aid on a volunteer teacher's ability to plan for teaching. The sample population is selected from ten churches within southeast Michigan that use volunteers to staff religious education programs and includes 43 participants teaching

during the first three months of 1998.

An analysis is conducted to determine differences in lesson plans created by the control group and the treatment group using the planning job aid. Additional information is gathered from the treatment group on opinions about the use of the job aid.

The job aid, used in conjunction with published curriculum materials, appears to be sufficient to guide volunteer teachers through a planning process, producing better quality lesson plans than the control group did without the intervention treatment. Formal training, years of experience, age group taught, use of denominational or non-denominational curriculum materials seem to have no effect on the results of the use of the job aid.

The data suggest that the job aid is sufficient as a stand-alone intervention. Additional instruction does not appear to be necessary to prepare volunteer teachers to use the job aid.

Findings suggest that the job aid enhances the teaching experience, helping the majority of the volunteer teachers in the treatment group to feel more confident.

AUTOBIOGRAPHICAL STATEMENT

Sue W. Bird is currently an Instructional Technologist Supervisor at MSX International, supporting the Ford Motor Company Vehicle Operations General Office (VOGO) as a member of the Education, Training, and Development staff. The Education, Training, and Development Department functions as internal performance consultants to divisional staff management, the engineering staff of the division, and to the 26 stamping and assembly plants located in the United States and Canada.

Ms. Bird has been in her current assignment since 1995. She has been associated with the automotive industry since 1992, both as an independent and as a member of training supplier firms. Prior to that, she spent thirteen years in the field of religious education as Director of Education and Youth in a large (1200 members) suburban church.

During her eighteen years in religious and corporate education, Ms. Bird has designed and developed numerous internal educational programs and publications. An instructional video she created in 1991 is still in use in area churches. One design and development project, a 50-hour curriculum for workgroups, is currently being implemented at Ford manufacturing locations. Her most recent projects include conducting a needs assessment, designing, and developing a curriculum for first-line supervisors at all Vehicle Operations plants within the U.S. and Canada.

Ms. Bird graduated with a Master in Education in Instructional Technology from Wayne State University in 1992. Her undergraduate degree, a B.S. in Education, was achieved in 1967 from Georgia State University. She is currently completing work on a doctorate in Instructional Technology in the College of Education at Wayne State University.

Ms. Bird is a member of the International Society for Performance Improvement (ISPI) and the Greater Detroit Chapter of the American Society for Training and Development (ASTD).