

# Epistemological Positioning in Research on Quality Assessment in Educational Field

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**Abstract:** In this paper, the principal elements of research paradigms in terms of epistemological approaches are presented and reviewed. The epistemological perspectives considering the specificity of the field of Higher Education that includes institutional management, educational approaches, physical requirements, and socio-economic and cultural dimensions are presented. Thus, the epistemological approaches which are mainly the positivism, constructivism and interpretivism as well as derived approaches, are debated. Noting that many difficulties are to be encountered if the research adopts a unique and ultimate epistemological approach due to the complexity of the subject and environmental plurality that precludes the limitations to canonical paradigms.

**Keywords:** Epistemological Positioning in Research, Quality assessment, Higher education.

## 1 Introduction

A research question combines a theme, a purpose, and a process (Thietart et al, 2001). The theme concerns quality assessment in Higher education institutions. The purpose of the study is to propose a national quality assurance template/ model that could be applied in Higher education institutions for self-assessment and for quality assurance and accreditation processes' evaluation.

To start, such study, it is of interest to present and review, within the frame of the global knowledge approaches, the principal elements of research paradigms in terms of epistemological approaches. The epistemological perspectives are presented, considering the specificity of the field of Higher education that includes institutional management, educational approaches, physical requirements and socio-economic and cultural dimensions.

Literature abounds with epistemological approaches which are mainly the positivism, the constructivism and the interpretivism approaches as well as derived or independent approaches. These approaches are the subject of the research debate, in the field of Management within the social domain, especially in education field.

## 2 The principles of the Research Paradigms

Paradigms are considered as a research approach model; a research intellectual framework; and a research frame of references (Kuhm, 1962 cited in Thietart et al., 2001). A paradigm is the adoption by the researcher of a vision of the reality in which the research is conducted, whereby the investigation is guided in terms of ontological, epistemological, methodological, and ethical choices (Akale, 2012; Girod-Seville and Perret, 2001; Guba and Lincoln, 1994) which are defined by Akale (2012) as follows:

-The ontology gives answers to the following questions: What is the form and the nature of the reality? What does reality present in problems and curiosity that needs to be elucidated?

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-The epistemology takes interest in understanding the nature of the relationship between the subject (researcher / observer / investigator) and the object to be known.

-The methodological question is concerned with the procedure conducted by the researcher to find knowledge that he/she considers deserving to be discovered.

-The ethical question permits the identification of the validity criteria of the produced knowledge

Globally, epistemology is defined as the study of nature, validity, value, method, and scope of knowledge in a scientific approach (Girod-Seville and Perret ,2001).

### 3 The principal Epistemology Paradigms

#### 3.1 Positivism Epistemology

Knowledge and reality are essentially characterized by:

-Reality is potentially recognizable. The goal of science is to discover this reality.

-Knowledge is cumulative and describes the object.

-Every proposition which effectively describes the reality is considered as true.

-The reality is independent of the observer – investigator who describes it.

Positivism postulates the independence of the subject (researcher) and the object. A real object is not altered by the observation, nor is the observer affected by the observation (principle of objectivity).

Following the positivism epistemology, the laws of nature exist and determine reality. The determinism is expressed under the causality form (Descartes). Thus, in positivism, knowledge generated by discovery through natural logic is considered as true and as law of the nature. “The researcher question is formulated in terms of: for what reason?” (Girod-Seville and Perret ,2001, p.15)

The researcher adopts the positivism approach since his research is conducted in an independent manner, without any influence or interference occurring between the researcher and the research object and the judgement of the result (objectivity). We can ask: Can we apply this ideal approach to research object in social sciences, in management or in education? Is everything recognizable? Shouldn't the observer's point of view and approach be part of the observation? Although some researchers in management sciences try to adopt an objectivist attitude, others consider that the human limitation doesn't permit the attainment of this ideal level in this domain (Gadamer, 2002 cited in Akale ,2012; Miller, 2005)

Generally, the positivism is an epistemological position attributed to researchers in the science domain named exact or hard sciences and in applied sciences research domains (Remenytal, 1998 cited in Akale, 2012; Le Moigne, 1990)

In management sciences, the positivism approach is adopted when discovering general laws based on data of observable social reality, where the credible knowledge is considered as being produced as a result of objective observations of observable phenomena.

#### 3.2 Constructivism Epistemology

The word “Constructivism” proposed by Piaget (1970) is a neologism of the mathematician Brouwer when referring to the constructed character of the knowledge (Nellisen, 1999). The two basic axioms of this approach are: the phenomenological axiom, and the teleological axiom.

In the phenomenological axiom, the reality is not recognizable; the knowledge is constructed by interaction between researcher and phenomenon. Piaget identified the principle of inseparability as the interaction between the phenomenon to be known and the researcher / investigator who produces the knowledge which is related to the object and the mode of knowledge generation (the intelligence or the act of knowing).

The scientific researcher is a designer-observer-modeler (the principle of the intelligent action). The knowledge constructed by the researcher based on his experience, organizes at the same time the knowledge construction process. Then, the knowledge is the result of the knowledge production process and the process itself (Nellisen, 1999)

The constructivist ontological hypothesis proposes that the researcher does not know the entity of the phenomenon, but knows the act by which he (asks) perceives the interaction between the phenomena.

In the teleological axiom, the cognitive act is intentional; the researcher has a decisive role in knowledge establishment, where finality should be taken into consideration; consequently, the observed object (phenomenon) is in itself “finalized” when the researcher constructs the knowledge, he refers to the finalities that has explicated.

The methodology of the constructible knowledge is formulated by two principles, mainly:

- i. The principle of the systematic modeling where the modeling of the act is privileged (what does it do? why?). In this modeling the complex interaction between the researcher and the phenomena is expressed, that permits the producing of the rational statement (Charreire and Huault,2001).
- ii. The principle of the intelligent action which characterizes the capacity of the cognitive system to explore and construe the symbolic representations of the knowledge that it discusses, called problem resolution (Ibid). There is generation of knowledge (constructible and producible) by system of symbols. This principle proposes the elaboration of a descriptive posterior action. The finality is to propose a solution that agrees with the observer (Ibid).

From the constructivist approach we conclude the following:

- The reality is never independent of the researcher and is specific in nature. It is dependent on its form and content from the individual or individuals who are responsible for constructing the reality (Akale, 2012)
- The reality is apprehended in a non-tangible mental construction with the negation of ontological pre-supposition (phenomenological hypothesis).
- The experimental and social base of reality is based on the social local context.
- The reality cannot be directly reached. The researcher must develop means and adequate analytical analysis methods in order to attain it. Certain constructivists ask: does reality exist? (Girod-seville and perret, 2001; Glosersfeld, 1988 cited in Akale, 2012).
- The social word of the constructivists is formed by interpretation that is constructive due to the interactions between actors in particular contexts. Then the produced knowledge is always contextualized (Le Moigne, 1995, cited in Akale, 2012).
- The path of knowledge passes through the comprehension of the meaning that actors give to the reality. This reality must be understood from the interpretation given by the actors.
- The comprehension process participates in the construction of the reality of the actors being studied. The reality is “constructed by the act of knowing rather than by being a given objective perception” (Le Moigne, 1995 cited in Girod-Seville and Perret, 2001, p23).
- The validity of knowledge is base on adequacy and teachability (the knowledge fits a given situation and can be reproduced and must be transmissible) (Glosersfeld, 1988 cited in Akale 2012, Le Moigne, 1995 & Gadamer, 2002 cited in Akale ,2012)
- The constructivists accept, in general, all proven forms of reasoning.

### *3.3 Epistemological Interpretivism Positioning:*

In interpretivism positioning, obtaining knowledge requires that researchers seek the understanding of how social reality meaning is constructed by the actors (Thietart et al., 2001). There is some common epistemological question between the constructivism and the interpretivism paradigms: both are based on a phenomenological hypothesis. Both paradigms share the same assumption concerning the dependency of the observer (researcher) and reality (Girod-Seville and Perret,2001) and are based, concerning the nature of reality, on the intentional (finality) hypothesis. The nature of the produced knowledge is subjective and contextual.

In interpretivism approach, the essence of the object reality is multiple. The interpretivism is considered by certain authors as moderate constructivism (Akale 2012, p.161). Elsewhere, following the interpretivism approach, the

knowledge is generated by interpretation. The research question is formulated in terms of: What motivates actors? In general, the privileged status of knowledge is explaining in positivism, constructing in constructivism and understanding in interpretivism. Then, interpretivists try to understand reality through actors' interpretations. So, actors' intentions, motivations, expectations, motives, and beliefs must be taken into consideration (Girod-Seville and Perret, 2001).

Moreover, interpretivist research are drawn towards contextualized research. for example, in the case of organizational structure, daily functioning of an organization is analyzed, that involves carrying out field study (direct observation or on-site interviews) (Ibid). In general, interpretivism approach defends the particularity of human sciences of organizational science. Interpretivist search to understand how actors construct the meaning they give to social reality (Ibid).

In the interpretivist approach, the validity criteria of knowledge (value of knowledge) are multiple (Lincoln and Guba, 1985, cited in Thietart *et al.*, 2001 and Girod-Seville and Perret 2001), namely:

- i. The credibility (confidence in the "truth" of the findings of inquiry).
- ii. The transferability (extension of applicability of the findings of inquiry, in other contexts or with other researcher).
- iii. The dependability (determine whether the findings of an inquiry be repeated if the inquiries were replicated in the same or similar context).
- iv. The confirmability (the degree to which the findings of an inquiry interests or perspectives of the inquirer).

Beside the principal research paradigms cited above, other paradigms are evoked in the literature such as the pragmatism (Dewey), the empirism (Bacon), the functionalism (Burrelle and Morgan 1979 cited in Akale, 2012).

#### 4 A plurality of Paradigms

Although researchers must generally conform to the principles of a known epistemological category recognized by the scientific community (Verstraete, 2007), but debate was engaged in this community concerning the necessity or not of enclosing research practices in canonic diagrams of epistemological approaches. Peyerabend (1979, cited in Akale ,2012) stated that the idea that sciences can and must be organized under fixed and universal rules leads to neglect the human creativity (does not permit the researcher to open his path in diverse ways according to the circumstances) and retard on humanity development. Thus, science is becoming more dogmatic, and does not favor its development.

Certain researchers refuse to indicate the epistemological framework for their research projects (La Tour ,2006; cited in Akale 2012 Weppe 2009) and others consider that adopting a particular paradigm is a voluntary choice and is a veritable act of faith (Burrelle and Morgan ,1979; Jackson and Carter ,1991, cited in Thietart *et al.* ,2001). However, pedagogically, epistemology positioning presents a certain virtue for junior researchers in presenting coherent ideas and clear research procedures (Akale ,2012, p.163).

Many researchers tend to see plurality of paradigms as an opportunity, and certain authors propose an integrated framework or mixed epistemological position (Leed 1991, Pfeffer 1993, Donalds on 1997 cited in Thietart *et al.* 2001). Accordingly, researchers can gain from the multiplicity of the existing theoretical foundations and methodologies to reach the objectives of the conducted research, being however, precise and demonstrate the coherence of their choice with the research object. To take advantage of the various methodologies (in quantitative or in qualitative processes) and epistemological paradigm, intersection approach is encouraged. However, it is legitimate to ask: How can we define in a plural environment a coherent epistemological position to examine a research project in higher education and management domain, where epistemological references are not definitively identified? (Schmidt, 2008)

#### 5 Epistemological positioning in Management and Education Domains

The epistemological status in management and education is a subject of debate (David ,1999). Indeed, management and education are general social activities; however, they are not limited to firms, institutions, or public administrations. Management can be also discussed at the individual level, social political management, natural resource management, human resource management, risk management, environment management, etc.

As management is the coordination of the finalized piloting at some pre-identified functions (Ibid), then management sciences permit the engineering of social organization. We can admit that in this domain, the reality exists, but it is constructed in two manners (Ibid):

- i. The reality is constructed in our mind since we only have the representation of the reality. It is constructed because the different actors, including the researchers, construct or help in its construction.
- ii. The reality is not collectively constructed with complete coordination between actors. For an actor or group of actors, the reality is intermediate: only a part of this reality can be reasonably considered as a target of “project action”, the rest may be considered as “data”. Then it is legitimate for the researcher to claim the modelling of some phenomenon categories.

In management and education, the reality is in permanent construction and transformation process. It is not guided and managed by independent rules. Then, it is necessary, from an epistemological point of view, to understand the factors that specify the researchers’ position and the scientific characters of the produced knowledge.

From a research perspective, management and higher education systems are the boundless source of queries that vary depending on subject and aim of the adopted research approach (Girod-Seville and Perret, 2001). It can be research of content or an analysis of process with an objective to describe organizational learning to establish norms that are able to ensure the smooth operation of the organization or institution, or to enhance and optimize the functional aspect or to predict the outcome of a strategy or approach.

## 6 Methodological approaches in Management and Higher education systems

Due to the complexity of the object in management and higher education systems, applying experimental approaches will be difficult, since the reality where the human factor and the institutional factor (social and natural objects), cannot be reproduced in similar natural conditions. Field studies are privileged in these domains. In field studies, primary data are obtained using qualitative methods (interviews, inquiries, participating observations, scale analysis, protocol analysis, cognitive forms, etc.), and quantitative methods (surveys, systematic observations, analysis of content, etc.). The problem is the fact that in these domains the studied objects are complex and are necessarily the product of numerous influences (Morin 1977, cited in Lesage 2000). So, individuals are a principle element in social entity (institutions, public administration, enterprise, etc.). Every individual has his own motivation and cognitive characteristics.

This entity is strongly interconnected with its environment (physical and non-physical environment) and share common goals.

Although the data obtained from the field study permits a statistical processing, different effects can perturb their conditions of collection (internal validity) (Lesage, 2000); namely:

- i. The individual tries to rationalize their answers or present no interest in the answers (test effect).
- ii. The quality of the prepared questionnaire or interview for data collection may present some deficiencies (instrument effect).
- iii. The sample includes a biased non -controlled attributes (selection effect).
- iv. The subject contaminates the results through insincere answers (contamination effects) (Ibid).

Although each method has advantage and disadvantage in terms of factors that impact result validity, qualitative and quantitative methods are complementary (Curchod 2003). Moreover, certain researchers consider the case study which constitute an empirical research strategy adapted to the questioning of the implicit interaction related to a phenomenon (Chateline, 2009). The selected case must permit an access to multiple data sources (interviews, documents, questionnaire, observation, etc.)

## 7 Quality Assurance in Higher Education, mainly in interpretivism approach

In this domain, the institutions, and the theme -related concepts constitutes realities constructed and understood by actors. The actors (students, administration, faculty, campus and services, educational and research projects, programs, and curriculum ...) build a structure or a system (university, enterprise, research center, QA agencies, standards ...). It exists interactions and influences between actors. The structures are also in interaction with other actors or structures (educational system, government, society, economy, labor market, etc.)

The nature of the objects and the context of the study (national or international contexts) and the capacity of the actors to influence each other (structure and environment) should be taken into consideration. The observations, the comprehensions, the explanations, the interpretations of the conceptual basis, the mechanisms and the process guiding

the generation of standards and the socio-economic context, organizational and institutional consequence, the politics of standardizing and globalization of higher education are given much importance.

As mentioned in the introduction of this paper, the study leads to a modelling and proposition generated from cognitive understanding and analysis. The interpretivism is mainly chosen as the research approach because it is moderate and flexible, which is more adopted in the study of management and education domains.

Indeed, this positioning recognizes the existence of the researcher /object relations. The status of comprehensions is considered even privileged and the research is contextualized. The generated knowledge is the result of the actor's contribution, a cognitive dialectic and the observations. Moreover, our access to reality is not neutral. The study is not completely objective as stipulated by the conditions of the positivism approach, but also is not completely subjective as stipulated by the dogmatic constructivism approach. An interaction and influences between the actors exist. The deep involvement in the research object environment as suggested by the interpretivism (or the moderate constructivism) approach permits description and understanding of the process and the variables that interact with each other. It also permits to carry out a conceptual analysis to reach the objective of the study. It is worth mentioning that the objective is to propose a modelling of standards and criteria of the quality assurance, and assessment rules corresponding to the Lebanese higher education context or similar systems in other countries.

Although conducting the study within the entities (actors) of the research object, the results should not be strongly influenced by local, temporal and personal contexts of certain actors, so as to maintain acceptable judgement of the influencing mechanism in knowledge generation.

In fact, intersection of epistemological approaches like moderate positivism, moderate constructivism and interpretivism are considered; even interpretivism, paradigm positioning is mainly adopted.

## 8 Conclusion

In this paper, the principle of the research and epistemology paradigms are presented and discussed. Particular attention is given to epistemological interpretivism positioning and to plurality of paradigms. The epistemological positioning and the methodological approaches in management and higher education domains and systems are debated. The discussed, analyzed and the resultant issues pertaining to knowledge generation and hence epistemological perspectives in these domains are chosen which are mainly on interpretative approach.

Considering that many difficulties are to be encountered if the researcher adopts a unique and ultimate epistemological approach because the specificity of the subject of the research considered and the environmental plurality that precludes the limitations to canonical paradigms. Thus, for the research object, quality assurance in higher education, the epistemological approach adopted is mainly the interpretivism one, but also an intersection of epistemological approaches like moderate positivism, moderate constructivism and interpretivism are considered. The implicate reasons of this positioning are explained and justified, particularly, by the fact that actors are involved and implicated within the process of the research object, and by taking into consideration how reality is envisaged and the potential contribution to knowledge production.

However, we should note that global knowledge generation approaches, that require the researcher to have deep philosophical epistemological background and commitment, rigor procedure and methodology could not be conducted with rigor in this research, due to the complexity that characterize this subject domain.

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