OC International
Research Manual

Table of Contents

Introduction

The Purpose of this Manual

Research is intended to be a vital part of OC ministry and strategy. This manual presents many of the issues a team has to deal with in order for research to be integrated into the team's ministry. Not everyone should be a full time researcher. But certainly everyone can gain much by cultivating a "research mentality".

Sections one and two are about understanding research in general and OC's *style* of research in particular. These two sections are useful to every member of an OC team. Section three is a very brief introduction to some of the elements of church growth. Section four gives some general ideas about how to perform a survey research project. If you find the concepts and activities presented in sections three and four interesting, then perhaps you have an aptitude in research and could take on some responsibility in that area.

A companion volume will eventually be produced which will contain case studies of research projects from various fields. These case studies will be sent out occasionally. Any field is welcome to submit a project as a case study. Directions on how to do this are in Appendix A in the back of this manual.

> *"Any enterprise is built by wise planning,*
>
> *becomes strong through common sense,*
>
> *and profits wonderfully by keeping abreast of the facts."*
>
> *Proverbs 24:3-4 LB*

Why do Research?

OC is faced with a multitude of ministry opportunities and limited resources. How do we decide what course of action to take? It would be a simple matter if our ears were perfectly attuned to God and He were pleased to furnish us with specific instructions. God occasionally gives specific direction. God sent an angel to tell Philip "Go south to the road -- the desert road -- that goes down from Jerusalem to Gaza." Philip obeyed and the Ethiopian eunuch met the Lord. (Acts 8)

But generally Christians must make decisions about specific ministry opportunities without a specific word from God. In the early days of the church the Twelve were faced with many ministry opportunities which made heavy demands on their time.

They suggested the appointment of deacons to look after the orphans and widows so they could pursue prayer and the ministry of the word. This was agreeable to the group so they did it. There is no record that God told them to do this. Apparently they prayerfully analyzed the situation and made a decision about what to do. And God blessed the result. Luke records that "the word of God spread. The number of disciples in Jerusalem increased rapidly, and a large number of priests became obedient to the faith." (Acts 6)

When God leads in a direct and specific way, research may not be needed. We simply obey as Philip did. When God does not give specific direction, it is important for us to prayerfully analyze the situation, to *count the cost*, to *interpret the signs of the times*, to do our homework so that our efforts to obey and serve him will not be in vain. Prayerful research is OC's tool to accomplish this. As Bob Waymire says, without formal research "the Church will often forget its long-range goal, get lost in many good deeds, come up empty-handed out of ripe harvest fields, and leave many millions in bondage who could be liberated." Research is a valuable tool which we cannot neglect in the task of world evangelization.

A Biblical Basis for Research

Solomon believed that "of making books there is no end, and much study wearies the body" (Ecclesiastes 12:12, NIV). Paul warned that "knowledge puffs up" (1 Corinthians 8:1, NIV). Many others realize that gaining knowledge can be a burden (Ecclesiastes 1:17-18).

However, Solomon also believed there was great wisdom in diligently seeking greater understanding and knowledge (Proverbs 15:14; 18:15). He learned that patient study enables one to make good plans (Proverbs 14:15). It protects against the pitfalls of hasty decisions (Proverbs 19:2).

> *"It is not good to have zeal without knowledge,*
>
> *nor to be hasty and miss the way."*
>
> *Proverbs 19:2 NIV*

The nation of Israel recognized the value of research in carrying out the task of conquering the land of Canaan. It appears they often gathered and studied information to gain wisdom in making crucial decisions as they marched through the land.

Exploring the land before marching into battle was apparently a common practice (Numbers 13:16; 21:32; Joshua 2:1; 7:2; Judges 1:24; 18:2). A small group of men

were often sent out ahead of the army with a well-defined assignment. For example, Moses sent the first group of spies with a very detailed questionnaire which gave them clear and specific instructions of what information to look for (Numbers 13:18-20).

The assignment was to prepare a report about the land they were about to conquer. The report was to describe the towns and their inhabitants. Its purpose was to help them conquer the land (Deuteronomy 1:22).

Another phase of research involved doing a periodic evaluation of the army itself. It was apparently necessary in certain circumstances for Israel to evaluate the strength and size of its army (Numbers 1:2-3; 26:2; Joshua 7:13-15; Judges 7:2-6). This assessment was an important part of the information needed to plan their strategies.

> ## The first contextual survey
>
> ### Numbers 13:18-20
>
> What is the land like? Are the people who live there strong or weak, few or many?
>
> What kind of towns do they live in? Are they walled or unwalled?
>
> How is the soil? Is it fertile or poor? Are there trees on it or not?
>
> Do your best to bring back some of the fruit of the land.

There is a parallel between Israel's goal of conquering the land of Canaan and the Church's goal of making disciples of all nations. Spying out the land and evaluating the army are models for the kind of research the Church needs to do in order to plan effective strategies for reaching the world with the gospel.

Nehemiah is another model, as he went around secretly by night to evaluate the status of the wall in order to make an effective plan for its reconstruction.

The apostle Paul reflected a research mentality when he reported to the Romans that the entire region of Asia Minor had been filled with the gospel (Romans 15:17-23). Luke used research in writing his gospel and the book of Acts.

These examples from scripture show that research was done in times past by God's people. The words "Thou shalt do research" cannot be found in scripture. Rather we have many narrative passages showing us that research was just done as a

matter of course. We also see many admonitions to use wisdom and planning in anything we do.

Errors in Human Inquiry

- **Inaccurate observation** - Failing to observe things right in front of us or mistakenly observing things that really aren't there.

- **Over-generalization** - Assuming that a few similar events are evidence of a general pattern.

- **Selective observation** - Ignoring events or situations that don't correspond to a preconceived generalization.

- **Made-up information** - Thinking up ways to explain away the events that contradict generalizations.

- **Illogical reasoning** - Reasoning away the observations that contradict accepted generalizations or conclusions.

- **Ego-involvement** - Avoiding further inquiry because disproof of a personal observation may tend to make one look unintelligent or untrustworthy.

- **Premature closure of inquiry** - Discontinuing the process of inquiry and observation because of the errors detailed above.

- **Mystification** - Attributing supernatural or mystical causes to all situations that seem to lack an explanation.

Godly wisdom can come through the persistent, diligent and systematic pursuit of knowledge and understanding. Such wisdom is useful in motivating and directing those who earnestly desire to know and understand God's will and purpose. It enables Christians to be faithful stewards of God-given resources, and to be responsible in carrying out biblical mandates.

> All men are liable to error; and most men are, in many points, by passion, or interest, under temptation to it.
>
> -An essay concerning Human Understanding (1690) John Lock 1632-1704

General Research

The purpose of research is to search for specific information in some field of study that goes beyond the realm of common knowledge. The process of research is 1) to inquire, study, examine, investigate, experiment, or explore some field of knowledge and 2) to gather and analyze information carefully, patiently, systematically, diligently and purposefully. A good research project will also produce things: 1) The discovery of new information in the form of facts or factors, 2) The revision or interpretation of existing theory in light of new information, 3) The discovery of new practical applications for previous, revised or new information.

Personal Human Inquiry and Formal Research

Everyone goes through the process of gathering and studying information. This information forms the basis for sound decisions. Most of the time, information is gained informally through personal experience and observation. Informal personal human inquiry is the process of learning through experience. It is a casual, innate ability by which intelligent people become knowledgeable. Since this knowledge is usually gained through practical experience, personal human inquiry often serves as the source for some of the deepest, most heartfelt convictions about life.

Formal research is more systematic and attempts to be more objective in its study and investigation. It improves on the normal process of personal human inquiry by taking man's natural ability to learn by observation and adds structure, persistence and objectivity. It then becomes a useful tool which safeguards against making decisions based on outdated, incomplete or inaccurate information.

Research In OC International

Research and OC's Philosophy of Ministry

OC's corporate philosophy of ministry is summarized in primarily four documents: A Statement of Purpose, The OC Distinctives, Strategy of Ministry, and a Measurable Goal. Together they form OC's foundation for ministry. Therefore, we begin with a review of these documents.

OC International's Statement of Purpose is the overall criterion by which we test all of our ministries. It is:

> *In obedience to the Lord of the Harvest, the task of OC Ministries, Inc. is to assist the Body of Christ to make disciples of all peoples (Matt. 9:36-38; 28:18-20).*

The OC Distinctives include four values that distinguish us from other missions:

- **Whole-Nation Focus:** We believe that whole nations can and should be reached for Christ with the gospel.

- **Working Through the Entire Body of Christ:** We seek to accomplish this strategic effort by equipping and working through the entire church.

- **Church Multiplication:** We believe that the most effective means of making disciples is the establishment of witnessing evangelical congregations.

- **Team Approach:** On its various fields, OC forms resident teams that offer all the mutual benefits of a group: close fellowship, accountability, synergy and diversity of gifts.

OC's distinctive ministries are research, motivation, training and mobilization. Ideally, research will precede the other three in order to direct the motivation, training and mobilization towards the relevant areas of need. But in reality these four activities often take place concurrently in the process of ministry.

It is not enough, however, to declare a purpose and develop a strategy. The results must be measurable. OC's long-term measurable goal is to see a church in every village and every city neighborhood of the world. When this is accomplished, every citizen of every nation will be within easy access of Christians of his own culture. With the existence of these bodies of worshipping, maturing, learning, obedient, evangelizing Christians, we can make a basic assumption: all peoples in a nation could be discipled by the national church." When this is true OC's goal will have been reached.

The Purpose of OC Research

The primary purpose of OC research is to gather, analyze and disseminate information on the state of the Church, its context, and the effectiveness of the teams strategies and methods. This information will be used to assist OC International and OC teams in setting goals and objectives and to assist the national Church in setting growth goals and formulating strategy.

The secondary purpose of OC research is to motivate, train, and mobilize the National Church to become actively involved and self-sufficient in on-going research which shed light on its own purpose and vision for church growth and missions.

It is important to note that OC research is different than general research in that dissemination of new information is part of the process of OC research. Many times the projects which are conducted by OC researchers have wide interest and application. Part of the job is to get that information out to the people who can use it. Pastors, denominational officers, national church leaders, church planters will often be interested in the results of our work. The job is not over until we have informed the appropriate people of our findings.

OC research will have accomplished its purpose when information and analysis is being used to make decisions by both OC teams and the Church to engage in effective ministry. OC's measure of effective ministry is that which leads most directly to making disciples and to church multiplication in monocultural and crosscultural settings.

> Research can help to continually sharpen our focus, improve our methods, and stimulate our creativity.
> — OC Missionary

Areas of Inquiry

OC International is a harvest mission. Our purpose and strategy are focused on helping the national Church fulfill its role in reaping the spiritual harvest. OC assists the national Church in saturating whole countries with healthy, growing churches. Research should provide OC teams with information useful in motivating, training, and mobilizing the national Church toward these goals. It follows that there are certain types of information which most likely will be collected and studied on any OC field.
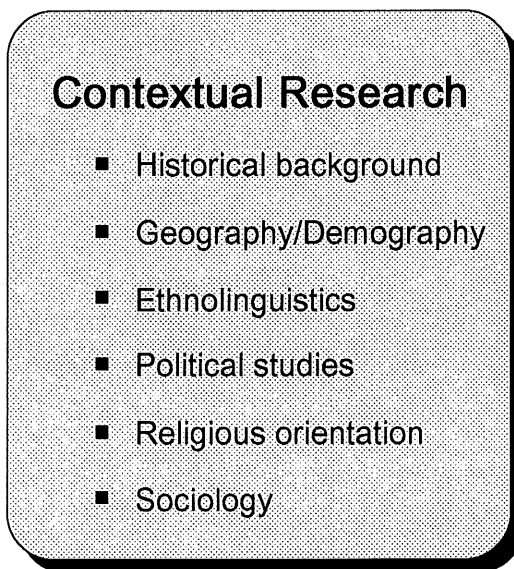
We divide the areas of study into three general categories of information which are of interest to OC: contextual, institutional and internal. Each category includes a broad range of other fields of information. Within each category there are specific areas of information which provide answers to the common questions being addressed by OC research.

OC seeks to work in countries with a noticeable openness to the gospel or where openness to the gospel is anticipated. OC seeks to work in nations where there is a church capable of reaping the harvest. However, the ripeness of the field and the maturity of the church vary significantly from one OC field to the next. Consequently, the information being gathered on each field will differ.

The Harvest Field (Contextual Study)

The purpose of contextual research is to discover information and insights about the national social environment which have a bearing on the growth of the Church. Almost anything in the environment can affect responsiveness to the gospel. So almost any area of study is relevant here: history, politics, economics, religion, sociology, attitudes, lifestyle, social psychology, geography.

Communication theory has taught us the importance of understanding our audience. Attitudes and values surveys are an extremely helpful tool in gaining understanding of the audience we hope to reach with the gospel. Section four of this manual is an introduction to audience research.

Contextual Research

- Historical background
- Geography/Demography
- Ethnolinguistics
- Political studies
- Religious orientation
- Sociology

Another very important area which is coming into focus is the reality of spiritual warfare. We are involved in a spiritual battle. Research and prayer are key sources of intelligence.

Out of the knowledge acquired by the study of the social context, new directions in ministry may be uncovered. The results of contextual studies may lead a team to redirect their efforts or to make modifications to existing ministry objectives making them more effective in their ministry. Most of OC's efforts in the area of contextual study will be library research to survey existing literature or interviews with knowledgeable Christian leaders. Taking a census, writing a history, doing an

ethnographic study are generally beyond the scope of OC's resources. But public libraries, university libraries and government offices are full of such information.

The Harvest Force (Institutional Study)

The purpose of institutional research is to provide an accurate understanding of the Church itself. The Church's condition affects how well the harvest can be reaped. Information about the Church as an institution will indicate what resources the Church has or needs to develop in order to increase the harvest.

Institutional research involves understanding the Church's past and present ministry. The items of interest here include the size, location, distribution, and the strength of the Church. It is important to get beyond a mere description of the church and to discern the reasons for growth or non-growth.

Institutional Research

- Church history
- Numerical growth studies
- Denominational studies
- Missionary presence
- Christian education
- Geographical distribution
- Leadership
- Directories
- Missionary Sending
- National Church goals

OC is committed to the study of monocultural church growth which has to do with denominations and local churches. Studies of various evangelism, discipleship, and church planting programs and their effectiveness are typical of this type of research. OC is also committed to the study of crosscultural church growth (emerging missions, two-thirds world missions) which has to do with mission agencies. The study of both is necessary in gaining an accurate picture of the harvest force and the readiness of the Church to make disciples of all peoples.

Internal Research (OC Team Ministry Evaluation)

Through self-evaluation of our ministry we obtain an assessment of our effectiveness in reaching our objectives. Ideally, this evaluation precess occurs at each administrative level (home office, area offices, and resident teams) on a quarterly basis. It takes the form of quarterly progress reports on the ministry objectives of each Team, Area or Home Office department.

Internal Research

- Methods
- Resources
- Networking
- Effectiveness/impact
- Objectives
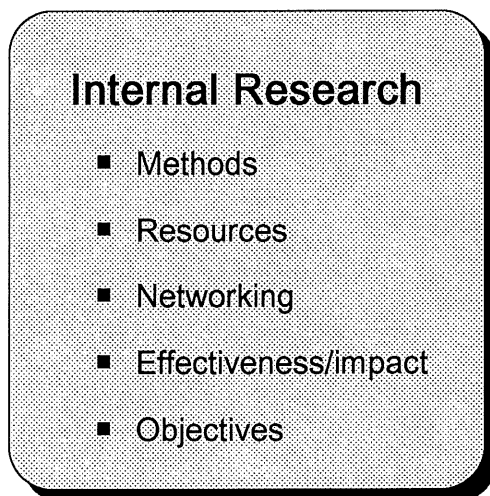
Besides this tracking of progress on objectives, a team may pursue a more in-depth study of one of its ministries. Examples of such studies would include reader surveys for periodicals, and follow-up surveys for participants in seminars, congresses or conferences which the team has lead. These instruments can be more than just an evaluation form filled out on the last day of the conference by the participant. They involve following up several weeks or months later to see if there was really any tangible impact that could be ascribed to OC's involvement.

Research is also useful in discerning the actual impact of the methods used by the team. It can help improve the way a team operates from year to year.

Integrity without knowledge is weak and useless, and

Knowledge without integrity is dangerous and dreadful.

- Samuel Johnson 1709-1784

The Development of an OC Team and its Research

While OC desires that each team and area office have a full time researcher, it may be a long time before that is a reality. In the meantime the research function can be accomplished by any team.

OC recognizes three levels of team development:

> **Level One** - a country which is being considered for resident team ministry. During this period the Area Office research department and the Home Office provide information sufficient to initiate the objective process.

> **Level Two** - a newly deployed team or a team which has been established for a while but is just beginning to incorporate research into its setting of objectives and evaluation of ministry. Initially the object will be to formalize a general assessment of the state of the harvest and the state of the church. In the case of an older team, veteran team members will have significant input along with information gleaned by a researcher.

> **Level Three** - a team has been firmly established and research is fully integrated into the team processes. Research then concentrates on refining its ministry objectives and effectiveness. Results from research efforts will suggest which ministries should be eliminated, which should be added, which should be modified and how they should be modified.

Relationships and Responsibilities

In general, **Resident Teams** decide upon and carry out research projects recommended by the team. There needs to be a balance between research projects focused on the national church and those focused on team effectiveness. Copies of all reports or articles produced by the team should be forwarded to the Area Office and to the Home Office. Occasionally resident teams may be asked to assist the Area Office or the Home Office in some research project they are doing. If significant effort is anticipated for a request originating from the home office or area offices then sufficient lead time must be given so that field teams can set objectives and plan accordingly.

The **Area Offices** have a monitoring and evaluation function. They receive reports from resident teams and serve as consultants. With reports from the teams in their area they can keep apprised of events and findings relevant to the churches in their area. Area offices also will collect information pertinent to its needs regarding impact ministry and networking among resident and non-resident countries in their area.

The **Home Office Research Department** has two primary functions. The first is to serve the resident teams in the areas of training, consulting, developing and supporting the field research function. The second is to serve the President and the mission in general by helping to monitor and evaluate the objectives of the fields, area offices and Home Office departments and by carrying out specific research projects as requested. In addition, the Home Office Research Department assist the Vice President of Fields in his assessment of field objectives, in tracking field objectives and achievements and in producing annual reports and objectives reports.

> *"A simple man believes anything,*
>
> *but a prudent man gives thought to his steps."*
>
> *Proverbs 15:15 NIV*

Elements Of Church Growth Research

This quote by the father of the church growth discipline indicates that counting and analysis can be a very profitable thing.

> The church is made of countable people and there is nothing spiritual or non-spiritual in counting them or not counting them. Men use the numerical approach in all worthwhile human endeavor: industry, commerce, finance, research, government, invention and a thousand other lines of enterprise and derive great profit and much of their stability in development from continual measurement. Without it, they would feel helpless and blindfolded... without it, effective administration and accurate forecasts would be impossible.
>
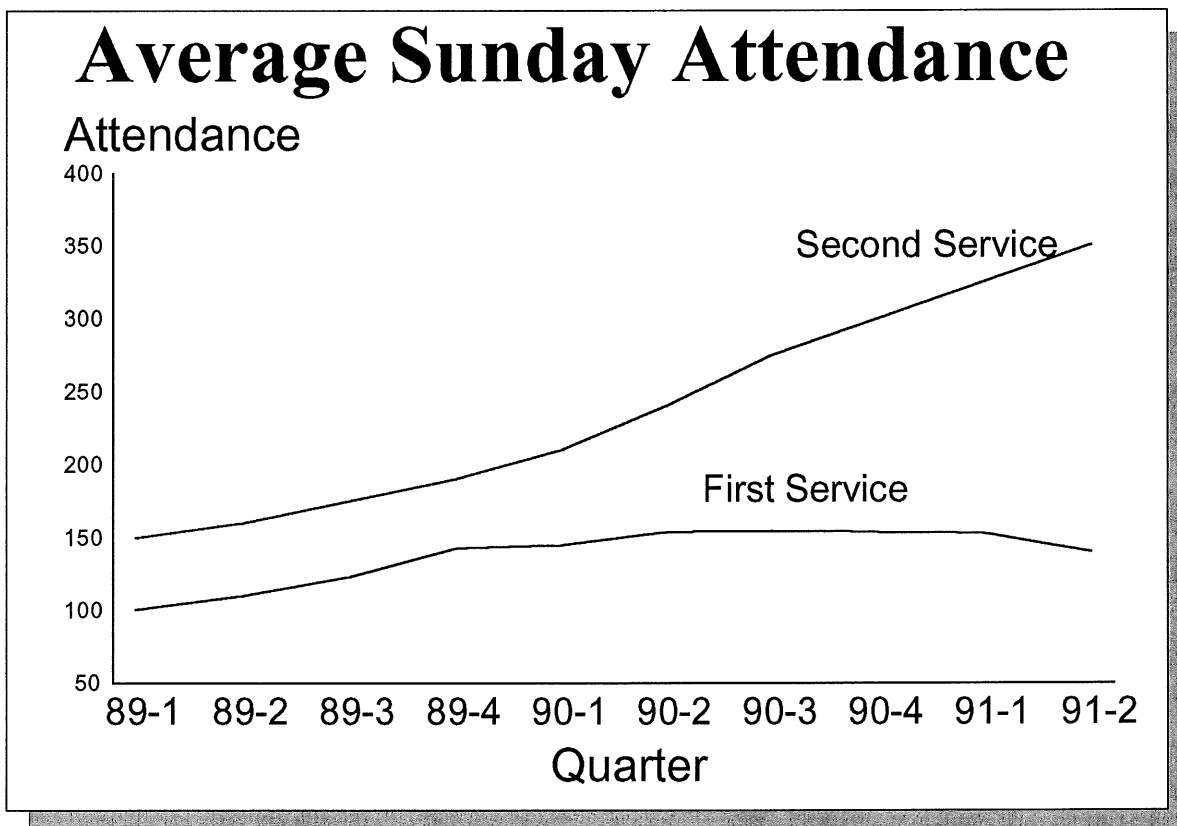> *-Understanding Church Growth,* Donald McGavran

Local Church Growth

Several measures come to mind which are helpful in assessing the health of a local church; attendance, membership, giving, leadership, and outreach. Simple tracking of attendance and Sunday morning worship and other church functions is one way to get a feel for the health of a church. Is it growing? Is it numerically stagnant? Is it in decline? What is the ratio of attenders to members? What about new attenders and members? Are they from other churches (transfer growth), new Christians (conversion growth), or births of members (biological growth). What is happening to reduce the number of attenders: transfers to other churches, attenders/members that become inactive, deaths. What does the growth pattern look like for the last five years?

And what about non-numerical growth: growth in maturity of the believer, growth in leadership ability, spiritual growth? These qualities are hard, if not impossible to measure accurately. But it is possible to measure approximate levels of maturity in a church. For example, it is possible to count the number of people who are capable of leadership in a church and to track that number over time. It is possible to get a feel for at least one dimension of spiritual growth by tracking giving per member over time. These measures are imperfect but still helpful as objective yardsticks which can keep us from false illusions.

The Church Growth Survey Handbook by Bob Waymire and C. Peter Wagner is a step-by-step workbook for analyzing the growth of a local church.

Denominational Growth

Denominations should keep track of number of churches (their membership and attendance), number of ordained ministers, number of outreaches or preaching points, giving, attendance and membership. From these figures come many helpful insights and implications for the denomination. The ratio of outreaches to organized churches will portend future growth in the number of organized churches. If there is an outreach for every church the growth potential is terrific. If there is an outreach for every 20 churches, the denomination is probably not going to see much growth. Denominations would also benefit by keeping track of what programs are having a positive impact. If one church is using a particular church planting strategy and has planted three churches in three years, then denominational leaders ought to know about it.

Average Sunday Attendance

Attendance

Second Service

First Service

Quarter: 89-1 89-2 89-3 89-4 90-1 90-2 90-3 90-4 91-1 91-2

Elements of Audience Research

There are quite a variety of research methods. This manual cannot do justice to them all. The following is a general discussion of some of the issues that would arise in many survey research projects. Concepts in this section are usually defined and related to other concepts but are not developed sufficiently for the researcher to work from without other training or resources. The researcher would need to reference other, more thorough treatments of the particular subject.

Identifying the Problem

There are basically two kinds of research: primary (basic) and applied. Primary research delves into fundamental questions which may or may not have any immediate application. Universities often sponsor this kind of research. Applied research is designed to shed light on specific and practical problems. Applied research is called for when important decisions about ministry have to be made.

Is the Research Project Worth the Cost?

Factors indicating high information value

- The cost of selecting a *bad* alternative or failing to select the *best* alternative would be relatively costly.

- There is a very high degree of uncertainty about which alternative to choose, based on existing information.

- Survey research information is likely to reduce a substantial portion of the uncertainty.

- There is a high likelihood that survey research will be effective at reducing the uncertainty.

Factors indicating low information value

- The cost of selecting a *bad* alternative or failing to select the *best* alternative would be relatively small.

- There is relatively little uncertainty about the decision, based only on the existing information.

- Survey research information will remove only a small portion of the uncertainty about the decision.

- There is no way to be sure that survey research information will be effective at reducing uncertainty.

Doctoral students sometimes involve themselves in topics which require primary research. However, as field researchers, we are most often interested in applied research. We have specific questions about our context, about the church and about the team's ministry. A research project often has its origin when someone who is contemplating a decision says "I wonder ... ". As a researcher it is very important to hold the purpose of the research in mind throughout the entire process. What do I want to know? Why? What decisions rest on the results? The answers to these questions help define the research question and the purpose of the research.

> *If a man will begin with certainties he shall end in doubts:*
>
> *but if he will be content to begin with doubts*
>
> *he shall end in certainties.*
>
> *- Francis Bacon 1561-1626*

When the research question is being defined, it is extremely helpful to do some library work on the topic. Find out what has already been written on the subject. That may lead you to further questions and further refinement of the research question. Write a brief statement of the problem.

Information needs of mission researchers often parallel that of the market analyst and the methods they use often have application in missions. There are a variety of ways to gather current, specific information. Surveys are one of the most popular tools for finding out about attitudes, values, beliefs, lifestyles, and behavior. Participant observation is another popular method. Experimentation is also possible.

Refining the Research Question Once you have a firm understanding of the problem, begin to identify what data you would need to provide the needed information and how you could get that data. Will general information be sufficient? Does it need to be current and specific? General information can be gathered from books and other publications. More specific and up-to-date information often means that an original study be done.

Purpose Statement The final step in identifying the problem is to write out a concise statement of the purpose of the research. What is the decision to be made? Why does the research need to be done? Will this research really shed light on the decision to be made? What specific question(s) should the research answer? How will the research impact the decision to be made? What should the results of the research look like?

A very good way to focus the research is to see if you can come up with a hypothesis to test. The hypothesis is a statement which you set out to disprove or prove by your research. (If you are unable to disprove it then you assume that the hypothesis is correct.) If you can come up with one then you are well along in focusing on the issue you want to research.

During this time of identifying the problem, the researcher must think ahead to the next stage; designing the research project. Budget and time estimates may be required to help the team decide the scope of a particular project. For example, a team may want to know the number and location of churches in Brazil. The researcher has to point out the tradeoffs of various methods of getting that information. A census of all churches will be very accurate and very expensive. A compilation of all denominational lists will be relatively inexpensive but it will also be much less reliable and may not yield any help on the location of the churches or other issues which are of concern. Nor would it identify independent and non-denominational churches.

Making Expectations Clear The written purpose statement which answers the Why? and What? questions should be agreed upon by the client (the one who has the decision to make, often the team in OC's case), and by the researcher (the one who is responsible to carry out the project.) It is very important to spend sufficient time on this very important phase of a research project so that expectations on all sides are consistent and that there is a firm consensus on the need for the research project. Once agreed upon, this statement becomes the guiding document for the project.

Estimating Research Project Costs

It is not difficult to come up with a reasonable estimate of what a research project will cost. The following discussion of costs assumes that some of the basic inputs are already in place: adequate computing equipment, your own salary, a place to work and train your assistants.

Other costs which are likely to be incurred:

Steps in Research Project	Associated Expenses
preliminary interviews, literature search	*travel, phone, postage*
design of research plan, questionnaire	
recruitment of interviewers	*phone, postage, travel*
training of interviewers	*materials, travel costs to training center*
data gathering	*materials, travel, honoraria*
data entry	*hourly wage*
analysis	
reporting	*materials*

In most situations, the biggest costs are going to be associated with the data gathering and entry steps of the research project. To get a good estimate of how much these costs will be, talk to other researchers about their costs for doing similar projects.

Ways to save money:

- Network with other researchers, take advantage of good deals they have found.

- Use volunteers in your data gathering stage if possible. (You will still need to pay for their out-of pocket expenses.)

- Use in-house people to do your data entry. (Do the data entry yourself if you can. Then you can be sure of the accuracy of the work and have a good feel for the data.)

- Produce the report in-house.

- See if other groups who will benefit by the results of the study would help you finance it.

> *If you will have your laws obeyed without mutiny,*
>
> *see well that they be pieces of God Almighty's Law;*
>
> *otherwise, all the artillery in the world will not keep down mutiny.*
>
> *- Thomas Carlyle 1795-1881*

Designing the Research Project

Identifying the research problem deals with Why? and What? Design deals with How? Planning, designing, flowcharting, setting deadlines, and budgeting are the processes of this stage.

From the purpose statement, the researcher decides what information will best fulfill the objectives of the project. This raises several questions. Among what collection of people or things will the information be found? What kind of data is needed from them? How will you get it from them?

Which group of people are you interested in impacting in ministry? This will indicate whom you need to target. Once you have decided who the target group is you will need to begin to figure out how many respondents you need and how to select them.

Sampling These questions bring up the issue of sampling. Sampling is used in most research projects and it is important to get this critical part of a research project done as well as possible. Some basic concepts of sampling will be covered here. The collection of all the objects in the target group is called the population.

Examples of large populations

- people on the earth
- mosquitoes in North Carolina
- fans of Johann Sebastian Bach
- Presbyterian churches in Asia

Examples of small populations:

- albino hippopotamuses
- Presbyterian churches in Beijing
- fans of Arnold Schoenburg
- third graders in a local Sunday School

With a small universe it is often possible to survey every member of the group. However we can seldom collect data from every member of a large universe. Still we can make some reliable statements about a large universe if we observe the characteristics of a carefully selected sub-group of that universe. It's like evaluating a whole pot of soup by sipping a spoonful after stirring the pot. The process of picking that sub-group is called sampling.

The steps in sampling are:

1. Define the universe: What is your target study group?

2. Identify the source of names: Is there a comprehensive list anywhere?

3. Determine the size of the sub-group: How many of the total will you select?

4. Pick the actual members: Which of those on the list will you observe?

If we want to know the opinion of the American public on an issue where do we get the names? The universe is all people in the USA but who has the list? Probably the researcher will have to accept a close substitute for the universal list, maybe the names in all the phone books in the USA or the list of everybody with Social Security numbers.

The size of the sub-group depends on the degree of accuracy you want in your results: the bigger the sample size, the more accurate your estimates will be; also the more expensive the study will be. The method of selecting the sample is also critical to the accuracy of your results. Below is a table which indicates how many respondents or observations would be needed to obtain the various error ranges given that 95 out of 100 samples will reflect the total population within that error range.

Error Range	Number of respondents
1%	9,604
2%	2,401
3%	1,067
4%	600
5%	384
6%	267
7%	196

(This table is from Mildren Parten, *Surveys, Polls, and Samples: Practical Procedures* (New York: Harper, 1950), pp. 305-19. Quoted in James Engel, *How Can I Get Them to Listen* (Grand Rapids: Zondervan, 1980), p 55.)

The number of respondents needed (and therefore the cost of the survey) goes up exponentially as one pushes for a tighter error range. For this reason, you will seldom see survey results with an error range less than three percent.

The method of selecting the actual members of a sample is a highly developed science but the basics are fairly simple. First the members have to come from the universe under study (they need to be representative) and second the members need to be chosen in such a way that every member has an equal likelihood of being selected. Picking the members at random accomplishes this.

There are several types of random sampling. Here are some examples:

- **Simple random sampling** Out of a universe of 300 members of Grace Foursquare Church pick a 10% sample. Write the name of each member on a piece of paper, put the pieces in a hat and pick thirty names out of the hat.

- **n-th select or systematic random sample** Same situation as above but this time randomly pick a number between 1 and 10. Beginning at that number pick every thirtieth name on the list.

- **Stratified random sample** Divide the universe along some important category (age, gender, income, etc). Then use simple or n-th select random sampling within each category.

- **Area cluster sample** Get a map of the area to be surveyed. Divide the map using a grid. Select cells from the grid at random. Select individuals within the cells at random.

Sometimes it will simply be impossible to obtain a sample that is really random. And without the quality of randomness in the sample the researcher technically cannot make statements about the total population based on the sample. In the real world a second best course of action is possible. First, do your best to get a random sample. Then, try and discover any reason why there would be a bias in the sample. If there is no reason to believe that the sample is biased, then just assume it is random. If there is reason to believe that the sample is biased, use logic to figure out what kind of influence this bias might have on your sample.

> **Here is a simple exercise:** A researcher is testing to discover what percent of the population of a province is Christian. He selects, at random, a 3% sample of names from the provincial tax roll and finds that 10% claim to be Christian. Will the researcher be able to say with any degree of statistical confidence that this is the percent for the whole province? What biases may exist? It could be that, the source of names may be a source of bias in the sample. What if the universe of registered taxpayers in that province has a different percentage of Christians that the rest of the total population? Is it likely to be a higher percent or a lower? What if taxpayers primarily live in the city and not the barrio and we know that, in general, urban populations have a higher percent Christian than rural populations? What influence will that have on our estimate of the percent Christian for the whole province?

See *How Can I get them to Listen?* by James Engel for a discussion of non-random sampling methods. *The Survey Research Handbook* by Alreck and Stettle has an excellent discussion of sampling error and bias and the implications of each.

Now for the second issue in designing the project: what kind of data is needed? This should be fairly obvious from the research purpose statement. Does it require

demographic data? geographic data? attitudinal profiles? belief profiles? awareness levels? lifestyle traits? felt needs profiles? or some combination of all these?

Again it will be important for the researcher to think ahead at this point and to sketch out the kinds of analysis she intends to do. That way she will have a thorough knowledge of what information will be required. Getting to the analysis stage and then realizing that a key piece of information has been left out at the data gathering stage has definitely been the cause of serious weeping, wailing, and gnashing of teeth. Think ahead and be sure to gather all the data you need for the analysis to come.

> *Where observation is concerned, chance favours only the prepared mind. - Louis Pasteur 1822-1895*

Finally, what data gathering method will best obtain the data? Generally there are four ways to gather data: Observation, Interview, Survey,and Experiment.

Observation (Also called participant observation). This is accomplished by the researcher using her senses and recording the phenomena she observes. This method is commonly used by anthropologists and missionaries when they set out to learn about a culture. They immerse themselves in the situation and hope that their presence doesn't affect the phenomena they are trying to observe.

Interview In this method the researcher may have a questionnaire but there is less structure. Questions arise from previous answers. Tangents are entertained. Interviews can be one on one or with a group. Focus groups are basically group interviews.

Survey This is perhaps the most widely know and used method of formal data gathering. In this method a questionnaire is devised and administered to the target sample. It can be administered by an interviewer who asks the questions and records the answers or it can be self-administered; meaning that the people in the target sample fill out the questionnaire themselves.

Experiment This is the most elaborate method of gathering data and requires the most stringent controls. In an experiment the target sample is divided into two groups; a control group and an experimental group. The experimental group is subjected to some stimulus and the control group is not. Observations are taken on both groups to determine if the stimulus had any effect on the experimental group. For example: Do OC's church growth seminars have any effect on the growth of the churches whose pastors attend them?

> ### Essentials for good Survey Questions
>
> Will it yield relevant information?
>
> Is it clear and unambiguous?
>
> Does the respondent have the information?
>
> Is the respondent willing to answer it?
>
> Does it bias the respondent by the way it is worded?
>
> Does it bias the answering of subsequent questions?
>
> Is is logically related to other questions and have a natural flow?
>
> Has it been pre-tested?

Interviews and surveys involve the use of a questionnaire. The questionnaire is a carefully devised list of questions which elicit from the participants answers which bear on the research question. This is an essential tool in the survey research process and therefore needs to be carefully designed and tested before it is implemented on the sample group. An excellent resource for questionnaire design is *Handbook of Survey Research* by Alreck and Stettle.

Anecdotal data Anecdotal data are simply stories which one hears. For example:

> Once a missionary came across a tribe who were Christians
> even though no missionary had ever lived there. The elders of
> the tribe said that one day a Bible in their language fell out of
> the sky. They read it and all accepted the Lord.

Anecdotal data is everywhere and it is tempting to believe a story if it corresponds to something we'd like to believe. But researchers are generally like the disciple Thomas, skeptical. And rightly so. Anecdotal data should not be ignored but it is very important to weigh the source of these stories carefully. Stories for which you cannot track down the source or whose source is questionable are very suspect and should not be used as evidence to support any finding at all. Stories from reliable sources can be used to supplement the researcher's thinking, to support a hypothesis or serve as a counterexample.

Any good missionary will be constantly hearing, collecting and weighing stories and reports from many sources in the field. This informal data gathering can be valid and valuable depending on how objective the missionary is and on how reliable and accurate the sources are.

Analyzing the Data

The purpose of data analysis is to discern the factors and causes which underlie the phenomena we observe. Why are these churches growing while the others are not? Why are some conference participants motivated to change their behavior and others not? Why is this people group comparatively receptive to the Gospel while the other is not? Why do some people drop out of church after a certain period while others do not? Why is this denomination able to plant churches in a given area while another is not?

Describing how to do data analysis is not easy. There is really no recipe to follow. There are some basic techniques and principles to learn. There are some pitfalls to avoid. But beyond that there is just the task of careful and meticulous thought and imagination. There is no formula for that.

It is important, at this stage, to recruit the help and opinions of insiders in the population under study. Their observations will come from the world-view of the respondents. This may yield explanations quite different from those of an outsider.

Functions and Randomness The purpose of a research project is to discover the causes of a given phenomenon. Some phenomena are so closely related that one can exactly predict one variable if he has knowledge of another variable. If I know that a jet is traveling at a steady 500 miles an hour, then I also know that in three hours that jet will cover 1500 miles. This is called a functional relationship; the distance traveled is a function of the speed.

Most phenomena we observe, however, have an element of randomness which obscures any functional relationship which may exist. For example, there is some relationship between a person's height and their weight. But it is not a functional relationship. Sampling and statistical techniques have been developed to help the researcher see through the randomness and to discern if there is some underlying relationship between variables.

Dependent and Independent Variables The variable which a researcher has set out to understand, say church growth rate, is called the dependent variable. Other variables which are thought to influence it, such as receptivity of the people, the various methods of evangelism used, the availability of trained leadership, the underlying spiritual realities, are called independent variables. The researcher's hypothesis is that church growth "depends" on these other variables. The intention is to find out how significant is the influence and in which direction is the influence of these independent variables on church growth.

Measurement of Social Phenomena One of the more interesting problems of social research is the measurement of social realities. It is one thing to measure how many calories of heat is required to bring a beaker of water to a boil, it is quite another to measure the impact of economic class on religious commitment. How can religious commitment be measured? Another problem arises when definitions are not clear. How can we estimate percent evangelical when the term evangelical means different things to different people?

Researchers are forced to devise indicators which approximate the measures which they are really interested in. An indicator for religious commitment might include church membership, church attendance, tithing or some combination of these as a proxy for "religious commitment."

The problem of unclear definitions can be addressed by the researcher clearly specifying his meaning of the terms he is using. In the case of defining evangelical, the researcher may avoid a theological definition by listing denominations who are included within the evangelical population. There will always be disagreement about who is and who isn't an evangelical but the researcher cannot let that deter him from getting the information needed.

Explanatory and Extraneous Variables It is important for the researcher to keep in mind that his survey or experiment will not be performed in a laboratory where conditions can be perfectly controlled. There will be many factors which may influence what happens and may even thwart the purpose of the research. The researcher first hypothesizes which variables have influence on which other variables. These independent and dependent variables are called explanatory variables. They are the object of the research project.

In addition, he must anticipate what extraneous factors may be at work. Some of these extraneous factors can be accounted for, some cannot. For example, in a study to test the hypothesis "women have a different degree of religious commitment than men" the explanatory variables obviously include sex and an indicator of religious commitment. But are there other factors which need to be accounted for? How about age, education level, social class or birth order? These things can be accounted for simply by obtaining measurements about these factors for each respondent. But what if their is some significant influence stemming from nearly forgotten childhood experiences. How could those be accounted for? They could not. In the case of such uncontrollable extraneous factors the researcher may treat them as randomized errors, part of the sampling error.

Categorical and continuous variables Variables can be of two types. A categorical variable can take on a finite number of discrete values. A continuous variable can take on an infinite number of values.

Categorical Variables	Continuous Variables
gender	age
religion	temperature
occupation	growth rate
membership	salary

Sometimes continuous variables are transformed into categorical variables. For example, age could be transformed into a categorical variable with discrete values indicating 0 to 5 years, 5 to 10 years, etc.

Independent and dependent variables can be either categorical or continuous. Care should be taken to use the right statistical technique depending on what kind of variables are being used to predict what. (See Alreck and Stettle for more on this.)

Qualitative and Quantitative analysis It is possible to distinguish qualitative and quantitative analysis. Quantitative analysis extracts information from numerical measurements of the sample. Counting, averaging, comparing, tabulating and the use of any statistical technique are examples of quantitative analysis. Quantitative analysis requires interpretation. Interpretation of quantitative analysis gets into qualitative analysis. Qualitative analysis has to do with the discovery of patterns, paradigms, categories and relationships. Qualitative analysis is built on quantitative analysis.

> *There are three kinds of lies:*
>
> *Lies, damned lies and statistics.*
>
> *- Mark Twain 1835-1910*

Some data gathered using observation or interview will probably not be amenable to quantitative analysis. Instead, the researcher will need to call forth objectivity and clear thinking and the guidance of the Holy Spirit as she attempts to see through the evidence to the categories and relationships underlying the phenomena in question.

For example, in a study of 10 growing churches in Manila, a researcher may have notes from ten interviews with the respective pastors of the churches. There may be some tabulation possible but since the sample is so small it is unlikely that any statistical inferences could be made. There probably won't be much quantitative work possible here unless members of the church were surveyed. Still, it will be possible for the researcher to notice commonalities between the ten churches: their programs, their pastors, the demographic profiles of the congregations, other features. The existence of patterns will suggest the presence of causal relationships. These causal

relationships are what we are looking for! (These churches grew *BECAUSE* the pastor was a charismatic, powerful preacher). Often these patterns suggest further questions and hypotheses which can be followed up on.

A note of caution: It is very hard to prove the existence of a causal relationship. Often all we can prove is a correlation between the supposed cause and its supposed effect. In the above example we could not really say that *THE* reason that the churches grew was the preaching of the pastor. Perhaps it was some other factor which was present but which we missed in our analysis. What about the growing churches with comparatively weak preaching? To prove that it was the preaching one would probably have to design an experiment to test this hypothesis. Very tough to do!

However, even if we can't prove a causal link between two phenomena, the mere fact of correlation can be an important finding. Just be careful not to say, "A caused B." Instead, say, "A seems to be associated with B."

Quantitative Data Analysis Data gathered using surveys or experimentation requires the use of quantitative analysis. Quantitative analysis is the domain of statistics. A statistic is a single number which captures important information contained in a whole bunch of other numbers. For example, the average is a single number which captures the central tendency of a large group of numbers.

Steps in quantitative data analysis:

1. Cleaning the raw data

2. Categorizing and coding

3. Data entry

4. Tabulation and application of statistical methods

Cleaning the raw data Before any analysis begins, the raw data has to be edited. This entails checking to see if all the questions have been answered? Are the answers clearly indicated? Are there any duplicates? Are there missing values which need to be filled in? Are there any answers so far out of line that they should be thrown out? If it is pretty clear that the respondent misunderstood the question, the answer is invalid and should be left out.

Categorizing and coding This involves identifying the classes into which each answer for each categorical question will fall. The set of categories which make up possible answers should be exhaustive, it should be mutually exclusive and should represent only one dimension or characteristic. Be careful about allowing bias to enter as responses are assigned to catagories.

```
┌─────────────────────────────────────────┐
│   Examples of data categories:          │
│                                          │
│   ■ gender: male, female                 │
│                                          │
│   ■ religion: Muslim, Buddhist, etc      │
│                                          │
│   ■ in school?: yes, no, part time       │
└─────────────────────────────────────────┘
```

If computers will be used to tabulate data, it may be necessary to assign a code for each category for each question. The document which shows the meaning of the codes is called the codebook.

The codebook can be prepared after the pretest of the questionnaire and updated if necessary after the questionnaires have been filled out.

Data entry In large projects a computer will be essential. Data entry is the process of encoding answers from the questionnaires into a computer file to facilitate analysis. This needs to be done carefully since errors can easily creep in at this stage. The data should be printed out and verified to assure that the actual answers from the questionnaires are encoded correctly!

It is very helpful to decide on the method of data entry (for example: which software you are going to use) before completing the final form of the questionnaire. Test the form for ease of data entry in addition to testing it with the target audience.

Tabulation and application of statistical methods Tabulation is the process of finding out how many of the observations fall into the various categories. For example:

Example of tabulation: Question #5: In school?:

Category	total
yes	25
no	10
part time	15
total	50

Cross tabulation is often very helpful in discovering patterns in the data. For example:

Example of cross tabulation: Question #5: In school?:

Category	boys	girls	total
yes	8	17	25
no	9	1	10
part time	5	10	15
total	22	28	50

From this cross-tab it would appear that girls tend to be in school more frequently than boys. This hypothesis could be tested by using the chi-squared statistic.

Since missions research seldom has extensive numerical data to work with, exotic statistical methods are seldom needed. A good understanding of elementary statistics is usually sufficient. A solid understanding of means, medians, modes, minimum, maximum, range, standard deviations, the normal distribution, skewness and chi-squares are a good beginning. There are many good books on statistics which can provide an understanding of these. Any good bookstore will have a section of books on statistics. A basic introductory book on statistics will cover all the topics mentioned here.

Significant Figures It is important not to imply a high degree of precision and accuracy by the use of many figures after a decimal point when it is not justified. One may be able to calculate a people group's level on the Engle scale to four significant figures but the instrument and the scale itself surely do not warrent such precision!

Reporting the Results

Research done by busy missionaries often gets bogged down at the reporting stage. The results are in. The findings have been found. The implications for the decision have been communicated informally. The job of writing up the results looms laborious and long. Actually, it is not necessary to write up a full report on every project undertaken. But certainly the bigger projects, and the projects which are likely to have wide appeal need to be written up so that others can benefit from the research too.

Since OC type research is usually applied research there is an assumption that the project was done because a decision needed to be made. For this reason the report should be written with the decision makers in mind. Technical language should not be

used in the body of the report. The emphasis should be on presenting the findings and recommendations clearly and succinctly.

Reports customarily include the following major sections:

- executive summary

- introduction

- methodology

- data analysis

- recommendations

- appendices

Executive Summary This first section of the report is the most important and will likely be the only part that gets read by most people interested in the project. It should be a summary of the entire report but focusing on the findings and their implications for the research question which prompted the project in the first place. This section should be two to four pages long and two is better than four.

Introduction The purpose of this short section is to state plainly the research question and the specific goals of the research project.

Methodology This section narrates the steps taken in the project. It tells how the sample was taken, how the questionnaire was designed, and how the data was analyzed.

Data Analysis Here are reported the results of the tabulations and statistical methods, if any. Graphical presentations beat tables by a mile. Bar charts and pie charts are good for indicating simple tabulations. Line graphs are good for showing growth rates or trends. Cross tabulations can sometimes be presented in three dimensional graphic form.

These charts and graphs should help the reader grasp the primary points in the results of the study. Don't complicate the main points here. If you want to report more detailed tables and charts put them in an appendix.

Presentation of these charts and tables will naturally lead to a discussion of the findings and the implications of the findings.

Recommendations This is the researcher's time to shine. You should know more about this project and what it means than anybody else. In this section goes your recommendations and your rationale based on the study for those recommendations. As in all science, findings and implications should be stated in a tentative manner and as the opinion of the researcher.

Appendices If a questionnaire was used in the project, it should be included in the appendices. Tables too detailed for the report but of some importance should be included here.

Annotated Bibliography

Market Research

Alreck, Pamela L. and Robert B. Stettle.

The Survey Research Handbook (Homewood, IL: Irwin, 1985) This is the most thorough treatment of survey research and is an excellent resource if you expect to do these kind of projects. It is plainly written and contains lots of examples and samples and checklists.

Barna, George

The Frog in the Kettle (Ventura, California: 1989) This book is a great example of what can be learned from surveys.

What Americans Believe: An annual Survey of Values and Religious View in the United States (Ventura, California: 1991) This book is full of graphs and analysis which communicate clearly what the Americans think and believe about God, church, work, leisure, truth, and more. A great model of discerning the times.

Marketing the Church (Colorado Springs: NavPress, 1988) Barna brings a fresh perspective from his marketing background to the issues of church growth. This book applies marketing theory and principles the local church.

Engle, James.

How Can I Get Them to Listen (Grand Rapids: Zondervan, 1980) This is an excellent little book on the basics of survey research. It covers in greater detail, the principles discussed in the third section of this manual. It has lots of examples and helpful hints for people working in developing countries.

Contemporary Christian Communications: It's Theory and Practice (Nashville, TN: Thomas Nelson Publishers, 1979)   An excellent introduction to communications theory as well as help for motivating conversion and spiritual growth.

Motz, Arnell, Editor

Reclaiming a Nation: The Challenge of Re-Evangelizing Canada by the Year 2000 (Richmond, BC: Church Leadership Library, 1990) This book is a compilation of several very helpful studies and articles on church growth issues in Canada. It is a great model of the kinds of research which can be done to stimulate thinking, prayer and action.

Church Growth

Castillo, Met Q.

The Church in Thy House (Manila, RP: Alliance Publishers, 1982) An exposition of the biblical understanding of the Church is followed by a description and evaluation of the phenomena of the Filipino house church movement. Very helpful for the Filipino context and beyond.

McGavran, Donald A.

Understanding Church Growth (Grand Rapids: Eerdmans Publishing, 1970) This book is the grandaddy of them all. It is a must for anyone interested in research and church growth issues.

Montgomery, Jim

DAWN 2000: 7 Million Churches To Go (Pasadena, CA: William Carey Library, 1989) THE book on DAWN. The principles of the DAWN movement are clearly explained and many examples are given. More good material for teaching about church multiplication and whole nation strategies.

Sjoberg, Gideon and Roger Nett.

A Methodology for Social Research (New York: Harper & Row, 1968) This book deals with some of the theoretical issues raised in studying things as amorphous as social phenomena. Scholarly level of discussion.

Wagner, C. Peter.

Your Spiritual Gifts Can Help Your Church Grow (Glendale, CA: Regal Books:1979) As the title implies, this book elaborates what the gifts are, distinguishes them from talents and describes how they fit into church growth.

Leading Your Church to Growth (Ventura, CA: Regal Books, 1984) The subtitle is "The Secret of Pastor/People Partnership in Dynamic Church Growth" This is a book for pastors and change agents who what to see their local church grow. A standard text in church growth.

Strategies for Church Growth (Ventura, CA: Regal Books, 1987) Subtitled: "Tools for Effective Mission and Evangelism" This book makes practical the theory of planning strategies for church growth. There are sections on goal setting, doing research, planing for effective evangelism and mission. Lots of good material here.

The Church Growth Survey Handbook (with Bob Waymire) (Milpitas, CA: 1984) This is a step by step handbook to apply to data from a local church.

Spiritual Warfare and Research

Dawson, John

> *Taking our Cities for God: How to Break Spiritual Strongholds* (Lake Mary, Florida, Creation House:1990) An exposition on how to research, discern and pray for urban areas. "Our cities are the keys to winning the world for Christ. They are encumbered by staggering problems and opposed by cosmic spiritual forces, yet these vast urban centers hold millions of people whom God loves." (from the back cover.)

McAlpine, Thomas H.

> *Facing the Powers: What are the options?* (Monrovia, CA, MARC:1991) An examination of the Reformed, Anabaptist, Third Wave and Social Science traditions regarding their explanations and methods of dealing with the supernatural.

Otis, Jr., George

> *The Last of the Giants: Lifting the Veil on Islam and the End Times* (Tarrytown, NY, Fleming H. Revell Company, 1991) An interesting look at the 'restricted access' countries and the history of Islam. " Well-documented, well written and truly fascinating... One of the first efforts to explore the world of spiritual darkness in a global context... A major and valuable contribution to an extremely important subject." (from the back cover)

Wagner, C. Peter

> *Spiritual Power and Church Growth* (Altamonte Springs, Florida: Strang Communications Company: 1986) This book analyzes the factors which are present in the rapid church growth of the Pentecostal church in Latin America.

Statistics

Arkin, Raymond

> *Statistical Methods* (New York: Barnest Noble Books, 1970) A good first - book on statistics. Loaded with examples.

Appendix A - Guidelines For Submitting A Case Study

The purpose of the case study digest. There is no way to anticipate all the varieties of research which OC fields *might or could* do. To try and write a manual to encompass all these possibilities would require a very thick textbook. Instead, I would like to begin a collection of studies which have actually been done by missionaries on the field. These studies can be catalogued and abstracted to make them easily referenced by other researchers. Samples of survey instruments, spreadsheets, project manuals, even training materials from all over the world would then be in each researcher's hand. Occasional updates of new case studies could be added.

In order to facilitate this sharing of case studies. Here are a few quidelines for making your research project easily understood by others.

- **What was the purpose of the study?** How did you or the team become aware of the need for the study? What was the basic research question? This will generally be explained in the background section.

- **How did you develop the study?** What research tools did you decide to use? Why? Did you test it before implementation? What adjustments were necessary? This will be described in the methodology section.

- **What's your evaluation of the study now?** What were you pleased with? What would you do differently? Did the findings have any impact on the team or the church? This will be covered in the last section: evaluation.

In the case of a thorough, well documented research study, (which we often don't have time to do on the field) these questions will be answered in the introduction of the final report. If you want to submit a study which does not answer these questions, please take the time to write out a preface which will.

Besides answering these questions, include both a hardcopy and a diskette of the report (or spreadsheet, or survey or whatever). The document can be written in any IBM word processor. We will take care of converting it here in the home office. (If we ever get a Mac we'll be able to read those diskettes too). Some editing of the case study will be done but you will be able to approve the final version before it is distributed.

A word of understanding It will take extra effort on your part to turn your research report into a case study. I know that after you have knocked yourself out to develop the tool or to finish the report, you probably don't want to go back and write a preface which answers the above questions. But by doing this you can potentially multiply your effectiveness many times over. Others will see your work and be stimulated to adapt it to their context or else develop some other tool which yours inspired. I think that this comes under the heading of **spurring one another on to good works!**