UNDERSTANDING RESEARCH IN E F L LEARNING

Nicoleta MINCĂ
Universitatea din Piteşti

Abstract: *Foreign – language teachers should be involved in educational research in order to help students. The research process is typically described as composed of "stages": defining a problem; analysing previous studies related to it; selecting a research strategy; selecting or developing appropriate instruments; collecting data; interpreting them and writing the research report. We also present some research approaches that may help clarify a research strategy adapted to the teacher's needs. Research should be perceived not as a difficult process but rather as a powerful tool to systematically study and solve some of the problems in our day-to-day experience.*

Our professional competence gives us the opportunity to bring about more information through research and then find plausible answers to our queries. The introduction of positive changes in our work will thus contribute to the improvement of instruction and education and to our own growth as professionals.

Key words*: education, instruction, research strategy*

Foreign – language teachers are always looking for better ways to help students. This implied that teachers are involved in educational research. However, since formal research tends to be perceived as a difficult process, many teachers feel that it is out of their reach. Certain aspects need to be clarified in order to overcome this feeling.

The research process is typically described as composed of "stages": defining a problem, analysing previous studies related to it, selecting a research strategy, selecting or developing appropriate instruments, collecting data, interpreting them and writing the research report. In doing research, teachers should not only work on each of these stages but should also develop a systematic research attitude. We will focus on the definition of the problem, because that is the initial, crucial stage in the research process. Once we have defined a research problem, it becomes easier to carry on with the other stages. We will also present some research approaches that may help clarify a research strategy adapted to the teacher's needs. Research should be perceived not as a difficult process but rather as a powerful tool to systematically study and solve some of the problems in our day-to-day experience.

In the model of Professional Competence and Action proposed by Páez-Urdaneta the researcher perceives some phenomena occurring in the so-called *environment space* as problems. In the field of language teaching, the researcher may be a teacher at any educational level, a student-teacher, a teacher-trainer, or an educational administrator. The events that he/she confronts in the environment space constitute what we would call "real-life problems". The researcher examines these events according to his/her experience and intuition and conceptualizes them as research-relevant objects. Then he/she approaches them from a professional point of view in what is known as the *problem space*, where he/she defines a specific research problem in operational terms and selects a strategy to study the problem as a research task.

Defining a problem

A question well-stated is a question half-answered. This is why defining a research problem is such a crucial stage of the process. In our daily activity as teachers,

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we face many worries of the following kind: students got terrible grades last time; students are dropping out; how do we teach the passive voice in an effective way?, etc.

We cannot act immediately and directly upon these events, which form part of a broad reality, our evironment space. However we can start a process of narrowing down our observation of such events until we are able to define an aspect that will form the basis of a research question. We conduct this process from the standpoint of language teachers, which determines the problem space of our profession. In other words, we identify problems by looking at these events through the eyes of our professional competence. Our studies and experience can thus lead us to state questions appropriate to research problems in the field of language teaching.

During the process of defining a problem, we ask ourselves lots of questions. Suppose that what is worrying us is the fact that students got bad grades on that last exam. We would pose these questions: Was the content of the unit adequate?; Were the general and/or specific objectives clear enough?; Did I teach this in an adequate way?; Were the study materials adequate?; Was the test adequate?; Were the students motivated in terms of the contents taught?, etc. Some of these questions may not stand for real worries because they can be answered without great effort. For instance, we may feel that students were in fact motivated towards the contents taught because they were so enthusiastic that they even prepared a bulletin board on their own. Therefore, we may feel that the real problem lies somewhere else, and we will of course continue thinking about each of the other questions. If we follow our intuition, we will stop to ponder certain questions over the rest. We can invest some time in verifying our hunches with colleagues and/or reading related literature. As a conclusion we are unintentionally carrying out preliminary research that can provide us with enough ideas to identify a problem worthy of a solution.

If we sense that the real problem is embedded in the question “Was the text adequate?” – the next step would be to ask ourselves questions of a more specific nature, such as: Did the exam evaluate the intended objectives?; Where all relevant objectives tested on this exam?; Was the exam too long? Too short?; Does this test represent a reliable measure of students’ knowledge? These extra questions should help us perceive a research area that is much more concrete than our initial worries. The process of narrowing down can continue until we decide, for example, to study in depth the question about test format. We are now ready to formulate the specific question about test format. We are now ready to formulate the specific question, “Which types of test are suited to evaluate my objectives?” If we are satisfied with it, this question will represent the problem we wish to investigate.

The stage of defining a problem is a crucial one, since it will give form and focus to the study. If we had formulated the research question in a different way, like “Is multiple choice better suited than essay to test my objectives?”, the approach could be experimental.

A researcher’s interest area, his/her background, and the kind of events he/she confronts will determine the specific question chosen for research. As a result, questions in educational research may be classified as either *theoretical* or *practical*, thus giving rise to what is known as basic and applied research. The former type investigates fundamental principles, whereas the latter tries to solve immediate, everyday problems. The final research question in the example above belongs to the practical type. An example of a theoretical research question is “How does foreign-language reading affect native language reading?”

Research approaches

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As researchers, we now continue to work towards the solution of the problem by selecting an adequate strategy. There are many different so-called *methodologies*, but we prefer to term them *approaches*. There is no clear-cut categorization of research methodologies. Our aim is therefore not to classify them but rather to explain some of the approaches available to the researcher. The strategy will most probably include more than one approach, but it must always be logical, since the strategy represent the skeleton that supports and frames the study.

In the educational field, systematic research does not exclusively mean experimentation. We deal with human beings, and the events we wish to examine are therefore not simple. Experimental research is one, and not necessarily the only, type of investigation worth doing. Other approaches, like documentary analysis and correlational studies, may also be employed. Numerous considerations, such as the reality we live in, our individual needs, the nature of the problem, and the kinds of data required, affect the selection of the strategy. Any strategy we choose to solve a research problem will lie somewhere in a continuum between quantitative and qualitative research approaches. Quantitative approaches describe events or phenomena in terms of numbers, as opposed to qualitative approaches usually cause uneasiness in certain areas of the social sciences, these are presented first in this paper.

Quantitative approaches, also known as *statistical*, imply working with numerical data to establish the degree of the relationship between variables. These include pre-experimental, quasi-experimental, true-experimental, ex-post facto, and correlational research. They all try to test a given hypothesis, that is, our idea of the degree of relatedness between two or more variables. A variable is a characteristic that the researcher takes as a representation of a concept. Take, for example, the research question we phrased as "Is multiple-choice better suited than essay to test my objectives?" The variables might be the two types of tests, on the one hand, and the students' degree of mastery of the objectives taught, on the other hand. The extent to which variables in a study, can be regulated is called *control*. Quantitative approaches usually imply a measure of control.

Quantitative approaches require special care in selecting a representative sample of subjects, designing the instruments, and collecting and interpreting data. There are numerous works that explain the different procedures available to carry out these activities. If our research problem seems to be complex, it is a good idea to resort to a more experienced colleague or to a statistician for advice on designing a strategy that accommodates our needs.

Pre-experimental research: The typical one-group, pretest-posttest design illustrates this method: a study of the effectiveness of a new teaching technique based only on a comparison of results from the same test administered before and after applying the technique in one classroom. This study ignores the effect of intervening variables, such as students' psychological development, and thus its conclusions are not precise enough to allow either making decisions regarding the validity of the new technique or generalizing the findings to the rest of the school population. The value of pre-experimental research lies in the fact that it may help point out a number of aspects that should be considered before further research is done.

Quasi-experimental research: Sometimes it is necessary to introduce some control of relevant variables in a study, but this is not possible to the extent of a true experiment. When this happens, we turn to quasi-experimental research. An example of this would be a study investigating the effect of the order of presentation of exam

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questions upon the students' grades without being able to randomly assign students to the different treatments because the academic environment does not allow for it.

True experimental research: Its aim is to investigate cause-and-effect relationships by manipulating and controlling variables. The effects of manipulating certain variables are observed on other variables. Through this approach, changes are deliberately and systematically introduced into the events of our interest. This is done by assigning one or more *experimental group* to one or more treatments and then comparing the results to one or more *control groups*, which do not receive the treatment. The subjects must be randomly assigned to each group. An example of the true experimental approach is a study of the effects of class size on achievement in English. Because it provides a variety of design strategies to fit different experimental purposes, this approach is considered by many the most sophisticated research method. However, because it requires manipulating variables, many researchers in the social sciences also consider it the most unrealistic.

Ex-post facto research: Its aim is also to investigate cause-and-effect relationships. However, it is used when changes in a variable have already taken place and therefore these variables are inherently not manipulable. The name of this approach implies that inferences are made "from after the fact". We may use the ex-post facto strategy when we wish to investigate the influence of variables like home environment, motivation, intelligence or parental reading habits. These are characteristics that a subject possesses before the study begins. As researchers, we have no direct control of these variables and can only try to determine their incidence on an observed consequence. Although this method lacks control, it is useful in our field because it can supply relevant information for educational decision-making. An example of ex-post facto approach would involve studying students' mastery of grammatical vs. stylistic abilities.

Qualitative approaches address the defined research problem in a different fashion: they study it from a more conceptual point of view than do the qualitative approaches. In the educational field, research can very often be more effective (and equally systematic) when qualitative approaches are employed. The stages mentioned at the beginning of this paper are the ones used to describe the typical process associated with quantitative approaches. In qualitative approaches, on the other hand, we also define a problem, but the very nature of it, as well as the study of the related literature, may suggest a research stategy not based on numerical data. In this case, we may not need special research instruments, since our data will probably be in the form of educational and philosophical positions obtained from our analysis of previous studies and other literature. Our own reflection on the problem will be even more necessary in the qualitative approach when trying to interpret this kind of "data" and reporting the "result" of our examination of the problem.

The typical qualitative approach, called a *documentary analysis*, describes a given situation, fact or event through the information obtained from different documentary sources: books, records, magazines, specialized journals, interviews, newspaper articles, etc. During our training most of us acquired some experience in the preparation of term papers by using the library and other sources to search for the ideas of scholars in our field. Brown points out that some language-teaching professionals continue "developing creative and productive insights into a given topic" by writing coherent statements of the term-paper kind. He also says that some people resort to an even "wider range of resources and experiences", as did Noam Chomsky, who had a

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background in mathematics and philosophy and combined it with his knowledge of linguistics to produce the revolutionary theory of generative transformational grammar.

Other useful examples of documentary analysis might include: an intensive review of available literature on the role of content schemata in ESP reading comprehension; a comparative study of various propositions for the use of American and British poetry in the EFL classroom; a synthesis of an important author's work in language teaching methodology based on situational considerations affecting the country trying to adopt it; an analysis of certain aspects of theoretical movements. Historical studies, such as tracing the development of a language-teaching methodologies, also rely on documentary analysis as an important source of research data.

Selecting a research strategy

Far from excluding each other, quantitative and qualitative approaches complement one another. According to Brown, statistical research "can help form patterns in the seeming confusion of facts that surround us". Although quantitative approaches do provide much of the valuable evidence needed to support our views of the problem, all research follows a qualitative approach at least in the researcher's analysis of the background of the problem. Without this, interpretation of results would be difficult.

Deciding how quantitative or qualitative our research strategy should be can be accomplished by consulting people who have more experience in doing research. If we are good at teamwork and find a colleague who is interested in our topic, we can also consider co-authoring the study. The strategy chosen will depend upon the nature of the problem as well as on the circumstances that we face and the facilities offered by our environment space. Among others, ethical and institutional considerations will affect selection of a strategy.

Resource constraints (time, money, equipment, personnel), especially in research projects involving complex problems, should also be considered. Therefore, the extent to which two or more approaches will combine to produce a research strategy that fits our purpose as researchers is often dictated by circumstances.

If we think for a moment about our initial research question, "What types of tests are suited to evaluate my objectives?" – a viable research strategy would start by studying books and journal articles dealing with different types of tests and their applications to various purposes. These investigations may prepare the background to set up an experiment to test relationships between some of the variables suggested by other people or studies. For instance, an experiment could be done to test the effects of three different types of exams on students' mastery of a particular set of instructional objectives, considering as many intervening variables as the real testing situation allows. However, we could skip the experiment if we felt that the analysis provided enough material to allow us to reach a conclusion, such as a qualitative reflection, regarding our preoccupation with how test types should be used in our particular case. This reflection alone is worth all the efforts invested in research.

There are many events which provide opportunities to learn about the strengths and weaknesses of our research strategies, to make contacts with people who can help us at certain stages, and to gauge the public's acceptance of different types of report presentations. The only thing required of us to make the most out of these opportunities is a *pro-research attitude*. The job may not seem easy, but it is certainly not impossible. Defining the problem and selecting the research strategy are only two steps in the

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research process, but they are the most important. Care must also be taken when we have to develop instruments, collect and interpret data, and report the results.

Our professional competence gives us the opportunity to bring about new information through research. We just need to see the events in our environment space as possible research problems and then find plausible answers for our queries. Such answers may mean the introduction of positive changes in our work. Our professional action will thus contribute to the improvement of education and instruction and, in the process, to our own growth as professionals.

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