**Research Dichotomies:**

**Basic Versus Applied Research**

One of the most central distinctions made in discussing research is the difference between ***basic*** *and* ***applied*** *research.*

**Basic Research:**

The purpose of *basic research* is to design studies that can test, refine, modify, or develop theories. As an example of basic research, Marcia’s (1966) research on adolescent identity led to a refinement of one stage of Erik Erikson’s psychosocial theory of development. Marcia’s goal was not to create a program to address practical ways to help adolescents but, rather, to extend and support the theory. Research that seeks to verify such things as the order that learners acquire grammatical rules or the importance of input in language learning are examples of basic research in the field of SLA.

Basic Research may be **explanatory , exploratory or descriptive**

**Applied Reasearch:**

examines the effectiveness and usefulness of particular educational practices. Here the goal is to determine the applicability of educational theory and principles by testing hypotheses within specific settings.So , the goal of applied research is to demonstrate the usefulness of theories in practice

A great deal of research in the field of Teaching English to Speakers of Other Languages **TESOL** is, of course, applied research. Second language educators, for example, have investigated why some students are reluctant to contribute to class discussions, what is the most effective type of feedback on student essays, and what is the most productive number of vocabulary items to introduce at one time.

The most basic distinction between the two paradigms of research is that basic research is research that has no immediate application, whereas applied research is research that does. However, such distinctions are somewhat ambiguous as almost all basic research eventually results in some worthwhile application in the longrange.

**Secondary & Primary Research**

There are two major sources of data that both basic and applied researchers can gather while conducting research

**Secondary Research (Literature Reviews) :**

*In using secondary data, researchers examine what* others have discovered about a particular topic. For example, if teachers want to know about the advantages and disadvantages of using peer review in a writing class, they can investigate what others have written on the topic. As McDonough and McDonough (1997) point out, when secondary data is used, “the outcome of the research is the establishment, publicizing, or utilization of something that somebody—not the researcher or the person commissioning it—already knows” (p. 37).

One example of a study using secondary data is Silva (1993). In this study Silva summarized the findings of 72 empirical research studies that compared L1 and L2 writers with regard to their composing processes and the features of their written texts. He then discussed what these findings suggest in general for designing an effective L2 writing program. Studies such as these are termed *literature reviews.*

**Primary Research :**

In using *primary data, researchers gather original data to answer a particular* research question. As McDonough and McDonough (1997) note, when researchers gather first-hand data, “the outcome is knowledge nobody had before” (p. 37).

**e.g.,**we gather data directly from students who are learning a language rather than from secondary resources (books about students who are learning a language )

**Inductive Vs Deductive Reosoning in Educational Research**

**Inductive reasoning :**

is often referred to as a “bottom-up” approach to knowing in which the researcher uses particular observations to build an abstraction or to describe a picture of the phenomenon that is being studied. Inductive reasoning usually leads to inductive methods of data collection where the researcher (1) systematically observes the phenomena under investigation, (2) searches for patterns or themes in the observations, and (3) develops a generalization from the analysis of those themes. So the researcher proceeds from specific observations to general statements— a type of discovery approach to knowing.

**Deductive reasoning:**

uses a top-down approach to knowing. Educational researchers use one aspect of deductive reasoning by first making a general statement and then seeking specific evidence that would support or disconfirm that statement. This type of research employs what is known as the **hypothetic-deductive method, which begins by forming a hypothesis: a tentative explanation** that can be tested by collecting data. For example, one might hypothesize that small classes would result in a greater amount of student learning than large classes. This hypothesis would be based on a **theory or a knowledge base composed** of the results of previous research studies.

The humanistic theory of education emphasizes strong teacher-student relationships as part of effective learning. Previous research studies have shown that such relationships are more common in small classes. Therefore, based on the humanistic theory and these previous studies, a researcher hypothesized that small class sizes will result in better student learning based on humanistic theory and previous studies. He collected data, and made a decision based on the data to either accept or reject the hypothesis or prediction.

The inductive and hypothetic-deductive approaches to knowing represent two general routes to knowledge used in educational research. Inductive reasoning is most closely associated with **Qualitative approaches to research** and deductive reasoning is related to **Quantitative approaches to research**

**Quantitative Vs Qualitative Approaches (traditions)**

**Qualitative research**

is a research in which the focus is on naturally occurring phenomena ,i.e,It collects and summarizes data using primarily narrative or verbal methods: observations, interviews, and diaries , and data are recorded in non-numerical form.

e.g., a diary study in which a student keeps track of her attitudes during a year-long Japanese language course ( the analysis is interpretive rather than statistical) .

**Quantitative approaches** :

summarize data using numbers. Hypotheses and methods of data collection in quantitative research are created *before the research begins.* Hypotheses or theories are then tested, and when supported, these hypotheses or theories are typically considered to be **generalizable: applicable to a wide range** of similar situations and populations. i.e,

Quantitative research generally starts with an experimental design in which a hypothesis is followed by the quantification of data and some sort of numerical analysis is carried out (e.g., a study comparing student test results before and after an instructional treatment).

*As a novice researcher, it is important that you consider which approach best captures your own assumptions about how theworld works.*

**Mixed-methods approach to research :**

In some studies researchers use both qualitative and quantitative methods to answer their research questions. For example , Pragmatic researchers propose that even within the same study, quantitative and qualitative methods can be combined in creative ways to more fully answer research questions.