

# Research Philosophy in Management Sciences: Epistemological Approach to Research Methods

Kotun, Ahmed Ishola / Elegunde, Abayomi Folarin & Balogun, Mustapha Tosin

---

## ABSTRACT

*This study explored research philosophy using epistemological approach in management sciences. The knowledge of research is essential to have a broad spectrum about a phenomenon. The use of appropriate research method depends on good knowledge of research paradigm, unit of analysis and the choice of method that is applicable within chosen research philosophy. The study examined importance of epistemological approach to research and gave typical evidences of the relationship between symbolic-interpretive perspective and function –systemic perspective of research methods looking at how reality can be famous (epistemology) and the techniques to use in gathering data. The study concluded that conjoining objectivity and subjectivity of research design to inter-subjectivity through epistemological approach, benefits philosophical building by management science researchers to explicate data gathering, analysis and interpretation.*

**Keywords:** *epistemology, functional–systemic, inter-subjectivity, management sciences, philosophy, qualitative research design and symbolic-interpretive*

## INTRODUCTION

Like other fields of study, management sciences research has grown increasingly complex. It is presently requiring new experimental techniques in examining research problems and analyses to explain and clarify environmental and social phenomena (Olajide & Lawal, 2020; Uma & Jolani, 2014). Previously, researchers in management sciences were ill-informed in their adoption of a particular position with regards to research (Umesh & Nitin, 2014). This has begun to change in a disparate management reviews; these are daunting and inaccessible to those yet to be admitted into the convention of philosophical discourse.

Corona, Kovac and Mijarez (2017) viewed that management discipline continuously develops new philosophies to contribute to the body of knowledge which are built on past research and

experimental studies that are purely innovative ideas which could be converted into theories. In analyzing the concept of knowledge, epistemologists seek to identify essential defining elements of knowledge, this is vital in the fact that management sciences field of study products are made by different modes. This include tangible and intangible activities and can be predisposed by different interests and knowledge arises from many sources (Acosta, 2014). Johnson and Duberley (2013) perceived management sciences research as a conduct not only with “knowing what”, but goes beyond this to consider questions associated with “knowing how.” It is concerned to build a body of knowledge that document, codifies and articulates a problem and solution-set concerned with understanding and improving the practice of management.

However, management sciences research often faces similar methodological problems as their counterparts in other science disciplines. There are at least two ways that philosophy is connected with management research: ontological and epistemological. Researchers’ ontological and epistemological stances affect the methods considered legitimate in carrying out empirical research, and determine what is stated as a valid contribution to theory (Tsang, 2017).

The knowledge of research traditions is very important for educational researchers in order to have a broad spectrum to make decision about the study the researcher engaged in (Mohajam, 2018). This type of research could be steered with either quantitative or qualitative approach. Oberiri (2017) declared that quantitative research method deals with quantifying and analysis of variables in order to get results. It involves utilisation and analysis of numerical data using specific statistical techniques to answer questions like who, how, what, where and when. Expatriating on this definition, Aliaga, and Gunderson (2017), described quantitative research methods as explanation of an issue or phenomenon through gathering of data in numerical form and analysing with the aid of mathematical methods; in particular statistics. Qualitative research on the other hand, is lucid as a systematic, scientific inquiry that seeks to build a holistic, largely narrative, description to inform the researcher’s understanding of a social or cultural phenomenon (Astalin, 2013). This is use to clarify research problems, proposition and to establish research priorities (Mohajam, 2018).

Going by the above definitions, it could be deduced that the first thing a research tackles or deals with is explanation of an issue, be it qualitative or quantitative. When researchers embarked on a research study, they are always on the verge of explaining a given phenomenon. From a philosophical point of view, the arguments on the superiority between quantitative and qualitative paradigms continue to dominate the academia and research guild. Existing evidence suggested that different parts of the population respond very differently to identical interventions and it my increase inequalities of result gathered (Hizaamu, 2015; Williams, 2011).

Dauda (2016) observed that any study that relies on qualitative method especially in management sciences is due to its suitability to assess administrative environment that prevails within practice of many management theories and organization’s environment. The author observed that qualitative research method could be more reliable than quantitative in the management of organizations because managers and administrators live within the complex political environment

that quantitative numerical data cannot understand. Knowing and seeing of what is important is critical to the basis in which application of knowledge and theory is possible in a changing and dynamic environment.

Although, assessment of qualitative research is frequently criticized for lacking scientific dynamism with poor justification of the methods adopted, lack of transparency in the analytical procedures and findings being merely a collection of personal opinion (Noble & Smith, 2015). In spite differences in evaluating qualitative and quantitative research methods, tests and measures in establishing results of qualitative research is not applicable to quantitative research. This is because both approaches have inherent different philosophical positions and purposes (Kivunja & Kuyini, 2017). This study tries to, further emphasize the importance of qualitative research paradigm by focusing on the epistemological (worldview), theoretical perspectives (who/what of the study) and tools to collect and analyze data to distinguish qualitative research pattern from other.

In the field of management sciences today, where decisions and recommendations are always arrived in determining organizations' goals, objectives and performance, importance of understanding research approach and their application cannot be overemphasized. Kivunja and Kuyini (2017) acknowledged the importance of research pattern and their usage by researchers. Realistic research method needs to be adequately applied to management sciences research in order to have first-hand and holistic information about a phenomenon to avoid strata justification, bias and frivolous judgement on research conducted by researchers.

Argument as to the appropriate research method adoptable for investigating a problem is a continuous issue among scholars and practitioners. This conveyed advocacy for diverse research approaches in solving a particular research study (Onwuegbuzie & Leech, 2005). This is imperative because research elements in management sciences are often challenging with dynamic and unstable responses. Thus, adoption of a particular method for conducting research studies might limit or affect appropriateness and correctness of a research study.

The perception of epistemology as it relates to research study in management sciences research signifies a huge debate about how knowledge is acquired, what people know and how knowledge relates to the conceptions of truth, belief and justification (Annis & David 2001; Bovens & Hartmann, 2003; Myers, 2013). This is necessary since research is a process of discovering new facts or obtainment of additional information about a given phenomenon by expanding frontiers of knowledge and decreasing ignorance in order to find answers to specifics questions (Adekeye, 2016)

Furthermore, it is however, observed that scholars in management sciences probably seem to be contented with the usage of either qualitative or quantitative method in conducting a research study. These researchers perhaps may believe that this may be because of insufficient awareness of the potentiality of philosophical management epistemology approach to research studies as a means of conducting research studies. Hence, this study seeks to expose management sciences researchers to epistemological approach to research studies in management sciences. The aim of

this study is to evaluate epistemology philosophy in management sciences research studies. The study adopted exploratory research approach where secondary data were collected from various publications such as journals, textbooks, magazines and internet.

### **RESEARCH PHILOSOPHY**

Research philosophy is the fundamental assumptions that explicitly underpin the way which reality is conceived and studied (Tsang, 2017). It is adjudged as a system of beliefs and assumptions about the development of knowledge, the study of the nature and meaning of the universe and of human life (Bryman & Bell 2015; Saunders et al. 2009). Myers (2015) opined that management sciences researchers faces similar methodological problems as their counterparts in other science disciplines. The researcher presumed two ways in which philosophy is connected with management sciences research; ontological and epistemological. Researchers' ontological and epistemological stances affect the methods considered appropriate in conducting empirical research, and what is regarded as a valid contribution to theory. Social and management sciences field anticipated that there are four (4) common philosophical positions associated with certain ontological and epistemological assumptions (Myers, 2015; Mohajam, 2018; Saunders et al. 2009; Tsang, 2017). These positions are positivism, critical realism, interpretivism and pragmatism.

#### **Positivism**

The philosophy of positivism research is a source of knowledge closely associated with physical and normal skills (Birger, 2005; Saunders et al., 2009). Positivism is a philosophical system, which confines itself to data of experience and experimentation, excludes metaphysical and theological speculation. It is a philosophy, that quest for accuracy, objectivity, causality and neutrality of values (Majeed, 2019). Mukherji (2000) affirmed positivism as reality consisting discrete occurrences that human sense can observe.

#### **Realism**

It is the attitude or practice of accepting a situation as it is and being prepared to deal with it accordingly. Realism is a representation of how things truly are and or being practical and facing facts. Realism is the rejection of mythical beings appears (Tutelman & Webster, 2020). The representation of realism is an art or literature of objects, actions, or social conditions as they actually are, without idealisation or presentation in abstract form.

#### **Interpretivism**

The term interpretivism according to Sulkowski (2013) refers to epistemologies, or theories about how we can gain knowledge of the world, which loosely rely on interpreting or understanding the meanings that humans attach to their actions. Sulkowski mentioned that interpretivism means interpretivist. It involves researchers to interpret elements of the study. Interpretivism in-

tegrates human interest into a study. According to interpretivist philosophy, it is important for the researcher as a social actor to appreciate differences between people. Interpretivist, method of research ensures valid responses and this close to the truth. With the individual mattering, they give a good reflection of how people are truly feeling often providing an accurate picture and measuring what the researcher set out to measure.

### **Pragmatism**

Pragmatism is a way of dealing with problems or situations that focuses on practical approaches and solutions. It is a reasonable and logical way of doing things or of thinking about problems base on dealing with specific situations instead of ideas and theories (Livingstone, 2021). Pragmatism is often contrasted with the word idealism, which means based on or having high principles or ideals. An American movement in philosophy founded by C. S. Peirce and William James, marked that pragmatism is conceptions sought in their practical bearings, that the function of thought is to guide action, and that truth is pre-eminently to be tested by the practical consequences of belief

The choice of research philosophy will therefore influence the development of the research. Every research is set up on philosophical assumptions about the nature of the world. (Myers, 2013). These assumptions relate to the essence of phenomenon being studied (ontology), the ground knowledge (epistemology), the relationship between human being and his environment and (methodology) investigation obtained or knowledge of reality. Scholars such as Bengtsson (2016); Creswell (2013); Denzin and Lincoln (1998); Snape and Spencer (2003) and Yilmaz (2013) concluded that qualitative research looks at relationships within a system or culture of personal interactions among people. It emphasises the importance of understanding a given social setting rather than making predictions about a setting. This require researchers to develop research instrument by observing and interviewing people face to face which allows establishment of close contact with research participants when collecting data. In this sense, it makes the researcher's data to be thorough, rich, extensive and complex.

Obviously, the use of qualitative research required enough time to do analysis that is equal to the time in the field, which calls for an ongoing analysis of data (Bengtsson, 2016). This involves informed consent decisions and responsiveness to ethical concerns as it incorporates description of researcher's role and preference (Corona *et al.*, 2017).

### **METHODS**

The study adopted philosophical assumptions and characteristics of qualitative research and it investigates comparison perspectives of epistemological approaches to management sciences research.

**Table 1: Philosophical assumptions and characteristics of qualitative research**

	<b>Assumption</b>	<b>Question</b>	<b>Characteristics</b>	<b>Implications for practice</b>
i.	Epistemological	What is the relationship between the researcher and researched	Attempts to lessen distance between researcher and that being researched	Researcher collaborates, verifies, spend enough time on the field with research participants for both to become emic and etic.
ii.	Ontological	What is the nature of reality	Reality is subjective and multiple as perceived by researcher and research participants	Researchers uses quotes and themes to provide evidences and perspectives
iii.	Methodological	What is the process of research	Inductive and logical study within the context of the study with emerging designs	Researchers works with study details with adequate revise of the questions from the experiences gathered in the field before generalization of the study

*Source: Adopted from Yilmaz (2013)*

Yilmaz (2013) concluded that qualitative research characteristics explained the relationship between epistemology, ontology and methodology of conducting research by researchers. He explained that researchers on qualitative research study provide evidences and perspectives of a particular study with due process of conducting research to attain definite conclusions and recommendations.

### **Management epistemology**

In management sciences field, every management strategy, management policy and inferences completely or openly, articulates an epistemological position that approves the knowledge claims that justify its substantive content (Umesh & Nitin, 2014). The authors stated that when something is described as “facts.” it need to be evaluated it in epistemological ground and then these facts can gain some kind of epistemic status. It specifies the relationship between the researcher and what is researched (Bryman & Bell, 2015). In this sense, Sułkowski (2013) termed epistemology as knowledge about knowledge or the science of reasoning. Management epistemology argued on dualistic vision and clinched researcher’s self- awareness in the conduct of research study on the epistemological reflection, which apparently leads to the development of research study. The first perspective of the study is based on “objective,” and second “relativist.” The axis of epistemological division within management as well as within other sciences fields can be the neo-positivistic, systemic and functional, and soft orientation, humanistic, interpretative and hermeneutic at the other hand.

### **Functional–systemic perspective**

This is called “neo-positivistic,” “functional,” systemic” or “quantitative.” Its epistemological



model is natural sciences. It is a combination of influence of neo-positivistic philosophy, systemic trend with functionalism in social sciences and espoused in management field of study. The assumptions of systemic vision are verification, knowledge cumulating, search for scientific method, division into dependent and independent variables, search for mathematical modelling and quantificational methodology. Verification allows for constant assessment of epistemological value of a given statement through empirical research of the subject matter. It gives the opportunity to obtain a unanimous answer of what an organization is and what corporate qualities are and how to manage them successfully. Knowledge cumulating means the belief that organization research creates lasting knowledge that consequently develops and continually makes progress. Due to the necessity of creation of precise generalizations, methodology of quantified research is better valued; i.e., rather quantitative than qualitative methods.

Contrarily, in management sciences, there appeared attempts of modelling generalization that are to lead to a coherent image of organization, expressed in a universal language of nature with little or no numerical status. In this instance, a complex real-life situation is converted into simple representation of the problem situation by focusing on the key aspect of business decisions (Adedayo et al. 2010). A neo-positivistic image of management remains a kind of common-sense vision of this discipline (Sulkowski, 2004). Patel (2015) stated that modelling generalization assume that the social whole maintains balance in the process of exchange among the elements of social order and majority of organization members serves to maintain this higher order of the social system.

A function is the input of a partial activity into the activities of the whole. Functionalism in management sciences leads to the separation of the set of complementary organizational functions, supporting the activity of this whole e.g. planning, organization, motivation and monitoring (Otubanjo, 2008). However, in a real organization conflicts, disintegration processes and activity in the imbalance conditions are more frequent. The total vision of organizational order can omit elements of sense constitution happening on the level of behaviours, interactions creating culture elements or giving meaning to the organizational reality (Saunders, 2011).

### **Symbolic-interpretative perspective**

A competitive cognitive approach asserts “interpretative,” “symbolic.” or “qualitative.”. The main sources of inspiration are social, behavioural and humanistic sciences, such as sociology, psychology, political sciences and administration. Sulkowski (2013) as cited in Pfeffer and Salancik “authority net” (1978); Smircich “corporate culture conception” (1983); and Weick “establishment.” theory (1979), many ideas related to corporate culture, management, human resources management, management processes or change management are based on epistemological assumptions of the symbolic – interpretative approach. Hatch (2002) opined that the basis of interpretative epistemology is the assumption about a constructional and conventional character of the social and organizational reality. The author mentioned that organizational order does not exist objec-

tively but is being continuously maintained, reconstructed and modified by individuals and groups acting in and around an organization. One can observe focus on every-day categories covering a kind of hermeneutic in the shape of perception, interpretation, definition, making and verifying hypotheses and finally act epistemologically (Suk-Young, 2001). Organizational management is through institutional, legalization and internalization processes and they are contractual – they are a collective consensus (Berger & Luckmann, 1966). A cognitive act is entangling in a language and culturally relative, it is a symbolic activity. Sulkowski (2013) convincingly concluded that research results are not objective inter-subjectively communicated.

### COMPARISON OF FUNCTIONAL AND SYMBOLIC PERSPECTIVES

The perspectives presented create separate basic notions and ways of organization and management research. An organization can be seen as an authoritatively created system or as an upwards network of meanings and interactions structure.

**Table 2: Comparison of the functional and systemic intellectual perspectives**

	<b>Criteria</b>	<b>Functional-systemic perspective</b>	<b>Symbolic-interpretative perspective</b>
i.	Organization constitution	A system is created by the market sector and economy	The net of meanings created by communication, interaction and sense making processes in groups.
ii.	Man in organization	Homo economicus, individual interest, functional dependencies.	Organization members enter into complex social interdependencies.
iii.	Nature of organization	Economic, objectively given, can be known	Socially created, intra-subjective perception, known in a limited degree
iv.	Effect of economic activity	Tendency to maintain balance	Tendency to gain control, tensions caused by fight between conflicting interests
v.	Research objectives	Generalization, verifying, analysis, predicting and change programming.	Understanding, description, synthesis, changes stimulation.
vi.	Scientist's approach to researched reality	Inter-subjectivity (objective), external perspective (outsider)	Participant in the researched phenomena and processes (insider)
vii.	Researcher's attitude to values	Search for objective knowledge, free of values	Consciousness entangled in values (axiological approach)
viii.	Preferred methodology	Predicates based on abstract notion systems	Descriptive and explanatory or understanding (hermeneutic)
ix.	Preferred method	Standardized methods, quantitative, structured	Non-standardised methods, qualitative, not structured

*Source: Adopted from Sulkowski (2013)*

From the table depicted above, it is evident that management sciences research on epistemology has process of grouping of different schools that are situated in one of the ends of the described range. In relation to the strategy school of thought: planning, positional and resource oriented is based on the functional-systemic perspectives, while the evolutionary school is situated rather on



the symbolic–interpretative end. The concept of the research on the influence of epistemology on management is rooted in functionalism, and the understanding of the corporate culture as a net of meanings has symbolism character.

### Ontology

Ontological assumption of research study brings continuous change between external objective reality and internal subjective reality shaped by social order such as history, institutionalisation, stability, social interaction, control and habitualisation (Berger & Luckman, 2016). Social order stability and direction on the premise of people's activities and structure. They are those parts of the society that constantly stable over time. Society must exist in a stable power, communication relations and cultural forms to uphold their basic ideologies and values (Hetcher & Horne, 2003).

Otubanjo (2008) sees that social interaction and habitualisation are purely physical relationship and pattern of routine of human activities between individuals or group of people with total psychological formations or mental representations. The activation is through human experience and develops co-existence of human activity into a behavioural pattern. Institutionalism, historicity and control according to Berger and Luckmann (2016) are the ability to make meanings from interpretations when there is reciprocal embodiment of habitualised actions and type of actors. History develop overtime; codes of conduct are ongoing control human actions that are inter-subjectively research to conduct research study.

Research plays a critical role in global innovation systems as a key driver that propels the advancement of knowledge. It focuses on unfolding investigation on a particular phenomenon, classifying its attributes and defining patterns and relationships in research activities (Olssen & Peters, 2015). Qualitative research centre on a constructive epistemology and explores what it assumed to be a socially constructed and dynamic reality through a framework that is value-laden, flexible, descriptive, holistic and context sensitive such as in-depth description of the phenomenon from perspectives of the people involved (Bengtsson, 2016). Rahi (2017) viewed qualitative research as collection of in-depth details on a particular topic. Data are usually in textual, sometimes graphical or pictorial form (Bryman & Bell, 2015). Qualitative research disseminates its findings in a first-person narrative with a combination of *etic* (outsider or the researchers') and *emic* (insider or the participants') perspectives (Denzin & Lincoln 2011; Miles & Huberman 1994; Bryan & Bell, 2015).

Yilmaz (2013) observed that characteristics of quantitative or qualitative research have four essential elements of research process; i.e. epistemology; a branch of philosophy that deals with nature, sources, and limits of knowledge, theoretical perspectives; it provides frameworks for understanding and analysing complex phenomena such as scientific management, contingency and human relation theories, methodology; systematic and theoretical analysis of the methods applied to a field of study or research and methods; systematic and structured ways of conducting research, experiments, or investigation to collect and analyse data, and to achieve specific goals. These processes structure the design of a research study since they discuss which view will inform

the study design, who or what will be studied, which research strategy will be used and which research method or tools will be used to collect and analyse data. This description component explained that quantitative research approach differs from qualitative research approach in terms of their epistemological underpinning.

Furthermore, Gao et al. (2017) observed research in management sciences specify the process through which social mechanism and causal relationship arise and produce the observed outcomes. The authors mentioned that qualitative research is an umbrella term of a broad range of different approaches and methods that differs in focus, assumption, knowledge and role. This implies that it tries to understand how social experience create and assume importance. In qualitative perspective, reality or knowledge is socially and psychologically constructed while relationship between the knower and the known are inseparably connected (Bengtsson, 2016). Hence, researchers supposed to develop a close and empathic relationship with the subjects being studied. Unlike quantitative studies which are concerned with outcomes, generalisation, prediction and cause-effect relationship through deductive meaning; qualitative studies are concerned with process, context, interpretation, meaning or understanding through inductive reasoning (Haele & Twycross, 2018).

Therefore, qualitative research method is effective when highly individualised programmes in which researchers have different abilities, needs, goals and interests proceed at their own pace to conduct the research study.

**Table 3: Comparison of quantitative and qualitative modes of inquiry**

	<b>Qualitative mode</b>	<b>Quantitative mode</b>
i.	Realities are multiple, constructed and holistic (Reality is socially constructed) <ul style="list-style-type: none"> <li>• Knower and known are interactive, inseparable</li> <li>• Variables are complex, interwoven and difficult to measure</li> <li>• Inquiry is subjective</li> </ul>	Assumption <ul style="list-style-type: none"> <li>• Reality is single, tangible and fragmentable (Reality is socially objective)</li> <li>• Knower and known are independent and autonomous</li> <li>• Variables can be identified and relationships assured</li> <li>• Inquiry is objective</li> </ul>
ii.	Interpretation; understanding actors' perspectives <ul style="list-style-type: none"> <li>• Contextualization</li> </ul>	Purpose <ul style="list-style-type: none"> <li>• Generalization; cause-effect explanations</li> </ul>
iii.	Ends with grounded theory, hypotheses <ul style="list-style-type: none"> <li>• Researcher as the instrument</li> <li>• Naturalistic/ non-intervention</li> <li>• Inductive</li> <li>• Searches for pattern</li> <li>• Emergence and portrayal</li> <li>• Seek consensus, norm</li> </ul>	Approach <ul style="list-style-type: none"> <li>• Begins with hypotheses and theories</li> <li>• Researcher uses formal structured instruments</li> <li>• Experimentation/intervention</li> <li>• Deductive</li> <li>• Component analysis</li> <li>• Data mining and control</li> <li>• Seeks plurality, complexity</li> </ul>

	<b>Qualitative mode</b>	<b>Quantitative mode</b>
iv.	Personal involvement and partiality <ul style="list-style-type: none"> <li>• Emphatic understanding</li> <li>• Emic (insider's point of view)</li> </ul>	Researcher's role <ul style="list-style-type: none"> <li>• Detachment and impartiality</li> <li>• Objective portrayal</li> <li>• Etic (outsider's point of view)</li> </ul>

Source: Adopted from Yilmaz (2013)

The comparison of qualitative and quantitative mode explains similarities and differences entailed in the methods for conducting research studies to arrive at reliable and dependable conclusions.

## FINDINGS

Empirical review of epistemological approach to research study.

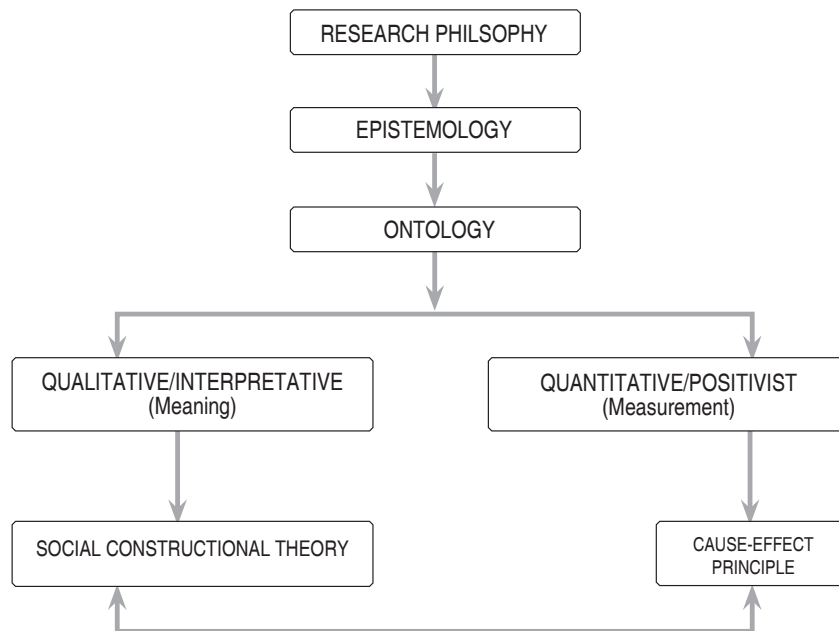
**Table 4: Critics on qualitative research design by previous researcher(s) for data collection**

	<b>Author(s)</b>	<b>Year</b>	<b>Title</b>	<b>Re-search methods</b>	<b>Remarks / critics/ application</b>
1.	Tsang, E.W.K. Moser, P.K.	2017 2010	The Philosophy of Management Research Epistemology	Qualitative epistemology Ontology	<p>The field of management research is often regard as a science discipline. As such, management researchers face similar methodological problems as their counterparts in other science disciplines</p> <p>The authors predicted two ways in which philosophy is connected with management sciences research: ontological and epistemological. They therefore affect the methods considered legitimate in carrying out empirical research, and determine what was regarded as a valid contribution to knowledge</p> <p>Application—Despite an increasing number of scattered philosophy-based discussions of research methodology, epistemological and ontological approaches address observed gap in research design and provides new ideas and arguments for guiding management researchers</p>
2.	Corona, J.L., Kovac, R.M. & Mijarez, H.M	2017	Theoretical Approach to an Epistemology of Management Sciences	Qualitative phenomenological-hermeneutic design	<p>Administrative and management Scientists have developed their own way of thinking and generating epistemes, through the creation of organizational knowledge based on dynamic interaction, between two specific forms of knowledge: tacit and explicit.</p> <p>Application—The emerging theories of the world of science incorporable into the world of administration and management sciences field of study.</p>

	Author(s)	Year	Title	Re-search meth-ods	Remarks / critics/ application
3.	Bombala, B	2014	Phenomenology as the Epistemological and Methodological Basis of Management Sciences	Case study	Proposing new methods of management sciences research in order to establish ontological coherence of management in an organization, which should originate in form of application to management sciences research especially those that are used for diagnosis of social and ethics problems Application—Researcher/participant analysis of research need to be adoptable. This shows there is a new paradigm of management thoughts as a tool of analysis in business and for conducting case study research.
4.	Umesh, R.R. Nitin, B.V.	2014	Management research: To understand the role of epistemology in management research	Qualitative positivism	A distinguishing characteristic of management research is that it engages with both the world of theory and the world of practice. Management sciences researchers can locate themselves at different points in the cycle at different times but they cannot stay fixed in either the world of practice without risking epistemic drift drive or in the world of theory without retreating to academic fundamentalism, Application—In recent times, management sciences research is not limited for “know what” but it enhances its scope to “knowhow.”
5.	Federico Zuolo	2012	Realism and Idealism	Qualitative Realism	The author from political science field revealed that realism and idealism are two broad concepts that recurs very frequently both in philosophical and daily discourses regarding administration and management, as well as other domains such as epistemology. They always seen as two opposing approaches towards how the world is understood politically and how administrative concept should inform managerial actions. Application—The concepts insist that disagreement and conflicts are something that cannot be eliminated even if management theorists were to find agreed common and grounded principles.
6.	Sulkowski, T. Sulkowski, T.	2013 2010	Cognitive challenges of epistemology in management science Two Paradigms in Management Epistemology	Quantitative & qualitative interpretivism	It seems that management science needs a balance between cognitive fundamentalism and non-fundamentalism. This is necessary in order to be unambiguous in the definition of an organization and management and to determine interdependence between object and subject in research study. This will in reality leads to the development of the researchers' self-awareness in respect of data gathering and analysis. Application—There are several cognitive challenges concerning definitions of the fundamental terms and formulating hypotheses in management sciences. The postulated construct of epistemology of management sciences could be interpreted like a valuable scientific area.

	Author(s)	Year	Title	Re- search meth- ods	Remarks / critics/ application
7.	Khin, E.W.S., Ying, C.W. & Fui, L.Y.	2012	Epistemologi- cal Approaches to Management Research	Qual- itative ground- ed theory	The study seeks to offer a more integrative and conclu- sive conceptualization of reflexivity as a way of identify- ing and understanding management sciences research. The authors discuss the theoretical grounding and under- lying assumption of positivism in management sciences research Application—Awareness of various epistemological ap- proaches and their implications for practitioners and management sciences researchers in the conduct of re- search study is impactful.

Source: Researcher (2021)



**Fig. 1:** Description from Epistemology to the creation of knowledge. Source: Adapted from Bryman & Bell (2015)

## DISCUSSION

Sulkowski (2013) philosophical approach to epistemology on functional and symbolic approaches appears to be cognitive to core management sciences research. The most obvious epistemological suggestion is the division based on the subject criterion. The differentiation of manage-

ment processes resulted in the concentration on different areas of management processes, which demonstrate certain differences in the cognitive field. There appeared many management schools and trends leading to the “jungle.” in the organization as cited by (Ajonbadi, 2000) in Koontz 1961 theory. The systemic approach distinguishes organizational models leading to the subsystems differentiation such as people, structure, tasks and technology management, which may require a different epistemological perspective. Each criterion does differentiate a cognitive approach to an organization. Moreover, it is obvious that organizational models (e.g. strategy, marketing, human resources, financial resources, information technologies) leading to the subsystems differentiation can be subjected to a more general epistemological scheme and could be termed intersubjectivity (Sulkowski, 2013).

**Table 5: Pattern in management sciences research**

Social orientation			Assumption
Regulation	Radical change		Inter-subjectivity
Functionalism	Radical structuralism	Objectivity	
Interpretive paradigm	Radical humanism	Subjectivity	

*Source: Adapted from Burrell & Morgan*

Burrell and Morgan classified functional–systemic and symbolic–interpretative; social orientation (regulation and change) and cognitive assumptions (objective and subjective) as inter- subjectivity research paradigm dominant in management sciences research.

## CONCLUSION

The blue print that specifies how data relating to a given problem is gathered and analyzed remains research philosophy. Researchers need to acquaint with different research approaches in solving problems in qualitative study as knowledge of qualitative and quantitative research approaches represents research continuum. Epistemology benefits researchers in management sciences research methods through approaches considered as alternative strategy for research that can corroborate each other for data collection, analysis and interpretations. The study having resolved that both qualitative and quantitative approaches have their own strength and weaknesses in their design and application, the use of appropriate research idea is dependent on good knowledge of research pattern and methods that are applicable within a chosen research philosophy through assumption of subjective, naturalistic and symbolic-interpretative perspective method for data collection and analysis in qualitative study. Provision of an in-depth understanding of people's experiences and the meaning attached to them and anticipation of positivist, objective and functional-systemic perspective for data measurement and analysis, and targets to make predictions and generalizations.



There is no best philosophy to deal with a research problem; rather it is the ability of the researcher to show understanding of the research objective to use the chosen philosophy to resolve observed social gap. Epistemology as a research method philosophy in management sciences specifies the relationship between researchers, researched, and sees how knowledge is acquired and transmitted to resolve research problem. Incorporation of both qualitative and quantitative approaches expands scope and deeper understanding of a phenomenon. Epistemological approach is recommended to management sciences researchers for conducting research studies as it stretches better and deeper understanding of a context such as knowledge management to enlighten explicitly in management sciences research. The attention of conjoining objectivity and subjectivity of qualitative and quantitative research design to inter-subjectivity through epistemological approach benefit philosophical building.

Finally, embracement of management epistemology in research study helps to enhance academic researchers through different approaches to research studies and clarifies ambiguity in findings.

## REFERENCES

- Adekeye, J.A. (2016). Empirical application of research design in management sciences, *net journal of business management*, 4(2)15-22
- Acosta, I. (2014). Formación gerencial y epistemología. *Revista Formación Gerencial*. Universidad del Zulia, 13(1). 10-11, 13-14
- Annis, R. & David C. (2001). Measurement validity. *American political science review*, 95(3), 529-546
- Adedayo, O.A., Ojo, O. & Obamiro, J.K. (2010). Operation research in decision analysis and production management; Pumark education publishers, Lagos
- Ajonbadi, H. A. (2000). Business management and theory; *Vantage education publishers*, Lagos
- Aliaga, M. and Gunderson, B. (2002). Interactive Statistics. [Thousand Oaks]: Sage Publications.
- Astalin, P.K. (2013). Qualitative research designs; A conceptual framework. *International journal of social science and interdisciplinary research*, 2 (1) 118-124
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis; *Nursing plus open*, 2, 8-14
- Berger, P.L. & Luckmann, T. (1996). The social construction of reality: A treatise in the sociology of knowledge. *Hamondsworth, Middlesex: Penguin Education*
- Birger, H. (2005). Empiricism, rationalism and positivism in library and information science, *Journal of Documentation* 61 ( 1). 130 - 155
- Bombala, B. (2014). Phenomenology as the epistemological and methodological basis of management sciences. *International Journal of Contemporary Management*, 13(1), 150-172
- Bovens, L. & Hartmann, S. (2003). Bayesian epistemology. Oxford University press, USA
- Bryman, A. & Bell, E. (2015). Business research methods; Oxford University press, USA

- Corona, J.L., Kovac, R.M. & Mijarez, H.M. (2017). Theoretical approach to an epistemology of management sciences; *International Journal of Business Management*, 2(4)81-84
- Creswell, J.W. (2013). Steps in conducting a scholarly mixed method study. In discipline based education research speaker series. Paper 48 available at <http://digitalcommons.unl.edu/dberspeakers/48>
- Dauda, Y. (2016). Managing economic recession challenge in Nigeria: Implication for organizations and National development. Conference proceedings of first faculty management sciences, Lagos State University, Ojo, Lagos
- Denzin, S. & Lincoln, M. (2011). *Sage Handbook of Qualitative Research*, Sage Publications: USA
- Gao, Y., Roth, A., Wang, P. & Zang, L. (2017). Does democracy cause innovation? An empirical test of the popper hypothesis. *Research policy*, 46(7), 1272-1283
- Hatch, M. J. (2002). *Teoria organizacji*. Warszawa: PWN.
- Heale, R. & Twycross, A. (2018). What is case study? Cross-mark *Research Made Easy Journal* 21 (1)7-8
- Hizaamu, R. (2015). The challenges of qualitative research: Can it be used to strengthen decision making for health care in Uganda? *Academic Journals*, 6(3), 24-30
- Johnson, P. & Duberley, J. (2013). Understanding management research; An introduction to epistemology. London: *Sage Publications*.
- Kivunja, C. & Kuyini, A. (2017). Understanding and applying research paradigms in educational contexts; *International journal of education*, 6(5), 26
- Khin E.W.S., Ying, C.W. & Fui, L.Y. (2012). Epistemological approaches to management research. *Research gate*
- Livingstone, I. (2021). Episteme conference special issue; *Cambridge University press* 18(3), 447-491
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis; An expanded source book*. Thousand Oaks CA: sage publications
- Myers, M.D. (2013). *Qualitative research in business and management*, Sage
- Majeed, I. (2019). Understanding positivism in social research: A research paradigm of inductive logic of inquiry. *International Journal of Research in Social Sciences* 9 (1)118-125
- Mohajam, H. (2018). Qualitative research methodology; *Journal of Economic Development, Environment and People*, 7(1), 23-48
- Moser, P.K. (2010). *Epistemology*. Research gate.
- Mukherji, P. N. (2000) *Methodology in Social Research: Dilemmas and Perspectives*. New Delhi: *Sage Publication*
- Noble, H. & Smith, J. (2015). *Issues of validity and reliability in quantitative research*; *Evidence based Nursing*, 18, 34-35
- Obieriri, D.A. (2017). Qualitative research methods synopsis application; *Kuwait chapter of Arabian journal of business*, 6(10), 40-47
- Olajide, O.T. & Lawal, O. R. (2020). Exploratory research design in management sciences, An x-ray of literature; *Annals of Dunarea de Jos University, Fascicle I Economics and Applied Informatics*, 2 (2) 79-84
- Olssen, M. & Peters, M. A. (2015). Neoliberalism, higher education and knowledge economy from free market to knowledge capitalism; *Journal of education policy*, 20 (3), 313- 345

- Onwuegbuzie, A.J. & Leech, N.L. (2005). On becoming a pragmatic researcher, importance of combining qualitative and quantitative research methodologies. *International journal of social research methodology*, 8(5). 375-387
- Otubanjo, B.O. (2008). Industry construction of the meaning of corporate identity in Nigeria's banking service sector: An interpretive analysis of corporate advertisement, 1970-2005. (Ph.D) thesis
- Otubanjo, B.O. & Melewer, T.C. (2007). Understanding the meaning of corporate identity: A conceptual and semiological approach; Corporate communications. *An international journal*, 12(4), 414-432
- Pfeffer, J. & Salancik, G.R. (1978). The External Control of Organizations: a Resources Dependence Perspective. *New York: Harper and Row*.
- Rahi, S. (2017). Research design and methods; A systematic review of research paradigm, sampling issues and instruments development, *International journal of economics and management sciences* 6(2)1-5
- Saunders, M., Lweis, P. & Thornhill, A. (2009). Understanding research philosophies and approaches. *Research methods for business students, pearson education, India*, 4, 106-135
- Smircich, L. (1983). Organizations as Shared Meaning. Organizational Symbolism. *Greenwich: JAI Press*, 55-65
- Snape, D. & Spencer, L. (2003). The foundations of qualitative research; Los Angeles, CA: Sage.
- Sulkowski, T. (2013). Two paradigms in management epistemology; *Journal of intercultural management*, 2(1), 109-199
- Suk-Young Chwe, M., 2001. Rational Ritual. Culture, Coordination and Common Knowledge. Princeton University Press and Oxford, pp. 79-82.
- Tsang, E.W.K (2017). The philosophy of management research; DOI:10.4324/9781315463216
- Tutelman, P.R. & Webster, F. (2020). Qualitative research and pain: Current controversies and future directions. *Canadian Journal of Pain*, 4(3), 1-5
- Uma, D.J. & Jaloni. P. (2014). Mixed methods, a research design for management doctoral dissertations. *Management Research Review*, 34(6), 687-701,
- Umesh, R.R. & Nitin, B.V. (2014). Management research: To understand the role of epistemology in management research. *Journal of management and science*, 4(1), 64-70
- Weick, K. (1979). The Social Psychology of Organizing; Reading, MA: Addison-Wesley.
- Williams, C. (2011). Research methods. *Journal of Business & Economics Research (JBER)*, 5(3).
- Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European journal of education: Research development and policy*, 45, 311-325