**Formulating Research Questions**

**The research question is the cornerstone of your study**

In a research study (or dissertation) the research question (s) restate or clarify the aims and objectives of the study.

**Principles involved in designing research questions**

* Questions come from the assumptions the researcher makes about the world.
* The way the researcher sees knowledge and ways of getting to it.
* The ontological, epistemological and methodological assumptions the researcher makes (Creswell, 1994).

**Contributing factors to the choice of a question**

* Worldview
* Training and experience
* Psychological factors
* The nature of the problem
* Audience

**Interpretive and Qualitative Questions**

Use one or two grand tour questions followed by a set of subquestions. Subquestions narrow the focus but do not constrain the researcher (Creswell, 1994). In this paradigm the questions depend on the type of qualitative design the researcher is using. For example, critical ethnography research questions may build on or start from established literature. In phenomenology the questions might be broad with no references to the existing literature.

Example: How do teachers cope with work overload?

Research questions often start with ‘WHAT’ or ‘HOW’.

Establish a purpose for your study . Explain what you are going to do with the research questions. Your research questions will lead you to:

* Discover; (e.g grounded theory)
* Explain or seek to understand (ethnography) time is an issue here.
* Explore a process (case study).
* Describe experiences (phenomenology).
* Criticize (some of the above within an action research framework).

Qualitative research questions evolve and even change during the study. The whole process is cyclical, not linear.

Nondirectional wording is essential. No variables to be related.

**Positivist Research Questions**

In this paradigm, questions have a different purpose and also different wording from those in the interpretive paradigm.

Hypotheses, questions and objectives develop from theory and observation.

Questions are testable propositions deduced from theory

A hypothesis is a declarative statement of the relationship between two or more variables.

A research question poses this relationship but in a question form

an objective states the relationship between variables but in a declarative form

**Hypothesis:** Third class EFL Lykeio writing students will improve their writing performance on their final exam test by 10 points after a two month using of CALL software.

**Research Question:** What is the effect of using a CALL writing software on the writing performance of EFL third class Lykeio students?

**Objective:** The purpose of this study is to investigate the effect of using a CALL writing software on the writing performance of a group of third class Lykeio students.

**Types of hypotheses**

**Literary null hypothesis** (concept oriented, no direction).

*Example:* There is no relationship between CALL and reading performance.

**Literary alternative hypothesis** (concept oriented, directional).

The more students have access to CALL the better they read

**Operational null hypothesis** (operational , no direction).

There is no relationship between the number of hours students use reading texts in CALL activities and their ability to answer inference questions on a 500 – word reading text.

**Operational alternative hypothesis** (operational, directional).

The higher the number of hours students spend reading texts in CALL activities the higher their performance will be in answering inference questions on a 500 –word reading text.

More contact hours in reading CALL based texts will increase students’ ability to answer inference questions on a 500 – word reading text.

Hypotheses-based studies tend to be experimental in design. They might include true experiments using randomly assigned subjects to treatment condition.

Not every study in the positivist paradigm uses a hypothesis. Some studies are **correlation**. These studies use questionnaires , structure interviews and tests to study the relationship between two or more variables.

Example: Is the anxiety level of an individual third class Gymnasio English learner related to the self – perception of his/her speaking ability in English?

**Related Readings**

Creswell, J. W. (1994). Research design: Qualitative and Quantitative approaches. L,ondon: Sage

Denzin, N.K & Lincoln, Y (Eds.). (1994). Handbook of qualitative research. Newbury Park, CA: Sage

Wolcott, H.F (1994) Transforming qualitative data: description, analysis and interpretation. California: Sage.