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Methodology Guide for Research in Literacy Training

The Joint Federal-Provincial Literacy Training Initiatives (JFPLTI) program

Direction de la formation générale des adultes (DFGA)

Québec

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Preface

In accordance with the Joint Federal-Provincial Literacy Training Initiatives (JFPLTI) program, the Direction de la formation générale des adultes (DFGA) of the Ministère de l'Éducation du Québec is pleased to present this methodology guide to accompany your literacy training research projects.

We hope this guide will help increase the quantity and improve the quality of research conducted in this area. The research projects financed by the JFPLTI program are aimed at improving techniques used in real-world situations. Research provides an opportunity to further delve into aspects of literacy training that we hope to evaluate or update. The choice of a research project thus demands serious reflection on the problem to be resolved, available resources, the energy that one can dedicate to the task and the context in which the research will be conducted. We have designed this guide to facilitate your research adventure; it should help you to better plan your research and to conduct it with precision—and flexibility!

This guide is one of the DFGA's responses to the recommendations formulated in the assessment report of the JFPLTI[1]* program. This report highlighted certain shortcomings of the research projects conducted over the last few years, notably the small number of projects and the fluctuating quality of research, particularly in terms of methodology. This is why we have decided to offer this tool to literacy training organizations whose members conduct research within the framework of the JFPLTI program.

We trust that you will enjoy reading this document. May it make your research projects more fulfilling and useful for your literacy training tasks!

Alain Mercier
Direction de la formation générale des adultes

* Diane Charest. *Faire le point sur nos actions. Bilan des initiatives fédérales-provinciales conjointes en matière d'alphabétisation 1993-1997*. Québec: Ministère de l'Éducation, Direction de la recherche, 1999.

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Introduction

"Conducting research is not a luxury, but a necessity, especially when it comes to human interaction. By means of this process, we can change our ways of seeing things, thinking and acting. Furthermore, research greatly contributes to the emergence of new techniques aimed at changing our communities."

Janine Legros, Groupe Alpha Laval, Laval (Free translation)

Time spent doing research is precious. It is the time to stop and think about one's past and future activities, to delve into the questions or problems encountered in the course of one's work. The idea of doing research is often uninviting: such an undertaking requires a lot of energy and time, but most of all, the task seems very complex! However, many people who have done research on literacy training have attested to the positive impact of their work on their teams and on their practice. In other words, although research sometimes seems overwhelming, it often produces very desirable results.

A study of literacy training organizations[2] allowed us to delve into the need for research, as it was summarily described in the assessment of the JFPLTI.[3] The people consulted had expressed the desire to have more support in developing good methodologies for conducting research projects, in particular, a simple and practical tool to accompany the process.

We therefore offer you this methodology guide, designed primarily for members of school boards and independent community-based literacy training groups. Our goal is to offer you a concrete support tool to accompany you through the steps of conducting research on literacy training, from identifying a situation or a problem to putting your results into action. In order to promote the learning or development of new techniques, the tone of this guide is direct and pedagogical. Because we attempted to explain generally complex principles in common every-day language, the guide may appear incomplete or simplistic to those who are already familiar with research methodology. However, the document contains many bibliographic references for those who wish to further explore the subject.

2. This study was carried out in September and October 1999 in about thirty school boards and independent community-based literacy training organizations, who had completed research activities over the last three years.

3. Diane Charest, *Faire le point sur nos actions. Bilan des initiatives fédérales-provinciales conjointes en matière d'alphabétisation 1993-1997*. Québec: Ministère de l'Éducation, Direction de la Recherche, 1999.

Research projects conducted under the JFPLTI program deal essentially with applied research. The need to do research generally arises from a situation observed in the course of one's work; the results of the research must, in principle, serve to improve literacy training practices. For this reason, the guide places emphasis on finding new techniques that have practical applications, rather than adopting a theoretic approach.

The guide presents the methodological steps necessary to carry out a quality research project. The steps are applicable to all research projects, both large and small. Whether one undertakes a vast study of a large population sample or just a small 10-person inquiry, precision is always of the uttermost importance.

However, this guide is not a magic recipe to be followed blindly. Each research project is unique and must be adapted to the subject of study and to the context. This guide therefore presents a set of principles, reference points, suggestions and warnings that you can use and adapt throughout your research project.

The guide is structured in the following manner. First, to avoid any confusion, we have prepared three tables that define the main terms and concepts commonly referred to in the research field. Then, we describe the research project as a series of 9 steps:

1. Identifying a situation or problem
2. Planning the research
3. Reformulating the project
4. Examining the question in detail
5. Choosing a method
6. Gathering data
7. Compiling, analyzing and interpreting the data
8. Writing the research report
9. Putting the results into action

These steps take into account the requirements and constraints of the JFPLTI program. Next, you will find a list of Internet sites and commented references that will facilitate further research. The guide concludes with a bibliography of the documents used in its development. The majority of the indicated documents are available from the Centre de documentation sur l'éducation des adultes et la condition féminine (CDEACF). Please don't hesitate to consult them.

Finally, we have attempted to offer you a user-friendly document that is easy to read and consult. The quotations and personal accounts are an integral part of the text. We have highlighted tips, advice and important points by placing them in boxes. We have also integrated comments concerning documentation searches as some of its methodologies differ from those of field research. At the end of each step, you will find a reminder of the principal elements of the step. All this facilitates selective reading and allows you to use the guide according to your specific needs.

Happy reading!

A Few Definitions

> *"To recognize that science is based on conventions is to admit that one cannot pretend that there is only one scientific methodology any more than one can pretend that there is one unified social reality. Because the questions with which social workers are dealing are complex, we must approach them in various ways."*
>
> Robert MAYER et al. *Méthodes de recherche en intervention sociale,* (Boucherville: Gaëtan Morin éditeur, 2000), 1, 2. (Free translation)

According to the definition provided in the terms and conditions of the JFPLTI program, a project falling into the category of research consists of "carefully following a systematic process of gathering and analyzing data to resolve problems or find answers to questions concerning literacy training. Ultimately, the results of the research should be reused in support of improved literacy training techniques and services.[4] " The JFPLTI research project, therefore, is a result of concerns linked to practical aspects of literacy training work, and such research projects fall into the category of applied research.[5]

Applied research is based on the realities and questions encountered by literacy training practitioners while working in the field. This type of research, whether aimed at gaining new knowledge or deepening existing knowledge, leads to a better understanding of one's work and a more effective practice. Applied research projects, therefore, result in new knowledge for resolving problems or for making changes or improvements in individual practices or the practice of an organization. They also allow those working in literacy training to perfect their knowledge by giving them a systematic means to reflect on the way in which they conduct their work. In other words, applied research provides time for reflection, leading to the development of new and better operational strategies in the field of literacy training.

The Principal Types of Applied Research

There are several types of applied research and numerous terms used in this field. Furthermore, the research types are not mutually exclusive and often intersect. How does one establish a firm point of reference? To simplify matters, we have chosen to provide you with a table containing the five principal types of applied research that generally meet the needs of the literacy training profession: action research, evaluative research, participatory research, action science and documentation research.[6]

4. Direction de la formation générale des adultes. *Programme des initiatives fédérales-provinciales conjointes en matière d'alphabétisation. Cahier des modalités de mise en œuvre du programme 2000-2001*, Québec, Ministère de l'Éducation, 2000, p. 10.

5. Contrary to applied research, the goal of fundamental research is to increase the theoretical knowledge in a particular domain, without having a practical objective.

6. Of course, there are other types of action research, such as feminist and militant research. For more details on these approaches, consult: Robert Mayer et al., *Méthodes de recherche en intervention sociale* (Boucherville: Gaëtan Morin, 2000), 287-325.

Table of Research Types

Definition	Characteristics
Action Research *(also called "action research-training")* Action research represents the intersection of two worlds: the theoretical and the practical. By the combined efforts of practitioners and research specialists, this meeting takes place in the context of an organization's operations and consideration for its operating conditions. This type of research is driven by the need to link theoretical work with the practical, reflection with action. Thus the organization improves its practice by gaining new knowledge and the researcher gains a deeper knowledge of how things operate in the field. It is thus an equal and reciprocal exchange of knowledge.	Action Research: • links practice with theory, transforms spontaneous actions into well thought-out practices • is generally carried out by a team of practitioners and one or several research specialists • provides research participants with two-dimensional training: practical and theoretical
Evaluative Research Evaluative research is based on the analysis of a population's needs or practices. On the one hand it deals with evaluating the difference between what is hoped for and what is actually obtained. On the other hand, it deals with analyzing the explanation of this difference in order to correct it. The goal of evaluative research is, therefore, to evaluate the effectiveness and pertinence of actions.	Evaluative research can take place: • before an activity (feasibility study, needs analysis of a population, etc.) • during an activity (evaluation of the teaching, of the approaches, etc.) • after an activity (analysis of the results or program effectiveness)
Participatory Research Participatory research is mainly based on the active cooperation of the targeted population in all research phases. The entire process, from problem definition to results, is a team effort between the practitioners and the targeted population. This type of research favours the participation of those who are the subject of the study, taking into account their perception of the subject studied and the proposed changes. The interaction between these individuals and the research team is the central element in this type of research.	In a participatory research project: • those targeted by the research participate in all of its phases • there is a reciprocal training dimension for those participating in the project. This type of research integrates perfectly into a democratic organizational structure

Table of Research Types (cont')

Definition	Characteristics
Action Science *(also called "ontogenic research" or "reflexive reasoning")* Action science is a form of research that engages practitioners as both researchers and the objects of the research. These individuals undertake research on their practice and retroactively analyze their actions as teaching professionals. The goal of this type of research is for the practitioners to perfect their actions, discourse, techniques and professional skills.	In action science, the practitioners: • study their own practices • must rigorously collect data on their pedagogical activities • must, in principle, obtain the cooperation of a third party to help them with the analysis
Documentation Research Several organizations specializing in literacy training conduct documentation research. This type of research is often used to acquire information about a population or a particular theme. It consists of doing in-depth research on the literature and data available on the subject in order to resolve a problem encountered in practice. The goal of documentation research, even if based on theoretical aspects (works and data), is to study the facts, concepts and results as documented by others in order to understand a situation or resolve a problem with which one is faced.	Documentation research: • is based on gathering information from literature and the field (specialists, statistics, interns); • is complete in itself, because its goal is to improve one's skills; it is not just a matter of producing a bibliography or compiling a list of documents or experiences; • assumes the analysis and synthesis of the collected data; • requires, as in all research, methodical, rigorous information collection.

The Research Method: Quantitative or Qualitative?

Applied research is based on either a quantitative or qualitative approach or a mixture of the two. We also speak of a quantitative or qualitative "approach" or "perspective." In principle, the choice of research method logically flows from its pertinence to the subject and questions of interest. Too often, the term quantitative is associated with a large sample, lots of numbers and statistics, while the term qualitative is synonymous with small samples, descriptions and individual accounts. Although all this is true, other elements distinguish the two approaches. The research methods table presents a brief description of the qualitative and quantitative research methods.

Table of Research Methods

Quantitative Method

Analyzing measurable data

Quantitative research usually measures social phenomena, to obtain precise data on a large number of people. Quantitative methods favour comparison and statistical analysis of large data samples. These methods are useful for attaining a high level of precision on specific points or for analyzing a large amount of material.

In quantitative research, one aims to discover the frequency and relations between the variables to establish trends. A quantitative sample often consists of a large number of people, but it can also be composed of more modest numbers. In principle, the results can be generalized for the population as a whole. However, to do so, one must use very sophisticated sampling techniques and analysis, which is generally easier in the context of a major study benefiting from the efforts of a team of specialists.

Qualitative Method

Analyzing descriptive data

Qualitative research deals with meaning and observation of social phenomena. It concentrates on the observation of social phenomena and the meaning that people attach to the actions and to the social reality they have built. In this sense, qualitative research is more involved with the content of the data studied than with its statistical values. It is oriented toward people's accounts and their perceptions of the situation in question.

Qualitative research is often based on small samples that form a good representation of reality. There is, however, no intention of producing generalized results for the entire population.

Combined Method (Quantitative and Qualitative)

Analyzing measurable and descriptive data

Numerous research projects combine the two research methods. According to several authors, the two methods are not incompatible.* A research project combining the two approaches is concerned with both the observation of social phenomena and the interpretations of those concerned as well as the statistical analysis of specific observed data in order to establish trends or more generalized statements.
A combination of quantitative and qualitative tools is therefore required.

* For more information on this subject, consult the following document, which notably treats the dichotomy or continuum between the quantitative and qualitative aspects: Michelle Lessard-Hébert, Gabriel Goyette and Gérald Boutin, *La recherche qualitative. Fondements et pratiques*, 2d ed. (Montréal: Éditions Nouvelles, 1996), 21-25.

The Tools

The tools, i.e. the methods and means of collecting data, will depend on the research method chosen. Here, we present three principal means of collecting data: survey, observation and documentation analysis. Each mode is supported by a variety of tools: open-question or closed-question surveys,[7] outlines for open or directed interviews, observation charts, etc. Here again, the choice of tools will depend on your research goals and the type of information you want to gather.

All the modes and data collection tools have strengths and weaknesses; you must, therefore, choose the one that best corresponds to your objectives. Nothing prevents you from using several different tools or even developing a hybrid.

The following table provides a brief description of the three data collection modes and their most frequently used tools.

Table of Data Collection Methods and Tools

Data Collection Modes	Data Collection Tools
Survey An active data collection mode, the survey involves direct interaction between the person conducting the survey and the respondents. The survey can be conducted orally (interview or life story) or in a written format (questionnaire). It can contain specific questions (multiple-choice questions) or give more freedom of expression to the respondent (semi-directed or open interview). It can be conducted individually or in a group setting. It can be adapted for both large and small sample sizes.	**Open-Question Questionnaire** The open-question questionnaire somewhat resembles an open or semi-directed interview outline. It solicits relatively long answers from the respondents and generally requires data compilation by means of content analysis. This type of questionnaire is well suited to qualitative research. **Closed-Question Questionnaire** The closed-question questionnaire is a tool perfectly adapted to studies of large population samples or quantitative investigations. It results in systematic and standardized answers from the respondents. **Open or Semi-Directed Interview Outline** The open or semi-directed interview outline lets you obtain detailed information by letting the respondents freely express themselves concerning certain themes or their personal experiences. It is well suited to the study of the respondents' perceptions and to the analysis of their discourse and reality. This tool requires a qualitative content analysis approach; the interview can be held individually or in a group setting.

6. A closed-question questionnaire offers predetermined answers, while open questions solicit freely formulated answers from the respondents.

Table of Data Collection Methods and Tools (cont')

Data Collection Modes	Data Collection Tools
	Directed Interview Outline Structured a priori around predetermined questions, the directed interview outline resembles a closed-question questionnaire. It allows you to obtain information on specific elements or to verify a particular problem.
	Life Story The life story allows you to gather information on a person's experiences, by means of his or her perception of the significance of events. It can be biographical (an entire life story) or thematic (a single period or aspect of the person's life). The tools used resemble an open interview outline. Life stories are generally collected by means of private interviews, which allow for content analysis as part of a qualitative approach.
Observation A relatively passive mode of data collection, observation allows you to learn about a reality in its actual context. Its goal is to gather descriptive information on facts, attitudes or types of communication in the course of an organization's normal activities. It requires an acclimation period, so that the observer's presence will not have a bearing on the actions of those being observed, which may reduce the accuracy of the gathered information.	**Participatory Observation (Journal)** Having no pre-prepared charts, participatory observation lets you confront reality with a clean slate and does not impose a predetermined study of certain elements, as in a questionnaire. By their presence and participation in the given environment, the researchers can better understand the environment and progressively integrate themselves into it. Data will generally be recorded in journals.
	Observation Chart The observation chart is established at the beginning by choosing precise elements (facts, words, actions) that will be noted during the observation period. This chart is more systematic and takes into account the frequency of observed elements; it assumes a quantitative as well as qualitative compilation of the observed data.

Table of Data Collection Methods and Tools(cont')

Data Collection Modes	Data Collection Tools
Documentation Analysis Documentation analysis involves gathering and analyzing data, from both literature and the field, on a specific situation or theme. This data collection mode is used in documentation research. However, it is common to all research projects during the detailed study of the subject in question (Step Four). The documentation sources can be specialized studies, policy statements, addresses, administrative documents, statistical studies, testimonials from specialists, etc.	**Note Cards** One generally uses note cards to update and summarize information gathered from documentation. Using cards, one will also compile information gathered in the field or obtained in meetings with specialists. The researcher must record the key points of all gathered information. By combining the information on these note cards and implementing a selectively qualitative approach, the researcher will be able to analyze the results of the documentation research.

The information presented in this section was taken mainly from the following documents:

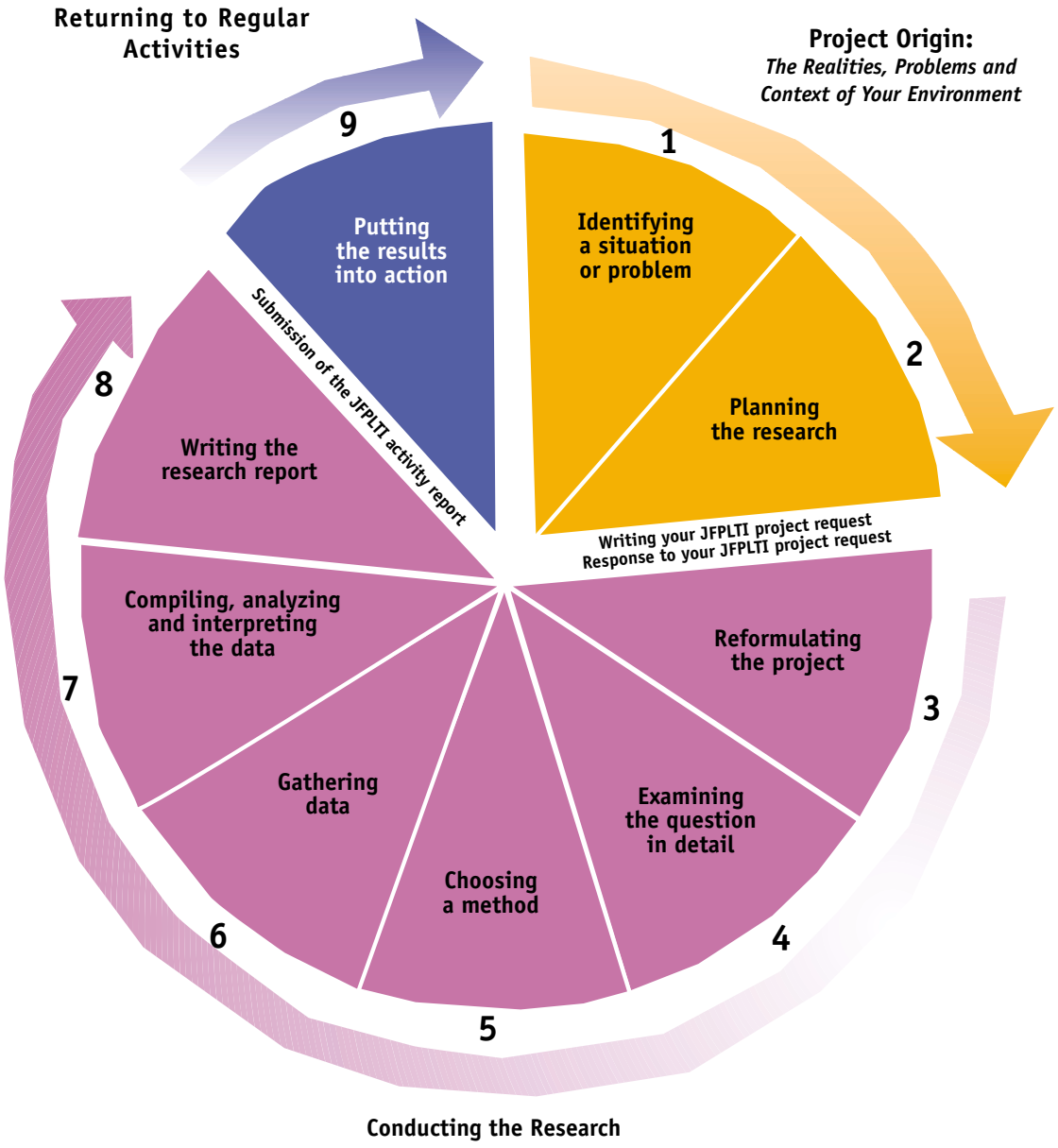
- Jan Barnsley and Diana Ellis. *Research for Change: Participatory Action Research for Community Groups*. Vancouver: Women's Research Centre, 1992.
- Margot Désillet, Marie-France Paradis and Carmen Allison. *La recherche dans le domaine de l'alphabétisation*. Québec: Direction de la formation générale des adultes, 1996.
- Michelle Lessard-Hébert, Gabriel Goyette and Gérald Boutin. *La recherche qualitative. Fondements et pratiques*, 2d ed. Montréal: Éditions Nouvelles, 1996.
- Robert Mayer and Francine Ouellet. *Méthodologie de recherche pour les intervenants sociaux*. Montréal: Gaëtan Morin, 1991.
- Robert Mayer et al. *Méthodes de recherche en intervention sociale*. Boucherville: Gaëtan Morin, 2000.
- Jean-Marie Vand Der Maren. *La recherche appliquée en pédagogie. Des modèles pour l'enseignement*. Collection Méthodes en sciences humaines. Brussels: De Boeck Université, 1999.

These documents are available for consultation at the CDEACF.

The Process of Developing a Research Project According to the JFPLTI

"Resolving everyday problems and conducting research is really about the same thing; the only differences lie in the level of awareness, the effort applied to systematization and the degree of precision in the generalizations."

G. De Landsheere, *Introduction à la recherche en éducation* (Paris: Colin-Bourrelier, 1976), 18. *(Free translation)*



Step 1

Identifying a Situation or Problem

"All research projects are built on an intriguing question."

Jacques Chevrier. "La spécification de la problématique," in Benoît Gauthier, *Recherche sociale: de la problématique à la collecte de données* (Sainte-Foy: Presses de l'Université du Québec, 1997), 52. (Free translation)

In a social intervention context, research projects are always born of questions to which you wish to find answers in order to improve your skills or the services you offer. Research projects have thus become the method of choice to find answers to questions or to resolve problems.

Is Research Really the Best Way to Resolve Your Problem?

The first step in the process is, of course, to ask yourself if a research project will be useful for your work. Not all problems and difficult situations engender research projects. It is important to verify if such a project is pertinent to the situation in question. Other solutions are often less expensive, more effective and produce results more rapidly. Perhaps you already have everything you need to resolve your problem. Sometimes, it only requires a team discussion or a meeting with other specialists who have experienced the same situations to come up with creative solutions. You can also consult research projects to find new paths to explore and new plans of action. However, should these methods fall short, that is when your own research becomes necessary and meaningful!

Conducting research requires time, energy and money. It is, therefore, important to consider the pertinence of your project in light of the current conditions in your organization. In order to conduct valuable research that will have positive effects on your organization, you need to be able to count on a solid team and stable finances. If you are confronted with personnel changes, financial crises or personal conflicts within the organization, it is preferable to postpone the research project to a more opportune time.

Some Reasons for Conducting Research

You must examine the facets of your work and identify a situation that requires attention. Here are a few examples of situations or problems encountered in the literacy training field that could be subjects of research.

- *The encountered problem is persistent and the current methods no longer sufficient*

For example: The rate of registration for literacy courses is diminishing from one year to the next. The traditional recruitment methods are no longer effective. Moreover, the requirements of shelters and aid organizations have been modified, putting new restrictions on adults who want to go back to school. Services offered and recruitment methods must, therefore, be completely re-evaluated. This could be a research theme.

- *There are ongoing questions to which you have not yet found satisfactory answers*

For example: For years, you have worked with poorly educated parents of young children and have daily noted their concern for their children's scholastic success as well as their feelings of inadequacy regarding their role in the educational process. You wish to better understand the role of these parents and their contribution to the children's success in school. How do they go about helping their children with their school work? What works and what doesn't? What you have read in books on the subject doesn't quite fit with what you have observed in your situation. Here is an occasion to dig deeper by doing some research.

- *A new situation*

For example: For some time now, your literacy training organization has been inundated with young people under 25 years of age who, until now, have not taken advantage of your services. As your current literacy training techniques seem less suited to this population, you feel the need to adapt your activities accordingly. What literacy skills do these young people need for their social and professional development? How do they view the literacy training process? What are the consequences of their past scholastic experiences? Here is a subject of research.

As you can see, there is no lack of examples of research subjects. Your project will come out of a particular situation or a question arising from your organization's history and activities.

Defining the Situation or Problem to be Studied

You have examined the preceding questions, thought about your work and decided to embark upon a research adventure. You have a vague idea of your subject, but you must firmly define it before writing your JFPLTI project request. The situation for study must be one of substance. Further defining your subject presents an occasion to formulate all your ideas on the subject in question in order to establish the scope of the project and limit your options.

To further define your research project, you must determine your research goals and objectives.

- *What do you want to know?*

This important question will lead you to better define your subject. Take, for example, your concerns regarding the young people under 25 years of age. What aspects of their case do you actually want to explore? Their past scholastic experience? Their motives for returning for training? The techniques you should use with them? The results they obtain after a year of literacy training? As you can see, there is no lack of questions! From among all the possible questions, you must choose one or two major elements, which will eventually become the heart of your research project.

- *Why do you want to explore these elements?*

This question cannot be separated from the first. In fact, the subject you are going to explore must lead to improvements in your practice. Here, it is a matter of identifying as clearly as possible the goal of your research: what you plan to correct, to do or to implement based on the results obtained. Of course, your goal must be pertinent and realistic!

It is preferable to have all members of your organization actively participate in identifying the problem and in defining the goal and objectives to be attained. Let us emphasize that identifying a problem requires intuition, creativity and sensibility on the part of those individuals who experience the situation in the field. In the course of this process, there will be discussion, debates and taking sides. There is nothing easy about defining a problem; it is an arduous task. However, working as a team is the best way to ensure that you will achieve your objectives and transform your practice.

Tip for defining your project

Here is an exercise to help define the research project. Try to write a few lines describing your research project as conceived in Step One of the process. Your text must contain the subject of the research, the question(s) that interest you and your goal. To obtain a summary of each individual's position, all team members should do this exercise following a group discussion. This exercise will help you clarify your research subject, give it direction and, above all, establish its boundaries. It will also facilitate the formulation of research questions, which is a part of Step Three of the process.

As you are at the beginning of the process, it may be difficult to imagine all the aspects of the problem you plan to study. Don't worry, this too is a part of the research project! However, it is always easier to work from a well defined idea, even if it must be modified later.

At the end of Step One, you should have:

	OK?
• concluded that the best way to meet your needs is to conduct research	☐
• determined that your organization has the means to embark on this adventure	☐
• identified a problem or a situation to study	☐
• defined your research goal and objectives	☐

You can now go on to the second step, where you will think about the process and plan your research project.

Step 2

Planning the Research

"When community members have ownership of the research process, there's a better chance the research will be relevant to them. If it's relevant to them, they'll likely be more willing and able to act on it.

"In our approach, community participants define the research questions and control the research process. They are involved in figuring out what the research process will be. They make the decisions."

Jan Barnsley and Diana Ellis, Research for Change: *Participatory Action Research for Community Groups* (Vancouver: Women's Research Centre, 1992), 11.

Research projects, like all JFPLTI projects, require a division of responsibilities, activity planning and adherence to a tight time schedule. Now is the time to organize the elements necessary for your research, develop your research schedule and plan your budget. This preparatory step is crucial to the success of your research project. Good planning will result in a more precise request for financing according to your determined needs and in a more accurate timetable for completing each step of the project.

You must ensure that the amount of time, energy and money that your organization is ready to devote corresponds to the scope of the project envisioned. It is better to undertake a smaller project and do it well than to embark on a more ambitious project and fail! However, if you feel your organization is equal to the challenge, you can undertake a longer more arduous research project, one that could spread out over more than one year. In this case, you must determine the forms of cooperation that will be necessary, the research calendar and the budget required by a long-term project.

In this section, you will find the principal elements that must be considered in appropriately planning the tasks, time and budget involved in your research. You may, of course, have to modify your calendar, as well as certain other choices, depending on the amount received from the JFPLTI program (Step Three). Furthermore, numerous unforeseen elements could require that you re-examine your initial plans. It is, therefore, important to consult your plans regularly to see if you are on schedule and to make any necessary adjustments.

Who Will Participate in the Research?

From the beginning, it is important to determine who in the organization will participate in the research process. The ultimate goal is to transform the practice; therefore, it is preferable that the directors, teachers and learners take part in the research in a capacity in keeping with each individual's role. The research thus becomes an integral part of the organization's work, a type of catalyst for reflection and collective decision making. The more the practitioners and learners are engaged in the research, the more they will be involved in the outcome. Such teamwork leads to the acquisition of new knowledge and skills, provides a sense of accomplishment and creates tighter interpersonal bonds between the participants.

The role of each individual must be determined along with the most appropriate means and time to ensure their participation. Several forms of continuous or occasional participation are possible. Examples are:

- by participating in information meetings or discussions about the research
- by reading and checking the texts written on the research topic
- by recruiting respondents
- by training others to conduct interviews among the chosen population sample
- by giving advice about the data collection tools
- by participating in the analysis of obtained results

The important thing is to think about these aspects in advance and to plan definite means (including budgetary resources) to ensure that everyone participates.

Deciding Whether or Not to Form a Partnership or Cooperative Team

The terms and conditions of the JFPLTI program favour forming various types of partnerships or teams to help literacy training organizations accomplish their projects. These projects include research. You might want other organizations to become associated with your project because they have expertise in your area of study, or because their area of activity allows them to participate in certain phases of your research. Finally, you might want these organizations to become partners in cases where their participation will result in a greater impact in the field. Here again, it is important to have well defined research goals and objectives.

Any kind of association is possible; what is important is to define its nature. Other organizations can share the research responsibility with you by fully participating in all the project phases, from defining the project to implementing changes based on the results. These organizations are referred to as partners. Other more occasional forms of cooperation can be established, such as to aid in recruiting individuals for interviews or to define your subject of study. In this case, we are talking about various forms of cooperation.

Here are some examples of organizations that may occasionally cooperate with you in your research or become your partners:

- an elementary school, if the goal of your research is to improve the level of cooperation with poorly educated parents concerning the scholastic follow-up of their children
- a community library, if you are studying the habits and behaviour of individuals having weak reading skills, with the aim of better understanding their needs and encouraging them to read
- an organization whose mandate is to help individuals to enter the job market, if you are interested in how to help individuals completing literacy training to enter the job market

It is important to consider forms of partnership and cooperation at the onset of your project, because your decisions will affect the steps and cost of your project, elements that must be included in your JFPLTI request.

Will You Need Help?

> *"Conducting an action research project is not an easy task for those with little or no experience in this area.*
>
> *"The expertise of Concordia University professor Ghislaine Guérard, her pertinent advice, her ability to explain research methodology, her willingness to share her experiences, her facility in building trusting relationships with her partners, her caring ear, her warm and welcoming attitude, have established a working environment that is positive, productive and, above all, one that puts our minds at ease.*
>
> *"Thanks to the invaluable cooperation of Ms. Guérard, the team of Un Mondalire was able to successfully complete its action research project."*
>
> Un Mondalire, Pointe-aux-Trembles. (Free translation)

Certain practitioners, through their studies or experience, have acquired the skills needed to successfully complete research projects in the literacy training field. However, many of you are relatively unfamiliar with research methodology. Forming cooperative associations, whether continuous or occasional, with specialists having expertise in conducting research could increase the effectiveness of your research activities. The amount of cooperation required would be a function of the size of your project and your financial resources. Here are a few examples of what a research consultant could do for you:

- help define your subject of study by suggesting pertinent reference sources or by providing training sessions;
- help define the appropriate research method for your questions and objectives;
- help determine and develop the data collection tools;
- help analyze the results.

Taking into account your expertise, the scope of your project and your budget, it is important to decide, before presenting your project to the JFPLTI, if you will need the assistance of a specialist, whether on a part-time or full-time basis. You will have to determine the nature of the assistance required and decide who could provide it as well as define the lines of responsibility between this person and your organization. If possible, it is preferable to approach this individual to ensure his or her interest and availability.

If you are considering charging the specialist with conducting the entire research, you must make sure that the person has a good understanding of your project, goal and objectives. It is also very important to set up several follow-up meetings with this person, so that you and your organization feel a part of the process. Much too often, we have seen organizations give research contracts to specialists due to lack of time and not follow up on the progress of the project. If this happens, the research report may not meet your expectations and may end up on the shelf collecting dust rather than producing the results initially envisioned.

Who is the ideal consultant?

The ideal specialist to accompany you in your research has the following characteristics:

- strong practical research skills
- good understanding of the method you plan to choose
- good understanding of the literacy or literacy training subject in question
- respect for your organization's right to control the process
- good understanding of the research context and the situations and questions that arise from it
- is a good facilitator, not controlling
- is conscious of his or her own strengths and limitations
- clearly explains the research methods to the uninitiated
- demonstrates the necessary flexibility

How to negotiate and draw up a contract with a consultant

It is important to properly define how the research responsibilities will be shared between the consultant and your organization:

- clearly articulate the type of assistance you desire and your reasons
- ask the consultant why this work is of interest to him or her
- discuss who will be responsible for doing the research
- determine the research tasks of each person and decide who will make the decisions
- ask the specialist to explain the research methods he or she has used in the past
- agree on the fees to be paid to the specialist and the project deadlines
- discuss the manner in which you will work together

Source: Jan Barnsley and Diana Ellis, *Research for Change: Participatory Action Research for Community Groups* (Vancouver: Women's Research Centre, 1992), 20, 21 and 33.

Think About Your Research Method

It is important to have a good overall idea of what the research will entail in order to be able to plan your calendar and budget accordingly.

Once you have found a subject of interest, you will have an initial idea of the data that must be collected: from which population sector, on what scale, etc. Furthermore, having reviewed the information presented in this guide, you will have a good idea of the work required in each step. This will facilitate budgetary planning. For example, you must choose, from those available to you, the data compilation technique(s) best suited to your needs. Your choice will affect your budgetary needs. Perhaps you will need to record the interviews and have them transcribed afterward; you may want to videotape classroom observation sessions; etc. All these eventualities must be figured into your project plans, if only in a preliminary manner.

You must ask yourself the following questions:

- Which method are we considering? Qualitative or quantitative?
- From which population sector are we going to collect data? Who are these people and how many are there?
- Which tool will we need?
- Who will collect the data?
- Who will compile them?
- Will we use database software or will we compile the data manually?
- Should interviews be required, will they be recorded?
- What materials or hardware will we need?

The answers to these questions will lead to expenses that must be involved in your grant request. These questions will also help you to develop your project calendar as well as to better organize your time and budget.

Do You Plan to Publish Your Results?

If the answer is "yes," you must determine in advance the time, work and finances necessary to publish an official report. Writing a public report is not at all the same thing as composing an activity report. The form of your final report should be decided before presenting your project to the JFPLTI. A practical research project can be pertinent even if it only results in the production of an internal report, instead of a widely distributed publication. You can compile your results, analyze them, present them and discuss them with your team according to your own objectives. This process will naturally lead to a written report, but not of the scope required for publication.

However, it is a good idea to publish your results if your want to enrich the literature in your field or to make your conclusions available to a wider public. Practitioners who have experienced the same situations as you will certainly be interested in reading your report. Should you decide to publish your

results, you must figure into your project calendar the amount of time that will be necessary for such a task and estimate the costs.[8] You must plan for:

- a report director, who has both the desire and necessary skills for the task
- a continuous writing process at each step of the research project
- revisers who will help you improve the text
- a budget for text revision and layout
- a report production budget based on the number of desired copies

Carefully Plan Your Project Calendar

To ensure a successful research project, it is imperative that you plan the work to be accomplished in the course of the year. In light of the information found in this guide, you will have a good idea of the different steps involved in a research project and will be in a better position to evaluate the time needed for each one. The ultimate goal of your planning is to avoid devoting too much time to the initial steps to the detriment of the latter ones. Each step is important, and, therefore, none should be neglected.

Now is also the time to estimate the amount of time necessary to complete your project. According to the scope of your subject and the tasks to be accomplished (particularly the data collection period), you must determine if you can realistically complete the project within one year or if you should plan it over two years. In any case, your project presentation to the JFPLTI must contain adequate justification for your decision. A well-structured and well-planned two-year project is better than a one-year project botched due to lack of time.

Of course, it is difficult to foresee the exact amount of time that will be required for each step in the process. We therefore suggest that you prepare an initial project calendar that can de modified as necessary in the course of the project.

Your project calendar is one of your most important tools; consult it regularly to ensure that you have enough time to complete each project step.

8. In Step Eight, you will find practical advice on writing your research report.

At the end of Step Two, you should have:

	OK ?
• **planned the level of participation for each member of your organization and identified their specific tasks**	☐
• **evaluated your need for partnership or cooperation with other organizations**	☐
• **defined the forms of outside assistance you will require (consultant, specialist)**	☐
• **decided whether or not to publish your research report**	☐
• **chosen to conduct the research project over one or two years**	☐
• **developed a project calendar and a budget taking into account all the steps outlined in this guide**	☐

You can now write your JFPLTI project request.

For assistance, consult the document distributed by the DFGA: Session de formation continue à l'intention des groupes d'alphabétisation populaire autonomes. La rédaction d'un projet.[9] There, you will find advice on writing your submission, corresponding to the two preceding step—identifying a situation or problem and planning the research. Moreover, it is important to note that the subject to be defined in the JFPLTI project presentation refers to the situation you want to study. Defining the research topic, which you will explore in-depth in Step Four of this guide,[10] is a more exhaustive operation.

Make sure that you provide all the details on your project; the quality of your presentation will determine the acceptance of your project and the amount of your grant. Your presentation must demonstrate your project's pertinence, its real-world value, its coherence and the effect it will have on the problems you purpose to resolve.

9. Regroupement des groupes populaires en alphabétisation du Québec, Direction de la formation générale des adultes and National Literacy Secretariat. *Session de formation continue à l'intention des groupes d'alphabétisation populaire autonomes. La rédaction d'un projet*. Québec: Direction de la formation générale des adultes, May 1999.

10. In the JFPLTI forms, the research topic refers to the situation you want to study, to the context of your research. In the research process, as you will see in Step Four, the research topic refers to the literature review and the collected field data used to formulate the research questions.

Step 3

Reformulating the Project

"Our research project was certainly ambitious, but we were trained and ready to go. However, our grant was insufficient and arrived later than expected, forcing us to redo our entire calendar of activities.

"In the end we were very embarrassed not to be able to produce an analytic report supported by reliable data. We now understand that researchers must accept the possibility of failure."

François Labbé and Lise Pelletier, Groupe en alphabétisation de Montmagny-Nord, Montmagny. (Free translation)

Your JFPLTI project has been analyzed and you have received your grant. You are now ready to embark on the research project!

However, before going any further and embarking on the project, you must first re-evaluate your plans in light of the response to your request, the actual time you have to complete the project and the funds granted. If you received what you asked for—Bravo!—modifying your initial plans will be less arduous. If you have received more than you requested (!), you may decide to increase the scope of your project by adding new perspectives to your data collection and analysis tasks. You may also envision widening the scope of your publication, distribution or result applications.

If, however, you receive less money than you asked for, you must downsize your project accordingly. You must, therefore, re-examine all your plans in light of the new budget amount. Reconsider your goal and objectives. You will have to make some tough choices. You could, for example, eliminate certain objectives, reduce the amount of data to be collected, reduce the number of people to be interviewed or plan a less extensive data processing phase.

At the end of Step Three, in light of the budget received, you should have:

	OK ?
• **reviewed your project's goal and objectives**	☐
• **reviewed the level of participation of the members of your organization**	☐
• **reviewed your need for partnership and cooperation**	☐
• **redefined the form of outside assistance that will be required**	☐
• **reviewed your choice as to whether or not to publish a research report**	☐
• **devised a new calendar and budget**	☐

You may now begin your research.

Step 4

Examining the Question in Detail

"Formulating the research corresponds somewhat to a filtering operation that involves going from general questions to those that are more specific and could be the subject of a study based on the scientific method. It is, therefore, a matter of looking more closely at your study question to situate it in relation to the current state of scientific knowledge and the needs of practitioners. In this manner, the pertinence of your study will become clear."

Robert Mayer et al., *Méthodes de recherche en intervention sociale* (Boucherville: Gaëtan Morin, 2000), 45. (Free translation)

Based on your objectives and your research questions, you must now develop a research topic which explains and enriches your project as formulated in your JFPLTI request. Formulating the research topic is an essential step in the process that will allow you to fully develop your initial idea. This is what will allow you to prove that the project is pertinent to your work. You must closely analyze the situation you wish to explore, improve or change. To accomplish this goal, the research topic must be based on the concrete experience of the organization's practitioners, on the exploitation of the most pertinent data available related to the area of study as well as on information from documentation that explores the same questions.

Here are the four essential phases in defining your research topic:

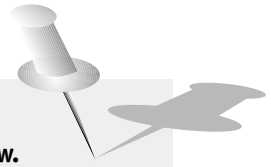
- literature review
- collection of data in the field
- formulation of your research questions
- formulation of your research hypothesis

Literature Review

A literature review consists of consulting the sources of theoretical information already available on the question you wish to investigate: specialized works, articles, research reports, policy statements, etc. Bringing together a corpus of pertinent documentation and consulting information on your area of study are essential to the success of your project. These two elements allow you to determine the current state of scientific knowledge about your subject. This corpus should contain the sources you find most significant, i.e. those that either shed light on your concerns or justify them.

In addition to enriching your own reflections on your research, the literature review also allows you to confirm the pertinence of your project. In fact, you could discover that certain aspects of your research project have already been studied by others. You could also find information that would be useful in your decision-making processes. Moreover, in the course of this step, you will certainly have specific ideas concerning your research to confirm, explore or clarify. Consulting or reading this documentation is an important part of this step, but you will come back to this documentation later to explain or comment your research results (Step Seven).

Documentation research is greatly facilitated when you have clearly defined your subject. Furthermore, you will further refine your subject based on information gained from your reading, which will allow you to select and retain only the material that is directly related to your topic. Six or seven pertinent and well-used references are better than a long list of general works that you hardly ever consult.



Many complementary strategies exist for conducting a good literature review. We will present a few of them here:

- Do a keyword or subject search in your library's catalogue or documentation centre;
- Start by consulting the more general works in which you can find references to more specialized documents in which you will find still more references, etc. (the "snowball" method).
- Remember to consult several types of sources: works, specialized journals, other research or reports, policy statements, etc.
- Do not read the documents in their entirety! Selectively read those chapters or sections that interest you. Consult the tables of contents, indexes and summaries.

You have reached the saturation point in your literature review when you constantly run across the same authors, the information becomes repetitive and your reading brings no new insights. At this point, you can consider that you have enough reference material.

Collecting Data in the Field

You will also need to collect data from organizations and specialists in your field who can clarify and put your subject in context. Contrary to the literature review, this information gathering process is more practical. Here, it is a matter of gathering facts, statistics or experiences that generally come from your field.

You can, for example, obtain more detailed regional or local data on the population of interest (high school drop-outs, unemployed women, poorly educated elderly people, etc.). Organizations such as Emploi-Québec, community organizations, schools and CLSCs often have information that could be useful in your research.

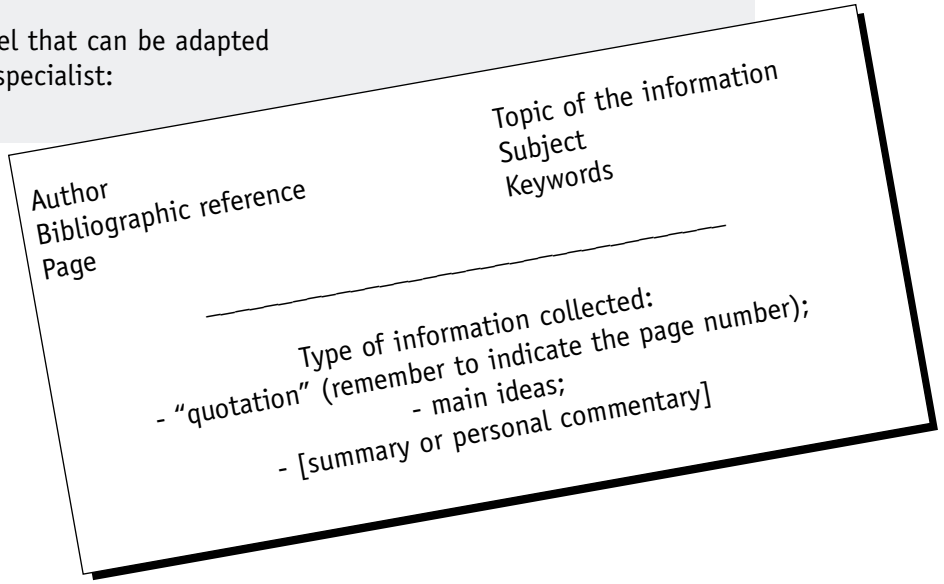
It is also interesting to meet with others working in the field or on your subject of interest (e.g. elementary school teachers, social workers, company personnel). These people will certainly have other points of view and ideas to share that will enrich your own reflection on the subject and help you to further refine the context of your research. Individuals who have experienced the situation that your are addressing are also good sources of information and can function as initial sounding boards for your thoughts and questions.

Tips for Retaining Collected Information

It is important to always keep a written record of the information relating to your research and to file the information as you go. Get into the habit of using note cards to write down important information. The same concept applies to meetings with specialists: transcribe and file the collected information immediately. Remember to rigorously identify the content of each note card (title of the document, name of the person with whom you spoke and the date of the meeting): this will prevent serious hassles when writing your research topic statement.

On each card, always indicate the sources as well as the subject and keywords associated with the collected information. Below this data, write the information that is important for your research in the form of a quotation, summary or personal commentary. Always identify the information with a corresponding code (see the following example), as this will allow you to rapidly know if it is a quotation or not. The more your card is precise and complete, the easier it will be to write your research report.

Here is a note card model that can be adapted for an interview with a specialist:

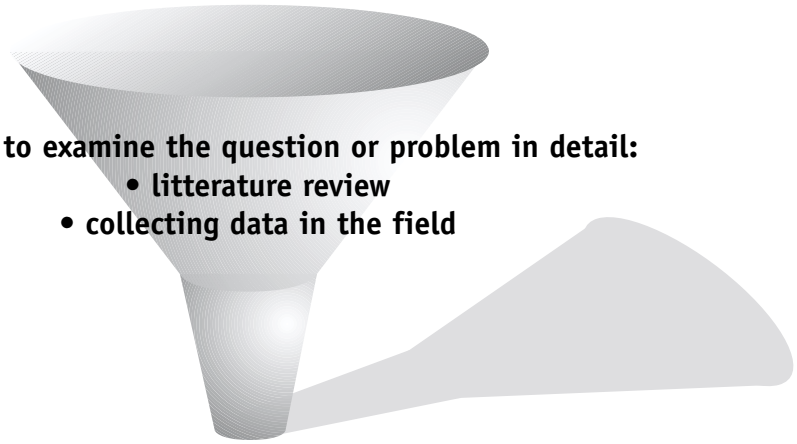


Research Questions

As it is impossible to study a reality in its global entirety, you must define the limits of your research. To do so, you must attempt to reduce a general problem down to a few essential elements, to restrict the study of your subject to one or two aspects. Humility is the key! Defining a research topic[11] requires that you answer some specific questions about your subject of research.

After an overview of the existing theoretical and practical knowledge concerning the phenomenon of interest, you are now ready to define the limits of your research and formulate precise questions to which you want to find the answers. Formulating a research question, therefore, corresponds to a sort of filtering process in which you will start from a general problem and arrive at the particular questions you want to address.

A situation that requires your attention



Steps to examine the question or problem in detail:
• litterature review
• collecting data in the field

Your own questions or research hypotheses

Here are two examples of research questions:

- What are the principal causes of the drop in enrolment in literacy training courses in our organization?

- What are the main factors pushing drop-outs under 20 years of age to return quickly to enrol in adult training programs?

11. It is important to always keep in mind that your research topic does not correspond to the research topic defined on the JFPLTI project presentation form, which is only the statement of the situation you wish to study.

Your research questions will help you organize your investigation. Based on these questions, you will define your method and choose your data-collection tools, your interpretation method and the way in which you write your report. Your research topic, which includes your literature review, the information gathered in the field and your research questions, constitutes the guiding element of your research.

Research Hypothesis

In addition to choosing to concentrate on one or two questions, you can also, if appropriate, define one or more research hypotheses. An hypothesis is a provisional statement that one proposes **to confirm** or **refute** by means of research. In fact, the hypothesis is the anticipated answer to the research question. When the research is structured around an hypothesis, it is centred on proving the hypothesis true or false based on available information.

Practitioners generally have a certain intuition concerning the problem in question, and such intuitions should not be excluded from the research. Initial suppositions are important: they reflect practical experience, which is the basis of applied research. The hypothesis is, therefore, a supposition, born of intuition and experience, which should then be subjected to verification by confronting it with reliable data (achieved by carrying out the next research steps).

Moreover, the hypothesis establishes a relationship between two or more response elements. In this case, it proposes to draw relationships between different elements and phenomena that could explain the problem.

Here some examples of hypotheses:

- The **socioeconomic** and **family** situation of people with little education, particularly in our region, explains the drop in registration for literacy training courses.

- Young people return to register for adult training programs mainly **to obtain a secondary school diploma** and because **they think the work will be easier in an adult program than in a program designed for young people**.

The bolded elements are the variables that we want to explore in detail when collecting our data. The data collection tools must, therefore, be designed accordingly. Note that is it not necessary to formulate an hypothesis—only do so if it facilitates your work.

The questions and the research hypotheses correspond to the analysis framework in that they provide one or more concepts for investigation and relational analysis in order to better understand the initial problem. This will help you structure your analysis and your research report.

As in all the steps, it is important to have discussions with the members of your organization to come up with as many paths to explore as possible. Even if it is the researchers' task to conduct the investigation, the practitioners must be able to express their own opinions about the research questions and hypothesis.

At the end of Step Four, you should have:

	OK ?
• consulted and read the pertinent documents, which you will be using throughout your research	☐
• met with others in your field to refine your subject	☐
• collected pertinent statistics from local organizations	☐
• made cards containing the main ideas of the data obtained	☐
• formulated research questions	☐
• defined, if appropriate, hypothetical responses to these questions	☐
• written the first draft of the chapter on your research topic, especially if your plan to publish your results	☐

You can now choose the appropriate research method.

Step 5

Choosing the Method

"To establish a relationship between the empirical and theoretical worlds, the researcher, whether conducting qualitative research or not, is driven to make several technical choices: an investigation method, one or several data collection techniques and one or more tools for recording data. In addition to acquiring the necessary tools to accomplish the work, the researcher must critically evaluate the chosen methods."

Michelle Lessard-Hébert, Gabriel Goyette and Gérald Boutin, *La recherche qualitative. Fondements et pratiques*, 2d ed. (Montréal: Éditions Nouvelles, 1996), 91. (Free Translation)

After having refined the research questions and developed the research topic by studying the literature and field data, you are now ready to choose a data collection method.[12] This process contains four interdependent elements:

- Refining a Research Approach
- Defining and Constituting the Sample
- Choosing and Preparing Data Collection Tools
- Evaluating the Tool: the Pretest

Each decision concerning the method will affect the rest of the research process, notably the amount of data collected and their analysis. In this chapter, take the time to analyze the consequences of your decisions according to your goal and objectives as well as the available time and resources. Remember the validity of your research largely depends on the clarity and precision of your data collection method. Two fundamental questions will guide you in ensuring that your choices are well founded[13]:

- Will the chosen tool(s) provide the most pertinent data for your subject of study?
- Is there a large enough number of respondents having opinions that are sufficiently varied to furnish the data necessary for a clear and pertinent response to the problem in question?

12. Don't hesitate to consult the section entitled "A Few Definitions," which exploits the research methods and data collection tools.

13. Jean-Marie Van Des Maren, *La recherche appliquée en pédagogie. Des modèles pour l'enseignement*, Collection Méthodes en sciences humaines (Brussels: De Boeck Université, 1999), 140.

Refining a Research Approach

According to the nature of your questions, the objectives of your research and the type of information you hope to obtain, you must choose between a quantitative approach (directive tools, closed-question questionnaires, statistical data analysis), or a qualitative approach (tools allowing free expression, open questions, free observation, analysis of individuals' experiences) or a combination of the two.

A quantitative approach will let you conduct a statistical study **to describe, compile and measure facts, opinions or perceptions**. This also implies that the data to be analyzed is numerical, rather than words or ideas. This method can be useful for covering a large population sample in a short amount of time. For example, using a closed-question questionnaire, you could describe:

- a population's degree of satisfaction with the activities you organized
- the distribution of people according to their motives for registering for a training program
- the principal needs of the population being trained in your organization

A qualitative approach is more concerned with **understanding and analyzing a phenome**non based on individuals' experiences and their perception of the situation. The principal feature of qualitative research is that it favours the point of view of the social actors. There are no pre-determined answers to choose from. These content analyses based on individuals' experiences will generally lead to a data re-organization by subject and category. For example, a semi-directed interview outline could help you to:

- understand people's motives for registering for a training program, according to personal experiences and the job market
- explain the past scholastic experiences of young people enrolled in literacy training
- understand the obstacles faced by poorly educated women wanting to enter the job market

An approach that combines both quantitative and qualitative methods will allow you to analyze a problem by exploring certain phenomena in detail using qualitative means, while measuring other aspects of the situation using quantitative analysis:[14]

"Thus, many research projects have both quantitative and qualitative aspects. The objectives and the materials available will determine the degree to which the project is qualitative or quantitative. [...] What is important is to employ all the means necessary to fully investigate the subject of study and to analyze all its facets. These two main methodologies are now used as a matter of course in the social science field."[15]

14. If the quantitative versus qualitative approach question is unclear, refer to the documents mentioned above, particularly Robert Mayer et al., 2000.

15. Margot Désilets, Marie-France Paradis and Carmen Allison, *La recherche dans le domaine de l'alphabétisation* (Québec: Direction de la formation générale des adultes, 1996), 10. (Free translation)

The choice of research method will, therefore, affect the nature of the sample you will constitute and the data collection tool developed.

Hints for Choosing a Method

It is not easy to decide whether to choose a qualitative or quantitative approach and to evaluate the limits or constraints of each method. To help you with your choice, you can:

- discuss the question with other literacy training specialists in your region who have adopted a method that interests you
- discuss the question with the specialist you hired to have his or her opinion on the value of each approach according to your research goal and objectives
- if you have not hired a research specialist, solicit the advice of someone who is well acquainted with applied research

Defining and Constituting the Sample

This is an important step. It involves determining which people could most help you by answering your questions, according to their knowledge and experience in the domain you want to explore. This is what we call a "sample".[16] You must estimate a number of people to contact that is both realistic and sufficient for providing varied and rich data on the problem under investigation: will you interview 10, 25 or 100 people? That will depend of your goal and objectives, the chosen method and the time and resources available.

For example, if you want to know the literacy training needs of the people in your region, it would be impossible to contact the thousands of adults having less than nine years of schooling living in your area. You could implement a telephone survey using a quantitative approach to reach larger number of people in order to find out their principal needs. However, you will not be able to get as much in-depth information as through conducting personal interviews with a group of 20 people or recording the life stories of 5 people, using a qualitative approach.

Beyond the numbers, it is also important to specify the characteristics of the people you wish to contact. For example, if you want to get information about the possible results of training, it would serve little purpose to choose adults who have only just started a program! If you want to identify the obstacles or challenges faced by poorly educated parents in helping their children with their homework, it would be preferable to contact those people who are experiencing this situation, not those with children of preschool age! Therefore, you must specify certain sample conditions.

16. For more information about sampling techniques, refer to: Robert Mayer and Francine Ouellet, *Méthodologie de recherche pour les intervenants sociaux* (Montréal: Gaëtan Morin, 1991) chapter 9, p 378 - 398.

Moreover, even if you have a small sample, you can expect to attain a certain amount of representation[17] of the general population. For example, if you are conducting a general study in your region, it would be preferable to select a group of people who reflect the aspects of your reality well: urban or rural population, or both; men and women, young and old; etc. Likewise, if you are doing research on the satisfaction of the people registered for a training program, you would select from this group a sample reflecting the diversity of the group, whether it be on the basis of gender, age, nationality or occupation. Still, the criteria for forming a sample will depend on your research goal and objectives.

Based on the above discussion, here are descriptions of some possible samples:

- 10 people under 30 years of age who have been registered in literacy training courses in a school board for at least one year (equal number of males and females)
- 20 poorly educated women who have children enrolled in Grades 2 to 6 of elementary school (if you want to address homework issues)
- 15 specialists who, for at least two years, have been treating adults with mental illnesses; half of these professionals should come from community organizations and the other half from mental health institutions
- 100 poorly educated people who are over 45 years of age and have been working in a specific factory for at least 10 years

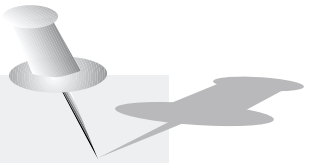
Nothing prevents you from gathering information from other targeted groups in order to vary the point of view of the issue under investigation:

- 15 people in literacy training courses and 10 teachers in this area
- children aged 7 to 12 who are registered in elementary school and their parents
- people who have had a job for at least 2 years and people who have been living on welfare for 10 years

In this case, you will certainly have to create more than one data collection tool, according to the position and particular characteristics of each target group. In order for your data to be as useful as possible, you must ensure that the criteria used to form your samples are sufficiently precise and that the number of subjects is appropriate for the chosen tools.

It is not enough just to specify the characteristics of a sample. You must also find the means to contact these people and solicit their participation. In the case of the people registered in a training program, it is relatively easy to do. However, if you want to reach people with whom you do not normally come into contact, you must devise a way to recruit them. The recruitment notice should be clear and simple. The people must know what they are getting into and expressly consent to participate in the research. They must be allowed to withdraw from the study should they so desire. You must assure them that all the information they provide will remain confidential.

17. Do not confuse representation with generalizability: a sample having characteristics in common with the population studied is said to be representative; a sample whose data and results can be applied and extended to the entire population studied is said to be generalizable.



Hints for Selecting and Forming Samples

Consider the following aspects:

- time available to conduct the research
- number of people available to carry out the study
- type of information to be collected to produce a realistic portrait of the situation in question
- data collection tools selected *
- situation and experience of those to be questioned
- availability of those to be questioned (how and where to contact them, whether they will share their experiences, whether you will need an interpreter)
- their degree of representation and their diversity (whether the experiences of these people will cover a sufficient number of situations relating to your subject)

Adapted from: Jan Barnsley and Diana Ellis, *Research for Change: Participatory Action Research for Community Groups* (Vancouver: Women's Research Centre, 1992), 42-43.

* For example, individual interviews will provide a detailed description of how people reacted to certain situations, but this will require a lot of data compilation time, while a closed-question questionnaire will be quicker to process, but will provide less information on the subject in question.

Documentation research does not require the same type of sample. In fact, in documentation research, the sample consists of a group of documents and field data that will shed light on the research questions. In this case, therefore, what's needed is a tool with which to analyze these materials. This could be a card like the note cards used to record data collected during your reading, interviews, etc. What is important is that your research method be clear and easy to implement in the quest for answers to your questions.

Choosing and Preparing Data Collection Tools

"Your chosen investigation techniques must first and foremost correspond to the type of data you want to collect. You must, therefore, avoid what may appear to be the most reassuring technique, such as the general questionnaire, as well as whichever technique seems to be currently in fashion. Pertinence, however, is not the only criterion. Material, financial and human resources also play an important role in your choice of technique."[18]

18. Robert Mayer and Francine Ouellet, 1991, 41. (Free translation)

When choosing your data collection technique(s), you must consider your goal and objectives, your research questions and your resources. You should try to define both the nature of the tool and the context in which it will be used, without forgetting the projected duration of the data collection process. Whether you use one or several tools, the important thing is to investigate all the facets of the situation or problem in question. For example, the tool chosen could be:

- a 20-minute individual closed-question questionnaire that workers will fill out during their lunch hour
- a 15-minute telephone interview questionnaire (closed-question with one or two open questions to solicit commentary) if the people to contact live far from the organization and you want to avoid travel
- an observation chart in which to record your observations, information and comments gathered during literacy training workshops
- a semi-directed 40-minute interview outline to be used for individual interviews
- a basic structure in which to record about 90 minutes worth of life stories

You must develop these tools according to the method chosen, either qualitative or quantitative. Whether you use the questionnaire or the interview as your data collection tool,[19] always keep in mind that the tool must serve to solicit the individual's responses, which may differ from those expected. Close attention must be paid to designing objective, neutral tools that will not in any way influence the respondents' answers.

As always, there is no magic recipe for developing pertinent data collection tools. Each one has its advantages and limitations; none of them are innately good or bad. Their pertinence depends of the type of research conducted. "The choice must be well thought out: the use of a particular technique implies a detailed analysis of both the research subject and the research context—there are no absolute rules."[20]

19. For more information about these data collection techniques, refer to: Robert Mayer et al., 2000, chap. 4, 5 and 6.

20. *Ibid.*, p. 79.

Hints for Developing Your Data Collection Tool

Here are the main steps:

- decide on the type of information you need (precise data, perceptions, opinions)
- choose a type of tool (directed or open structure)
- write a rough draft of the tool
- re-examine and revise the questions with the help of outside consultants
- conduct a pretest of the tool on one or two people having the same characteristics as your targeted sample (see below)
- refine the tool

A few points to remember:

- make your questions precise and clear
- target one idea per question
- use simple vocabulary and short sentences;
- use neutral terms and formulate questions in a way that will not influence the respondent
- avoid suggestive, ambiguous or imprecise questions

Source: Robert Mayer et al., *Méthodes de recherche en intervention sociale* (Boucherville: Gaëtan Morin, 2000), 45.

* See the section entitled "A Few Definitions" for information on the main data collection tools.

Evaluating the Tool: the Pretest

It is very important to conduct a pretest of your data collection tool using one or two people not in your target sample. In the case of documentation research, you can make changes to your note cards the first time you use them; for workshop observations, you can use a short observation period as a pretest by reproducing the same conditions as in the actual research project.

The pretest will allow you to rapidly detect problems or shortcomings with your tool and to make necessary corrections before starting the actual data collection process. This is also a good way to evaluate the length of the interview, the pertinence of the questions and how the respondents will react to them. Moreover, it is an opportunity for the people who will be conducting the interviews to practice their active listening skills and to display a considerate but neutral attitude.

Remember that the goal of the pretest is to improve your method: the collected material must not be included in your data analysis.

According to the adopted qualitative or quantitative approach, at the end of Step Five, you should have:

	OK ?
• **defined the characteristics of the people to be interviewed and their number**	☐
• **prepared strategies to recruit the respondents, if necessary**	☐
• **chosen and developed your data collection tools**	☐
• **pretested your tools**	☐
• **written the first draft of the section presenting and justifying your research method, especially if you intend to publish a report**	☐

You are now ready to collect your data.

At the end of this step, you are a third of the way through the research process:

- **Are you ahead of schedule?**
- **Are you behind? If so, you must evaluate the situation and make the necessary changes.**

Step 6

Collecting Data

"All researchers are governed by the principles of ethics. When collecting data, these principles require that the researcher respect the respondent. "Don't go too far" and "Be careful" are two things that the researcher must always keep in mind when questioning a respondent. [...] It is of utmost importance to never offend, hurt or frustrate the respondent. The respondent reveals chapters of his or her experience without getting anything in return. The best approach to take is one of simplicity, respect and preparedness."

Diane Vincent, "Comment mener une enquête auprès d'informateurs," in Jocelyn Létourneau (dir.) *Le coffre à outils du chercheur débutant. Guide d'initiation au travail intellectuel* (Toronto: Oxford University Press, 1989), 146. (Free translation)

Now that you have defined your sample and your data collection tools are ready and tested, you can start your field work. You must pay particular attention to this step in the research process. The data gathered here will serve as the heart of your analysis and will affect the answers to your questions. You must, therefore, conduct your research under the best possible conditions to guarantee precision and reliability.

Concerning precision, there are three principal aspects to be considered:

- respect for the individuals interviewed
- preparation of the interviewers
- organization of the data collection process

Respect for the Respondents

Several authors[21] have stressed the importance of ethics in applied research. When collecting data, respect for the respondents must be the top priority: **respect** for their **free and informed consent**, their **dignity** and their **private life** is the basis of ethical behaviour in interview situations. Prepare a protocol for the interviewers to follow. In addition, you may want to prepare a written consent form simply explaining the subject of the research and the rights of the respondent.

21. Jean-Marie Van Der Maren as well as Jan Barnsley and Diana Ellis greatly stress the ethical behaviour to be demonstrated toward respondents during the data collection process.

It is important to verify that these ethical principles are respected in actual data collection situations. It goes without saying that the atmosphere in which the data collection takes place will be more pleasant and the data more reliable if the interviewer demonstrates ethical conduct.

" If the researchers want to solicit the opinions of the respondents, they must build and maintain a relationship of trust and mutual satisfaction. Two ethical principles should guide the researcher:

- As soon as they arrive in the field, the researchers must clearly inform the respondents of the goal of the research project, the activities to be carried out and what part they are to play in the process and the risks of doing so.
- Researchers must do everything in their power to protect the research subjects [...] from all psychological or social risks, 'embarrassment and/or administrative sanctions.' To evaluate the risks faced by the respondents, the interviewer must be as informed as possible about the field situation. It is also wise to negotiate a strict information protection policy."[22]

You must particularly ensure the confidentiality of the collected information and protect the anonymity of the respondents. Adopt a code system for your interview forms, questionnaires and observation charts in order to conceal the identity of the respondent.

Preparing the Interviewers and Observers

According to the scope of your data collection task as well as your time and resources, you may be able to hire external specialists to conduct the interviews and do the observations. You could also choose to hire external specialists for ethical reasons, for example, in a case where the respondents might not feel comfortable confiding in someone they know well. Should you choose not to hire external specialists, the investigations and observations can be performed by members of your research team.

In either case, it is useful to plan a short training session for those who will be conducting the interviews, especially if these people are not integral members of the research team. The training should address three elements:

- Knowledge: Everyone conducting the interviews or doing the observations must have the same knowledge and understanding of the research project, so they can present it correctly and identically. Each person questioned or observed will, therefore, have the same basic knowledge of the project. Those conducting the studies must also have adequate knowledge of the population sample. For example, if certain respondents have particularities or difficulties (stuttering, mental health problems, etc.) this must be known ahead of time so that the situation can be handled properly.

- Attitude: The people conducting the interviews or doing the observations must adopt a positive attitude and empathize with the individuals they meet. The interviewers and observers must be skilled in the "art" of listening, questioning and observing, so the respondents will feel at ease to answer freely without changing their normal behaviour. Make sure the people conducting the interviews and observations remain neutral in their actions and words, so as not to influence the results.

22. Michelle Lessard-Hébert, Gabriel Goyette and Gérald Boutin, *La recherche qualitative. Fondements et pratiques*, 2d ed. (Montréal: Éditions Nouvelles, 1996), 56. (Free translation)

- Conditions: The people conducting the interviews or doing the observations must ensure that the external conditions in which all the investigations take place are relatively similar. For example, if certain interviews are conducted in private homes in the presence of others, you will not obtain the same results as in interviews held in a neutral environment with no distractions. Try to conduct all interviews in similar conditions that encourage respondents to answer openly and completely.

Organizing the Data Collection Process

> *"What would a bicycle be without wheels, skates without blades, planes without wings, boats without bottoms, trees without roots, studies or research without basic data on the topic and the field under investigation? Motionless bodies, without life. A research project that is alive and dynamic, that evolves and transforms, requires this knowledge; only this knowledge can help one define the problems and find their solutions."*
>
> Jacques Jobidon, Groupe Ebyôn, Cap-de-la-Madeleine. (Free translation)

It is important to standardize your data collection process as much as possible in order to ensure that the responses obtained and the elements observed have the same value. Adopt some clear and precise rules to be respected throughout the data collection process. Make sure you have everything you need: rooms, cassettes and microphones, coffee, etc. Set up your appointments with the people to be interviewed and confirm the time.

When making appointments for interviews or life stories, even in the case of a telephone survey, clearly explain the object of the research, so that all respondents will have access to the same information. To maintain a relatively homogeneous data collection framework, make sure to relate the information in the same way and to present the themes and questions in the same order. In the case of an observation session, adopt a precise structure that you will faithfully respect for each session. Of course, when using more directive data collection tools, as in a quantitative study, your process must be even more systematic.

Finally, we recommend that you regularly record information about the data collection session itself. Immediately after each interview or observation session, record the facts and your impressions: general atmosphere, presence of others, technical problems, events that may have influenced the respondent, the respondent's degree of cooperation, etc. It is often recommended that you keep a journal in which you can record your personal thoughts, observations, impressions, etc., especially in the case of participatory observation. In order to evaluate the quality and validity of the collected information, the research team needs sufficient knowledge of the conditions in which the data was collected. These elements will also be used in describing the details of the adopted method and data collection process when drafting the research report.

Please note once again that this section is of little interest to those conducting a documentation research project because this type of research is more concerned with a variety of written material (books, various documents, data from the field), which constitutes the body of data to be analyzed and interpreted. If this is your case, see Step Four, "Examining the Question in Detail," which addresses data collection and recording.

Compiling Information About Your Method

Following the data collection process, it is good practice to formulate a general description of the process. This is a first technical compilation of the data to obtain a relatively accurate idea of the material collected and the population questioned. This information will be included in the method section of your research report. Remember to include all the information concerning the data collection conditions recorded during the interviews and observation sessions.

This summary should contain elements such as:

- final number of respondents (often the initial estimation of sample size does not correspond to reality)
- characteristics of the individuals questioned divided into categories (age, gender, language, activity status, etc.)
- number of people who participated in the data collection process and their status
- average time allotted for the questionnaires, interviews, observed workshops (e.g. each interview lasted 30 minutes)
- duration of the data collection process (e.g. the process took 3 weeks)
- summary of the data collection conditions (notably the way in which the collection took place, technical problems experienced)

The data collection process provides a wonderful opportunity for your organization and its research team to establish meaningful contacts with individuals connected directly or indirectly with your area of study.

> *"This research project allowed me to work within a rewarding human framework and to deepen my knowledge of a topic that is more important now than ever. I was often moved by the testimonies of the participants. I felt that I was doing something of real social value."*
>
> Ghislaine Guérard, professor-researcher, Concordia University,
> resource person for the Un Mondalire group, Pointe-aux-Trembles.

The experience also proves to be very enriching for those questioned, given, of course, that they have been informed of the objectives and that they truly engage in the research process. For them, participating in a research project is often a moment of awakening, of self-discovery. It is also a time of training if, in keeping with the nature of participatory research, the individuals questioned fully participate in the entire project from the definition stage through to the step following data analysis. However, let us also note that for some individuals recounting memories or life experiences can be quite painful, and you must take this into consideration.

At the end of Step Six, you should have:

	OK ?
• defined and respected an ethical and organizational framework for your data collection process	☐
• trained the people who will collect the data	☐
• organized, according to a precise schedule, your data collection procedure (meetings, rooms, recordings, etc.)	☐
• contacted the people to be questioned and, if appropriate, set up appointments	☐
• collected all the data	☐
• summarized the data collection process, which will constitute the heart of the chapter on your chosen method, should you decide to publish your report	☐

You are now ready to move on to the core of your research: data analysis and interpretation.

Step 7

Compilation, Analysis and Interpretation of Collected Data

"The analysis and interpretation phase is the step in which one confronts the data collected in order to interpret it according to a chosen analysis framework. Here, one must review the initial hypothesis and questions. Whether the process be quantitative or qualitative, the experience is rich in discovery and enlightenment."

Robert MAYER and Francine OUELLET, *Méthodologie de recherche pour les intervenants sociaux* (Montréal: Gaëtan Morin , 1991), 43. (Free translation)

You have now finished collecting your data! In front of you stand piles of completed questionnaires, interview cassettes, observation charts, note cards, etc. This is the time to gather all the pieces of the puzzle together and to think, as a team, about how to arrive at new conclusions and creative responses based on these materials. Here we are at the crucial step: data analysis and interpretation. This step is, without a doubt, the most demanding, but also the most important one in your research project.[23]

In practice, many fail to perform this step correctly due to lack of time. They make do with a short description of each piece of data and an enumeration of facts without discovering how they are interrelated, and they skip the data analysis and interpretation step altogether. Remember that this step is necessary for finding the answers to your research questions and improving your practice. It is, therefore, important to allot enough time for this step, so as to be able to carefully examine all the material you worked so hard at collecting. You will need to organize all the elements necessary for a detailed interpretation of the results, while always considering your limited time and resources.

Below, you will find a summary of the steps in the compilation, analysis and interpretation processes. Naturally, the meaning of these operations depends on the type of research you are conducting, qualitative or quantitative, and the scope of your project. Regardless of these variables, this step is a logical process containing the following four elements:

- preparation of the material
- analysis plan
- data entry or codification
- interpretation of the results

23. For this section, we drew upon: Robert Mayer et al., 2000, chap. 7 and 8. You will also find detailed advice concerning data analysis methods in several other documents; consult the section entitled "Reference Works" for a list of these documents.

Preparing the Material

Before analyzing and interpreting the data, you must first organize the collected raw material in a unified and structured manner. This step requires careful work, patience and uniformity. You must put all the materials in order and verify them to facilitate the analysis and interpretation.

In the case of questionnaires, make sure that the answers have been clearly transcribed, that the information is readable and that there are no errors or instances of incoherence. In the case of recorded interviews, listen to them to make sure that the voices are audible before proceeding with the transcription phase. You must also determine the type of transcription required: a summary of the content or a word-for-word copy of what was said (verbatim transcription). In order to perform a meaningful analysis, it is preferable to work from a verbatim transcription, but this process is more lengthy as well as costly.

If you are doing documentation research, you should review your material, re-read your note cards and verify that all the data has been recorded on them: bibliographic references, name or title of the individuals with whom you met, sources of the field data.

In other words, you must ensure that the collected data is complete and ready for processing. This is also the time to remove all the names of the individuals questioned and replace them with codes or fictive names in order to protect their anonymity. Finally, this data is unique and very precious. To avoid the disastrous consequences in the event of loss or theft, make sure that you keep a backup copy of all your data in a safe place.

Remember that this preliminary examination of your data is not for nought in light of the upcoming analysis. On the contrary, you can draw some initial conclusions and observations based on this activity. By listening to your recorded interviews or reading the answers to your questionnaires, you will already have gained some insights and encountered some surprises; record your initial impressions. They will be a valuable asset in the upcoming more systematic data analysis step.

Developing Your Analysis Plan

Now that your raw data has been processed and is ready to be compiled, you must define your analysis plan. You will need to determine how you wish to compile your data. In this step, you must leave behind the individual accounts represented by the questionnaires, interviews and observation sessions to arrive at generalizations, a reconstituted whole, which give new meaning to the material. This analysis plan is invaluable: it allows you to review your initial research questions and, based on them, to find the means of obtaining the maximum amount of information from your data.

Should you have **quantitative data**, you will have to determine the form and level of processing and compilation. If you only have a few questionnaires to compile, you may simply want to create a compilation matrix and enter each of the answers in the corresponding category. This can be done manually or by using a software program (Word or Excel, for example). If you have a considerable number of questionnaires and the financial means to do so, you can input your data using a program expressly

designed for this purpose (SAS or SPSS, for example). In either case, however, you must establish a clear procedure for codifying the data, i.e. precisely defining the categories and converting each respondent's name into a number code.

Next, you will determine the level of data processing required. The simplest is a frequency distribution according to the answers obtained for each question. However, you could also choose, if the sample size permits, to compare two or more variables. For example, you could choose to analyze the effect of gender, environment (urban or rural) or age on the answers obtained.

Should you have **qualitative data**, you must also determine which compilation procedure to use and establish your analysis plan. For example, for your testimonies or life stories, you may have to define the topics or sub-topics that seem pertinent to gaining a better understanding of your research topic. Thus, you should gather all the comments the respondents made on their reading habits, their perceptions or work and their future plans. A general theme can be subdivided into several sub-themes. However, you must avoid themes that are too vast or a categorization scheme where the information is too dispersed. All this reflection on how to process your data puts you on the path to attaining your objectives.

Once you have established the analysis-by-category diagram, you can compile all the comments concerning each theme. This will allow you to better examine the meaning of each theme. Your individual interviews will be broken down into themes and sub-themes. It is up to you to decide how to code the information. If you have a small budget and only a small number of interviews, you could do the coding manually with scissors, paste and a few large boxes. It could also be done using a word processing program (Word, for example), a specialized content analysis program (such as Nudis't) or a relational database (notably Filemaker Pro). This will all depend on the materials collected and your budget.

Whether your data is qualitative or quantitative, "the categories established must meet five criteria: they must be exclusive, exhaustive, pertinent, objective and homogenous. Exclusive signifies that the content cannot be classified in more than one category, while exhaustive means that the established categories are sufficient to classify all the collected data. A category is considered pertinent when it allows the collected data to be studied according to the chosen questions and analysis framework. Objective signifies that the category has the same meaning for all researchers. Finally, homogenous relates to the classification of the material, which [...] must be done according to a single classification principle."[24]

Processing the Data

Once you have established your data processing procedure, you can start entering the data. This step requires a large degree of precision. Whether you do the coding manually or with the aid of software, you must apply the chosen procedure uniformly. Everyone participating in the data entry or coding process must understand the analysis plan so as to implement it identically. In principle, this means that a questionnaire or an interview would be coded in the same way by every team member. If a single person is examining the content, it is essential that the person's analysis criteria remain constant throughout the entire compilation process.

24. Robert Mayer and Francine Ouellet, 1991, 486. (Free translation)

Whether you are using a quantitative or qualitative approach, the data entry and categorization process must be carried out in an objective and systematic fashion. The categories must be precisely and clearly defined. The entire content of the material must be transformed into data that can be entered, ordered and filed in the categories chosen according to your final goal.

Give yourself the means necessary to ensure that the input and coding processes are well established. For example, test the system after a few questionnaires and interviews have been compiled. Take a questionnaire that has been compiled by someone else and see if you would have coded the data in the same manner. As a group, discuss your common understanding of any categories that tend to cause confusion. If only one person is doing the work, ask someone else to codify a few questionnaires to see if any adjustments need to be made.

Now your material has been compiled and organized according to your objectives. You should no longer need the raw data (cards, questionnaires, life story accounts). Based on the data compilation, you can highlight certain aspects, make observations and draw conclusions.

Analyzing and Interpreting Your Data

Once you have re-organized your data into themes, tables or graphs, your goal is to extract the maximum amount of information from the contents in order to provide answers to your initial research questions. You should view this step as a spiral constantly going back and forth between two points: reading and discussion, private reflection and group reflection. By internalizing the content of the material through multiple readings, formulating your own ideas through personal reflection and sharing these ideas in open discussion sessions, you will build a rich interpretation.

At this step, we would once again encourage you to solicit the participation of all the members of your organization in order to extract the maximum amount of meaningful information from your data. In this way the analysis process will be as complete, accurate and detailed as possible. Participatory research is based on broad cooperation, including with the individuals who were the "subjects" of the study. Even if you have not adopted this research method, several forms of occasional participation are still available to you. For example, organize a discussion based on the content of certain subthemes with the members of your organization (teachers, students, administrators etc.). Ask them to read the material and to make note of their reflections. Invite them to underline any elements they find surprising. In the meeting, answer the following questions:

- What elements stand out?
- Are there any new or surprising elements?
- Are there any elements that confirm your perceptions and hypotheses?
- Do your results correspond to what you have read in other similar research reports?
- What are the elements that provide answers to your initial questions?
- Do the data correspond to your expectations?
- Have any new hypotheses emerged?

This collective discussion will be extremely important in many regards. First, the participants will feel all the more a part of the project and will see that their opinion and experience are useful in the research process. Second, they will realize the scope of the work accomplished by the team. All this helps to abolish any prejudices toward the research. Finally, those who participate in this analysis will be able to envision new techniques that could be implemented in practice, which is the goal of all applied research. For in the end, what do we want other than to improve our practice?

To facilitate the discussion of the results, use visual aids (slides, acetates, charts). If you have compiled your data in a quantitative manner, your analysis plan will allow you to consider different levels of statistical processing, from simple frequency distribution to more sophisticated relationships between the variables[25]. Organize the data that seem to be the most significant and present them in various formats to better demonstrate the relationships: tables, graphs, diagrams, etc. In preparing the graphic representations you will gradually become aware of emerging or obvious trends as well as the elements that you find most interesting.

If you have chosen a qualitative data compilation method, review the content of the categories and the chosen themes, then start to identify the trends and major observations, and highlight the most important sentences. Your data can also be presented in tables, images or graphs, but it is better expressed in the form of theses, ideas and concepts.

A Few Strategies for Analyzing Your Results

Listed below are four strategies for your consideration:

- **enumeration:** to identify recurring and single-instance elements
- **cross-checking:** to identify links and opposition between the elements
- **breaking down the elements:** to identify the sub-elements within an element
- **abstraction (extracting the meaning):** to consider things from a global perspective and examine the relationships between the elements

Source: Michelle Lessard-Hébert, Gabriel Goyette and Gérald Boutin, *La recherche qualitative, Fondements et pratiques*, 2d ed. (Montréal: Éditions Nouvelles, 1996), 82.

Furthermore, this is the time to take a step back and consider the documentation research that went into shaping your initial research topic (see Step Four). Reorient your thoughts around your research questions and hypotheses. Reread the more outstanding reference documents and your note cards. Now attempt to establish connections between these reference works and the results of your research.

- Are there common elements between your results and the data from previous studies?
- Which elements are different?
- Which authors best help you to explore your results?

25. For more information on frequency distribution and other representation methods, see: Robert Mayer et al., 2000, 202-211.

- What connections can you make with your research questions?
- Are your hypotheses confirmed?

This process should gradually lead to a rich, coherent and agreed-upon interpretation of the results, which in turn will supply answers to your research questions. It is possible, however, that your results do not confirm your hypotheses. But remember that just because your hypotheses remain unconfirmed does not in any way imply that the project has failed. On the contrary, the very purpose of research is to either confirm or refute the initial suppositions and hypotheses.

Be wary of abusive generalizations and errors in interpretation. The majority of research projects conducted within literacy training organizations are done using samples which cannot be generalized for the entire population, whether it be because of the small number of respondents or because the sampling methods were not sufficiently sophisticated to ensure such a generalization. For example, if eight out of ten people questioned have the same opinion, you cannot claim that this would correspond to 80 people out of every 100 in the general population. This, however, does not lessen in any way the value of the data for clarifying a certain situation and instigating action on a local scale.

This step in the process will gradually lead you to writing the chapter on the interpretation of your data. Remember to include in your text any data or elements (quotations, tables, graphs) that seem particularly effective in illustrating your points. Finally, if you conducted research on a very small sample (less than 30 people), avoid converting your numbers to percentages. It is good practice to repeatedly remind the reader of the actual size of the sample used.

In the case of documentation research, collecting and interpreting data should be done according to the same procedure described above. The only difference lies in the sources of the data, which in this case are your note cards and summaries of information collected from organizations and specialists in the field.

The simplest way is still to reread all the collected information, classify it according to themes and sub-themes, etc. Next, once you have a good overall view of the re-organized material, identify the main ideas, connections and oppositions. As in all types of research, you have to interpret these data in order to find answers to your research questions and determine paths toward resolving your problem.[26]

26. To learn more about documentation analysis, refer to the section on content analysis in: Robert Mayer et al., 2000, 160-171.

At the end of Step Seven, according to your quantitative or qualitative approach, you should have:

	OK ?
• **prepared and organized your material**	☐
• **developed an analysis plan for your data**	☐
• **entered and coded all your data according to the chosen analysis plan**	☐
• **held group discussions on the results to arrive at a rich interpretation that is consistent with your initial research questions**	☐
• **drawn connections between your results and those found in the literature review used in defining the research topic**	☐
• **chosen the appropriate forms of presentation for the results (quotations, extracts, tables, figures, etc.)**	☐
• **written the first draft of the chapter on result interpretation, especially if you plan to publish your research report**	☐

You are now ready to begin the final draft of your research report.

Step 8

Writing the research report

"Writing the research report is an operation that is essential for reviewing project activities and for making the results and individual experiences known. That's the way research works; the collected data must contribute to the advancement of knowledge, both theoretical and practical."

Daniel Turcotte, "Le processus de la recherche sociale," in Robert MAYER et al., *Méthodes de recherche en intervention sociale* (Boucherville: Gaëtan Morin, 2000), 63. (Free translation)

Your research work is not complete until you have recorded your results in a report. It is very important **not to confuse the research report with the JFPLTI activity report.** Writing the report is a normal part of the research process, while the JFPLTI activity report is more of an accountability tool used to ensure proper program management[27].

Before finalizing your research report, you must consider the form of publication (chosen in Step Two). If you wish to make your results public and thus enrich the corpus of knowledge on literacy training, you will choose to publish an official research report. This process requires paying more careful attention to the presentation of the information, demonstration of results and use of reference sources. This also requires a more directed writing project (including revision and layout). Naturally, this operation assumes a larger budget, which should have been considered in your initial grant request.

Even without an official publication, it is essential that you record your results in a written report. According to the organization's decision and the project budget, the report could remain as an in-house reference. In this case, it would be included as an annex to the JFPLTI activity report and only distributed to organizations upon request. Such a document would, therefore, require less effort in layout, graphics and editing. However, the report must still provide complete information on each step of the research project. The following are some suggestions that can be adapted to your situation.

27. To learn more about the principal elements of writing a research report, refer to: "Savoir communiquer sa pensée par écrit", Jocelyn Létourneau (dir.). *Le coffre à outils du chercheur débutant. Guide d'initiation au travail intellectuel* (Toronto: Oxford University Press, 1989), 196-206.

Official Publication

Before developing the publication you must first decide who the target audience will be. Practitioners? The general public? The research community? Learners? Choose the writing style and document format according to your answer.

Your report must reflect, as much as possible, the whole of your research process. Each step must be described, so that the reader will understand what you set out to do. It is particularly important to clearly explain your research questions and the method you used. It is difficult to estimate the value or the precision of your data interpretation without knowing what tools were used, how the data was gathered and how it was compiled. Transparency of the method is also a recognized element for judging the value of the research. We suggest that you include important elements of the method in your report as annexes. These may include:

- letter used to recruit respondents
- consent form signed by the respondents
- example of your data collection tool
- data analysis plan

Remember that the results constitute the most important part of your report. It is not just a matter of describing the collected data; you must **demonstrate**, **explain and illustrate** your results. Present your interpretations and analysis in light of your research questions. Remember also that these questions, along with the hypotheses (if applicable), were guiding factors in your research and must be the heart of your demonstration.

In brief, your report must contain all the elements and information needed by the reader to understand your project. However, make sure to always respect the anonymity of the respondents and the confidentiality of their statements. This does not, however, prevent you from thanking them for their invaluable cooperation.

Outline for the Research Report

Here are the main parts of a research report:

- Acknowledgements (respondents, partners, financing organizations)
- Table of contents and a list of tables and figures
- Introduction: general presentation of your research project and organization (and partners, if appropriate); report summary

- Presentation of your research topic:
  - why and how your project began (the context of your project)
  - your goal and objectives
  - what was learned about the subject from the literature review
  - what was retained from the data and field studies
  - your research questions and hypotheses

- Research methodology:
  - method adopted and reasons for your choice;
  - choice and presentation of data collection tools
  - sample: criteria for selecting respondents, their number, motives for your choices and the degree to which the sample represents the target public
  - data collection process
  - results of the data collection process
  - data analysis plan
  - limits and constraints of the research resulting from your method and the difficulties encountered

- Analysis and interpretation of the collected data:
  - topics addressed in your research (review of the research questions)
  - new or important points revealed by the data
  - differences, similarities and trends found in the data
  - connections to be made between the variables
  - how the data relate to your research questions and hypotheses
  - connections with the literature review

- Conclusion:
  - summary of your analysis and interpretation
  - evaluation of the scope and limits of your study
  - recommendations concerning the follow-up to your research, actions to be taken as well as paths for future study

- Bibliography of documents consulted
- Annexes: tools used and any documents that would help the readers understand the study

Adapted from: Jan Barnsley and Diana Ellis, *Research for Change: Participatory Action Research for Community Groups* (Vancouver: Women's Research Centre, 1992), 85.

Finally, remember to plan the time necessary for text revision and layout. These steps, which are essential for an official publication, are often skirted. Your document will attract more readers if it is easy to read and well presented. Documents remain useful for a longer period of time if you take the time to properly indicate the bibliographic references, insert a table of contents, include sub-titles and tables, etc.

Important Elements to Remember in Your Report

- title page, with an eye-catching title clearly indicated
- name(s) of author(s)
- organization(s) presenting the research (your organization and partners)
- place of publication
- year of publication
- financing organization(s)
- page numbers

Writing Tips

Too often, we reserve only three weeks at the end of the year for the writing process, which means we have to break records of endurance as we race against the clock and of collective memory. Naturally, the quality of the work suffers from this haste. To avoid all this, we encourage you to adopt some different strategies. One such strategy is to develop an outline for the final report as early in the project as possible. This activity may seem long and tedious, but it is very important in that it will guide the entire writing process.

Furthermore, you can use your outline to record important information during each step of the research process. At the end of each step, write a summary that will help you remember what was done. You can use these texts to stimulate discussions. As well, this continual writing process will help you synthesize your ideas as you progress through the research project. Writing the final research report will then be much easier.

Finally, record all the information necessary for the final writing process and file it in a place that is well known to all:

- documents, photocopied texts of authors consulted or quoted
- your note cards
- field data
- reports from meetings with specialists
- summaries of each research step
- recruitment letter
- copies of your tools
- all the data collection materials
- etc.

Hints for Writing the Research Report

Structure:

- structure and organize your ideas clearly and simply: one idea per paragraph
- support your ideas with quotations, reference documents, statistics, etc.
- always write a short introduction to each section of the report
- pay attention to the flow of ideas, paragraphs and sections

Writing:

- choose your words carefully, so as to express your ideas accurately
- use a simple vocabulary
- simplify and refine your sentences; they may often be needlessly complex
- if you quote an author directly, place the text within quotation marks and indicate the source
- if you quote an author indirectly, i.e. you express someone else's idea in your own words, indicate the source

Another way to render the writing process more effective is to have an outside reviser or a team of outside revisers. These individuals will read your work and make valuable comments to clarify and enrich your texts. You can call upon their services at the end of the process or all along the writing process. This will help you to both produce an interesting text and verify your research results.

At the end of Step Eight, according to your choice for publishing your results, you should have:

	OK ?
• established a writing plan	☐
• gathered all the materials necessary for the writing process, including the pre-written sections	☐
• standardized the different sections making up the report and made the connections between them	☐
• had the final draft read and corrected by others	☐
• chosen the document layout	☐
• produced an internal or public report	☐

Voilà! You have now completed your research!

However, this is not really the end.
You still have to incorporate the results into your practice.

Step 9

Putting the Results into Action

"It's important to remember that the research itself won't change anything. It can give us ammunition, but we still have to use it and act on it."

Jan Barnsley and Diana Ellis, *Research for Change: Participatory Action Research for Community Groups* (Vancouver: Women's Research Centre, 1992), 15.

You have collected the data, compiled them, discussed them and finally analyzed them to extract all their meaning. You have even produced a research report, whether for in-house use or general publication. So, what's next? How do you take advantage of the fruits of these efforts to help your organization and others? Too often, due to lack of time, research reports are not used to improve practice. We are in too much of a hurry to get on with the next task. This only fuels the prejudice that "research just leads to reports that collect dust on shelves." However, the nature of applied research in a specific field is to help improve techniques and create innovation! Making proper use of the results involves two important elements:

- disseminating the results;
- translating the results into action.

Disseminating the Results

As we already mentioned, it is not always possible to publish complete research results. If such is the case for your organization, this does not prevent you from disseminating the results in another form within your field. Here are some of the numerous means available:

- write an article summarizing the principal observations of your research: this article could be published in a periodical dedicated to literacy training, in a community or neighbourhood newspaper, or on an Internet site such as Espace Alpha
- as part of a conference or other such event, set up a booth or organize a workshop on your research and its results
- at a meeting with other specialists in your field, give a presentation of your research and its results

Regardless of the method you choose, the most important thing is to report on your research and its results, so that others may incorporate the new knowledge into their practice. Also think about ways to reach a larger public than the literacy training community: community organizations, elementary schools and CLSCs are just some of the possible partners that could benefit from information gained through field research in literacy and literacy training. If they are well informed, the resource people in these organizations could play a leading role in putting your findings into practice. They may even suggest paths that you had not thought of exploring!

Of course, all we have just said also applies to those who have chosen to widely publish their results. In this case, there is an additional consideration: publicizing your report. Those working in the field and, to an even greater extent, those who are not part of the literacy training community, do not always have the time to keep up with the latest literacy training literature. You must, therefore, redouble your efforts to ensure that the release of your report does not go unnoticed.

In addition to the means of dissemination listed above, here are a few hints for publicizing your report:

- Form a team or appoint a few official spokespeople to promote the research. This is the most systematic way to publicize your results.
- If you have the means, organize an event to mark the release of your report and invite all those who participated in the research as well as your closest partners. This is a good way to thank them for their hard work and to have a little fun after the long months, if not years, of intense work.
- Write a letter or article announcing the release of your report in which you summarize its main points.
- Announce the publication of your report in the CDEACF's discussion forum, Pratiques.
- Remember to send your research to the Directory of Canadian Adult Literacy Research in English. (See the section "Useful Sources of Reference.")

Translating the Results into Action

> *"The context of the research conducted at Atout-Lire implies voluntary, active participation of the people interested and of the group leaders connected with the project. Because our study consists of analyzing the process of socio-vocational insertion as it blooms and adjusts to the needs, aspirations, questioning and successes that mark the path of the multi-talented artisans, our top priority is action. Supported by a conceptual and theoretical framework that gives meaning and pertinence to our work, our research contributes directly to improving community literacy training programs, because the research is practical by nature."*
>
> Émilie Raymond, Atout-Lire, Québec City. (Free translation)

As you are involved in a literacy training process, the principal role of the research is to use it in action. In fact, research projects are born of problems or of new or unsatisfying situations to which you wish to find resolutions or new perspectives. It is, therefore, logical that the results should serve to establish or experiment with new techniques and approaches.

Unfortunately, this step is often neglected due to a lack of time or energy. In such a case, you risk loosing sight of the motives that drove your research. Don't write or publish a report without putting its results into action. If your work does not affect a change, you will feel as if you have wasted your time.

You must give yourself the time to discuss the results to find new plans of action. You have already listed some in your report conclusion. It is now time to further explore the realistic aspect of certain ideas. Here are a few ways to do so:

- Plan for key moments throughout your research when you can identify plans of action. As you are in a continuous process of reflection and action, you may find that the research has brought about some changes even before reaching the final results.
- If you are conducting participatory research, remember that it is now or never that you can gather together all the individuals questioned as well as the other participants from the organization to re-discuss the results and to collectively identify solutions to your problem situation(s).
- On a larger scale, organize a day of discussion and reflection with all the people connected with your organization as well as those who have participated in the project to discuss the results and identify possible plans of action.
- Prepare a prioritized list of the suggestions: put your priorities in order and determine the one or two most promising plans of action. Examine how you can implement the changes.
- Finally, try to implement the proposed solutions in depth and perhaps make this into your next JFPLTI project.

At the end of Step Nine, you should have:

	OK ?
• conceived different ways to publicize your results	☐
• tried to reach, through this dissemination, your community as well as those working outside the literacy training field	☐
• organized the release of your document and publicized it in different ways, if you are publishing a report	☐
• discussed your results within your organization and with close collaborators to identify new plans of action within your field	☐

You are now ready to implement the plans of action that seem most promising.

Conclusion

"Recounting a journey that has lasted over two years from its point of departure to its final destination is an exercise in the art of omission! The most precious thing I retain from this experience is the new, deep and indelible meaning that the words precision, respect, responsibility, trust, courage, cooperation, coherence, enthusiasm, passion, perseverance and teamwork now hold for me."

Renée Normandin, Commission scolaire Marguerite-Bourgeoys, Montréal. (Free translation)

Congratulations! You have now completed the research process.

You have come to the end of months, if not years of enriching discussion, debate and questioning. However, you have also experienced moments of confusion and discouragement. The work was rigorous and intense, but you have fully benefited from it by acquiring new skills and innovative ideas. Now, you are not only a practitioner, but also a seasoned researcher—or almost. Bravo!

Your project was born as a result of a particular situation or question, and it concluded by bringing improvements to your practice. Although you are closing the file on this project, the work doesn't stop here—so let's get on with the challenge!

Who knows? Perhaps you will come across other subjects in need of research...

Useful Sources of Reference

This section contains some reference sources to help you further investigate certain subjects, refine your knowledge and continue your research process. We have included a few explanatory notes on the particular subject of each of the suggested on-line sites and reference works listed below. This is only the beginning, the first step in your exploration of a vast domain. For example, consulting a Web site could lead to yet another site; in the bibliography of one work you may find other references that are of interest. Go ahead! Let your curiosity guide you in your explorations. Research is like a spider web, and now it's up to you to build your own centred around your own interests and goals!

On-line Resources on Action-Research*

PARNet
http://parnet.org
Participatory Action Research Network, Cornell University
Social research for social change

CARN
http://www.uea.ac.uk/care/carn
Collaborative Action Research Network, the University of East Anglia (UK), Centre for Applied Research in Education.

CARPP
http://www.bath.ac.uk/carpp/
Centre for Action Research in professional practice
University of Bath (UK). Support for teacher researchers who are developing their reflective practice.

AROWHELP
http://open.k12.or.us/arowhelp/
Action Research-on-the-Web Help. Includes links to AskERIC, the most important education database in the English language, and to other action research Web sites.

Action Research Electronic Reader
http://www.beh.cchs.usyd.edu.au/~arow/Reader/welcome.htm

Educational Action Research
http://www.triangle.co.uk/ear/index.htm
An on-line journal dealing with the link between educational research and practice.

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* From Mills, Geoffrey E. 2000. *Action Research. A Guide for the Teacher Researcher*. (Upper Saddle River, NJ: Merrille/Prentice Hall), 148-155.

Networks
http://www.oise.utoronto.ca/~ctd/networks/
On-line journal for teacher research.

Action Research International
http://www.scu.edu.au/schools/gcm/ar/ari/arihome.html

Other On-line Resources

http://www.nald.ca/nls.htm

The Web site of the National Literacy Secretariat (NLS) offers a wealth of statistical data and information, namely from the Adult Literacy Survey (ALS), with monographies on precise aspects of the survey. Most of the NLS documents are free and can be ordered. The site also offers information on literacy projects and activities throughout Canada. Finally, you can obtain information on the joint Social Sciences and Humanities Research Council of Canada (SSHRCC)-NLS funding program for research done in co-operation between universities and community organizations.

http://www.alpha.cdeacf.ca/recraf/index.htm

New CDEACF database offering information on all French literacy research done in Canada since 1994, published or in progress. Most documents are available at the Centre.

http://www.nald.ca/crd/start.htm

NALD site showing an index of research on literacy and adult literacy and reports and articles on Canadian research conducted in English since 1994.

http://www.cdeacf.ca/

Although the Centre de documentation sur l'éducation des adultes et la condition féminine (CDEACF) has a mainly French collection, it also offers the useful Canadian Literacy Thesaurus on-line as well as connections to other documentation centres and information services on adult education throughout the world via the (Unesco) ALADIN network. Those less familiar with the Internet can find a detailed section on how to use it and improve their research techniques on the Web.

http://www.nald.ca/litcent.htm

Located in Montreal, the Centre for Literacy offers access to over 7 000 documents, books, software and audio-visual materials on literacy. These can be borrowed directly or at a distance. The Centre also houses a very impressive collection (350 titles) of periodicals and newsletters dealing with literacy at home and abroad, including some on research in literacy such as The Research and Practice in Adult Literacy Bulletin (UK).

http://www.petitmonde.qc.ca/eveil/default.asp

Québec's *Éveil à la lecture et à l'écriture* program for disadvantaged communities, set up by the Ministère de l'Éducation and other government departments. List of projects, information on writing awareness, index of documents. A captivating site for those particularly interested in research projects on the prevention of illiteracy or on family literacy.

http://www.statcan.ca/start.html

The Statistics Canada site provides data and highlights of recent studies and links with other government statistical sites throughout the world. The publications Education Quarterly Review and Canadian Social Trends, to which one can subscribe (the CDEACF also has copies) are very interesting journals that deal with subjects directly or indirectly related to literacy training.

http://www.stat.gouv.qc.ca/default_an.htm

Data from the Institut de la statistique du Québec (ISQ) on the Québec population's health, schooling, occupation and family characteristics. Access to information on the major inquiries done by the ISQ; the one on health contains relevant information to help explain illiteracy in a larger context.

http://www2.biblinat.gouv.qc.ca

Access to the catalogue of the Bibliothèque nationale du Québec and links to other Canadian and Québec libraries, notably university catalogues.

http://www.meq.gouv.qc.ca/

On the Ministère de l'Éducation du Québec site, the sections dealing with statistics and publications are particularly interesting to consult. There is also contact information for the school boards, an overview of the Ministère de l'Éducation's priority projects and new information on the educational reform now in progress, which will affect programs for children and adults alike. In the statistics section, you will find general data and the most recent statistics on education as well as documents available on line, such as the Education Statistics Bulletins.

http://www.meq.gouv.qc.ca/dfga/

The site of the Direction de la formation générale des adultes (DFGA) (Ministère de l'Éducation) presents information on its mandates, various study programs and available adult educational services. You will also find a few DFGA publications concerning literacy training.

http://www.mss.gouv.qc.ca

The site of the Ministère de la Solidarité sociale is interesting for its many on-line publications and links to other sites, such as Emploi-Québec. Here you will find numerous statistics on employment and income security as well as documents for each region and links to local and regional organizations.

http://www.communautique.qc.ca/icea/

The site of the Institut canadien d'éducation des adultes (ICEA) gives access to more general information dealing with adult education, particularly within Québec (conference announcements, ICEA publications, submission of these to ministers). Here, you will also find links to the Hamburg Conference on Adult Education, international sites and very pertinent information connecting continuing education and employment.

Reference Works

ABBEY-LIVINGSTON, D. and D.S. Abbey. *Enjoying Research? A 'How-To' Manual on Needs Assessment*. Toronto: Queen's Printer, Ministry of Tourism and Recreation, 1982.

Contains an excellent chapter entitled "Summarizing and Analyzing Research Results" as well as a "Statistics Booklet" at the end of the manual.

BARNSLEY, Jan and Diana ELLIS. *Research for Change: Participatory Action Research for Community Groups*. Vancouver: Women's Research Centre, 1992.

This little jewel is, unfortunately, out of print. However, the CDEACF has a few copies on hand (in French) and it is available in some university libraries. It is a very simple, action-oriented guide that is full of examples, tools and practical suggestions to help community organizations that want to undertake participatory research or action research projects.

DÉSILETS, Margot, Marie-France Paradis and Carmen Allison. *La recherche dans le domaine de l'alphabétisation*. Québec: Direction de la formation générale des adultes, 1996.

This reference document was produced by the Ministère de l'Éducation du Québec as a part of the central reserve of the JFPLTI. It presents different types of research and methods generally used in the literacy training field. This is certainly a helpful reference for defining your sample and creating your data collection tools.

ELY, M., with M. Anzul, T. Friedman, D. Garner and A. McCormack Steinmetz. *Doing Qualitative Research: Circles within circles*. London: The Falmer Press, 1991.

A rich guide to doing qualitative research with a distinctive feature: "its concern with the interplay between affect and cognition—how people feel and what they learn—as they go about the very messy but exhilarating business of learning to do it." The authors are convinced that researchers who are concerned solely with the technical aspects of qualitative research miss the essentials of this type of research.

GABER KATZ, E. and Watson, G. *"The Land That We Dream of: A Participatory Study of Community-based Literacy."* Research in Education Series 19. Toronto: OISE Press, 1991.

The Ontario Institute for Studies in Education (OISE, University of Toronto) has been very active in research in education in general, and in adult education in particular. Their catalogue of publications, both books and periodicals, is worth consulting.

HARE, A. Paul, et al. *Handbook of Small Group Research*. Norwood, NJ: Ablex Publishing Corp., 1994.

HAUTECOEUR, Jean-Paul. *Recherche-action en alphabétisation*. Ottawa: National Literacy Secretariat, 1991.

This is an up-to-date document in which the author justifies the use and pertinence of action research projects to implement changes based on study. It describes the experiences of four organizations, two of which are from Québec, You can obtain a free copy of this document from the NLS.

HORSMAN, J. *Exploring Community-Based Literacy Research*. Toronto: Spiral Community Resource Group, 1989.

LÉTOURNEAU, Jocelyn (dir.). *Le coffre à outils du chercheur débutant. Guide d'initiation au travail intellectuel*. Toronto: Oxford University Press, 1989.

This work describes the research methodologies used in social sciences, particularly those related to documentation research. It contains interesting advice on summarizing, on content analysis, and notably on writing the research report.

LLOYD, Betty-Ann, Frances Ennis and Tannis Atkinson. *The power of woman-positive literacy work. Program-based action research*. Toronto: Canadian Congress for Learning Opportunities for Women, 1994.

Describes an action-research experience with women's literacy groups. "The research design and methodology provides a model for program-based action research that begins with frontline workers' lived experiences, involves them in collecting data, analyzing information and developing solutions to identified problems." Useful both because it details very clearly different research strategies as well as the research process and methodological framework used in this experience, and because of its central preoccupation with the way women learn and build knowledge.

MAYER, Robert et al. *Méthode de recherche en intervention sociale*. Boucherville: Gaëtan Morin éditeur, 2000.

Here is an excellent book on methodology! A recent edition of a work originally released in 1991, it takes an interesting pedagogic approach to the subject, which is to the advantage of beginner researchers. Don't miss chapter 2, which describes the research process in detail, and the second part of the work, which gives an excellent concrete description of several research techniques and tools.

MILLS, Geoffrey E. *Action Research. A Guide for the Teacher Researcher*. Upper Saddle River, NJ: Merrille/Prentice Hall, 2000.

A user-friendly, practical guide to action research aimed at school teachers but that can also be most useful to non-formal educators. Chapter on "On-line Action Research Resources," including the author's own home page.

MINIELY, Donna. *Seek, Gather and Process. A research manual for literacy programs*. Toronto: Literacy Coalition, Program Based Research Special Interest Group, 1992.

Practical step-by-step training guide on how to conduct research as well as the development of a way to communicate research results. Contains texts, questions, scenarios and exercises. Chapters: Need or Issue Arises; Define The Problem and Questions; Identify Assumptions and Biases; Develop Strategies; Conduct the Research; Analyze the Data; Report on Your Research. Annexes on Research Funding Sources, A Standard Report Format, etc.

PADILLA, Amado M. and Kathryn J. Lindholm. "Quantitative Educational Research with Ethnic Minorities", Banks, James A. ed., and Cherry A. McGee Banks, assoc. ed. *Handbook of Research on Multicultural Education*. New York: MacMillan Publishing USA, Prentice Hall International, 1995.

The authors give "considerable attention ... to methodological difficulties in conducting research with ethnic populations." Eurocentric approaches to the study of these populations "have frequently resulted in misguided interpretation because of specific biases inherent in (Eurocentric) paradigms themselves." This chapter offers suggestions as to how to overcome these difficulties.

REGAN, Terri. *Adult Basic Education Research Handbook*. Australia: 1991. Accessible through the National Literacy Secretariat of Canada's Web site.

Social Sciences and Humanities Research Council of Canada. *Ethics—Guidelines for Research with Human Subjects*. For a free copy: SSHRCC, Kent Square Bldg, 255 Albert St., P.O. Box 1610, Station B, Ottawa K1P 6G4. Tel.: (613) 992-0691.

STRAUSS, Anselm and Juliet Corbin. *Basics of Qualitative Research. Grounded Theory Procedures and Techniques*. Newbury, CA: Sage Publications, 1998.

"Grounded theory" is a qualitative research method that builds on the findings themselves and aims at generating hypotheses and theories from the data collected rather than at testing a preconceived hypothesis as in traditional research. A particularly relevant approach for community groups.

VAN DER MAREN, Jean-Marie. *La recherche appliquée en pédagogie. Des modèles pour l'enseignement*. Collection Méthodes en sciences humaines. Brussels: De Boeck Université, 1999.

This work, which deals with the methodology of applied research in the field of education, was written for teachers and not for professional researchers. It presents some applied research models and research techniques and tools. It is an interesting work that surpasses a simple methodology guide and deals with the more theoretical aspects of research in the field of education.

WAGNER, Serge. *Étude de milieu et analyse des besoins en alphabétisation des adultes, Alphabétisation communautaire chez les Franco-Ontariens*, Vol. 1. Toronto: Alphabétisation Ontario, 1987.

Although published over ten years ago, this document presents a process, reflections, practical advice as well as information useful for any group wanting to conduct a detailed research project in its field of expertise or on its target population. This document also presents interesting subjects for reflection regarding the topic of illiteracy within the francophone population of Ontario.

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