

Level: Master 1 (Didactics)

Module: Methodology in Assessment and Testing

The Methodology of Educational Research

Prof. Rahmouna ZIDANE

Department of English

University of TLEMCEM

Research on Assessment and Testing

- Educational research deals with the study of learning and teaching issues as well as testing. The process of research on assessment and testing aims at providing information about measurement and evaluation, the assessment methods and the ways of improving the testing situation.

Educational Research

- Through scientific research, educators hope to obtain accurate and reliable information about important issues and problems that face the educational community. Scientific research as applied to education is defined as the application of systematic methods and techniques that help researchers and practitioners understand and enhance the teaching and learning process (Lodico et al., 2010, p.10).

Research Paradigm

- Educational research is based on the application of various research paradigms.
- A paradigm is a philosophy of science that gives importance to the following issues: ontology, epistemology, methodology and axiology. **Ontology** implies the nature of reality that is discovered by research. **Epistemology** refers to knowledge. **Methodology** means the set of methods used by the researcher. **Axiology** is concerned with ethics.

Research Paradigm

- Kuhn (1962) asserts that a paradigm helps to guide research through the specification of the studied object, the formulation of hypotheses and the identification of the suitable research instruments.
- The choice of a specific paradigm determines the steps of research including the formulation of the problematic issue and the choice of the sample as well as the techniques of data collection and analysis. It enables the researcher to establish the study design.

Research Paradigms

The development of research methodologies has led to the existence of various research paradigms including positivism, interpretivism, pragmatism, the transformative paradigm and complexity theory.

Positivism

- **Positivism** is based on the idea that knowledge is objective. It includes the following methods: the experiment and the survey. It is based on the use of statistical methods of analysis. The application of positivism in education implies a research methodology that is based on objectivity and quantitative techniques.

Interpretivism

- **Interpretivism** is also called anti-positivism or hermeneutics or constructivism. It involves a set of research methods including phenomenology, ethnography, the historical method and the case study. The methodology of this paradigm is based on the use of qualitative research tools and interpretation. Qualitative educational research is often linked to interpretivism.

Pragmatism

- **Pragmatism** combines the ideas of positivism and interpretivism. It relies on the interpretation of data collected via practical research. The methodology of pragmatism involves the use of qualitative and quantitative research tools.

The Transformative Paradigm

- **The transformative paradigm** is called the post-modern or emancipatory paradigm. It aims at supplying information about the causes of a problem to make the necessary changes. It encompasses critical theory and feminist theory.

The Transformative Paradigm

- Critical theory attempts to reach emancipation and equality by understanding the problematic situation whereas feminist theory concerns the effect of gender on the studied phenomenon. In the domain of education, the transformative paradigm deals with reflective practice.

Complexity Theory

- **Complexity theory** which is also called complexity science relies on a pluralistic methodology that combines qualitative and quantitative methods. It focuses on the study of complex systems. In the domain of educational research, it involves studies about complex issues and educational change.

Research Paradigms

- Educational research today is beginning to move away from a hard and fast distinction between qualitative and quantitative research methods. In fact, many researchers combine both approaches in order to gather a breadth of data and to validate their results...As a beginning researcher, it is important that you consider which approach best captures your own assumptions about how the world works (Lodico et al., 2010, p.13).

Research Paradigms

- Educational researchers select a particular research paradigm according to their intention and objectives. However, the methodology of educational research often relies on mixed methods.

References

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