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Research issues in the humanities and its relationship with the theory of scientific epistemology

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Abstract
This research deals with an important topic summarizing the research issues in the humanities and its relationship with the theory of scientific epistemology**,** and through a brief study on scientific research in the light of the definition of research and science and the definition of scientific research**.**
The research deals with the definition of scientific research and the concept of science and its functions and objectives, in addition to scientific knowledge**.**
The talk about scientific research deals with its inception, concepts, objectives, types, characteristics and difficulties faced by researchers**.**
There is no doubt that the close relationship between scientific research and epistemology plays a key role in the scope of knowledge, its interpretation in short, and how to obtain it, and what is the connection between them and the existing facts around them.

Keywords:humanities, scientific epistemology**,** scientific research, scientific knowledge**.**

1. Research and science

1. 1. Definition of research

- Language: related increase. And from them, they said: The length of another river; that is, increase it and continue it, which is demand, inspection, tracking and investigation, God Almighty said: (God sent a graveyard looking at the land), Surat Al-Maida: 131.
- Terminology: Resulting information and study based on the tracking and tracking of a particular subject according to a special approach to achieve a specific goal: a new addition or collection of scattered or mixed arrangement or other scientific research objectives.

The search is a systematic compilation of all the information available to the author of a particular topic and is well arranged to support the previous information or become more clear and clear. It is an organized and accurate collection of evidence and evidence, with the aim of discovering new information or relationships or incomplete or correcting a mistake. The researcher shall follow the steps of scientific research and choose the method and the tools necessary for research and gathering information.
The scientific research has three pillars that are not based on them, and each of them represents an important matter in its appearance in the appearance that should be the subject, method and form:

1. 1. 1. Subject (Subject)

Is the focus of the study, which is the idea, issue or issue in question?

2. 1. 1. Approach

The information in the order of an arrangement as an arbitrator and in full objectivity and commitment to the use of information widely used correctly in a sound scientific method, and in the view and support issues presented convincing evidence and clarifying examples without prejudice to each other or bias for some.
The concept of the approach is considered in all fields of knowledge one, the goal is to

reconcile the self-activity creator, the initial information and the means by which appear in the context of the research, that the virtues of research in general, they are virtues related to the training proper to man, and then humanity as a whole.

The scientific approach is the conscious study of the different approaches applied in different sciences according to the different topics of this science, which is a section of logic, and the method is systematic steps followed by the researcher or student in dealing with the subjects that he is studying until it reaches a certain result, Is the way to uncover the truth in different sciences by means of a set of general rules that control the functioning of the mind.

The research methodology plays an essential role in the recording of research information. It requires the researcher not to present his personal opinion without strengthening his views with value, and to adhere to subjecting any opinion to the discussion regardless of the degree of confidence in him.

There is no truth in itself and the researcher must be meticulous in relying on novels and the need to accurately explain the meanings marketed by the researcher. In short, the researcher must be patient with what may sometimes search the soul of a sense of alienation and brutality, and what may mean loneliness, isolation and hopes, and then comes the strong relationship between science and epistemology[1].

Epistemology is the study of knowledge, Epistemologists concern themselves with a number of tasks, which we might sort into two categories.

First, we must determine the *nature* of knowledge; that is, what does it mean to say that someone knows, or fails to know, something? This is a matter of understanding what knowledge is, and how to distinguish between cases in which someone knows something and cases in which someone does not know something. While there is some general agreement about some aspects of this issue, we shall see that this question is much more difficult than one might imagine.

Second, we must determine the *extent* of human knowledge; that is, how much do we, or can we, know? How can we use our reason, our senses, the testimony of others, and other resources to acquire knowledge? Are there limits to what we can know? For instance, are some things unknowable? Is it possible that we do not know nearly as much as we think we do? Should we have a legitimate worry about skepticism, the view that we do not or cannot know anything at all?

While this article provides an overview of the important issues, it leaves the most basic questions unanswered; epistemology will continue to be an area of philosophical discussion as long as these questions remain[2]

Scientific knowledge is knowledge that can be demonstrated by both reason and experiment (observation), and logical validity and empirical verification are the two criteria used by scientists to evaluate the quest for knowledge. These criteria are translated into research activities undertaken by scientists through the search process, Here the

[1]The term “epistemology” comes from the Greek "episteme," meaning "knowledge," and "logos," meaning, roughly, "study, or science, of." "Logos" is the root of all terms ending in "-ology" – such as psychology, anthropology – and of "logic," and has many other related meanings.Boufoy-Bastick, Z. (2005). "Introducing 'Applicable Knowledge' as a Challenge to the Attainment of Absolute Knowledge". Sophia Journal of Philosophy. 8: 39–51.David A. Truncellito.Epistemology, *The Internet Encyclopedia of Philosophy* (IEP), https://www.iep.utm.edu/

[2] Annis, David (1978). "A Contextualist Theory of Epistemic Justification". American Philosophical Quarterly. 15: 213–219. Cohen, Stewart (1998). "Contextualist Solutions to Epistemological Problems: Skepticism, Gettier, and the Lottery". Australasian Journal of Philosophy. 76 (2): 289–306.

research process can be seen as the comprehensive outline of the scientific activities in which scientists are engaged to achieve knowledge, which is the ideal model of scientific inquiry.

3. 1. 1. Shape

It is the organizational method of research that the general scientific practice humbles on, starting with organizing the information on the title page, other way of using the margin, documenting the information, writing comments, indexing of the sources and other indexes, and other punctuation and side titles.

2. 1. The concept of science

The word "science" in our time is used to denote the body of knowledge supported by sensory evidence, and the laws that have been discovered to explain natural events are a fundamental explanation of those fixed[3]. They may be used to denote a set of knowledge with certain characteristics, such as the group of physics, chemistry or biology.

If we return to its definition in the language and the term, the word "science" in the language means knowing something about what it is, that is, certainty and knowledge[4], and science against ignorance, because it is a complete realization. As for the term, it is: the facts, facts, theories and research methods[5] that are rich in scientific works. Or as in the Webster's Dictionary (1758-1843) [6]: the coordinated knowledge that arises from observation, study, and experimentation, which is designed to determine the nature, origins and foundations of what is being studied.

Its definition in the Oxford Dictionary of 1974 is that: This section of the study, which relates to a correlative body of fixed facts classified and governed by general laws, uses reliable methods and methods to discover new realities within the scope of the study[7].

Julian Huxley (1887-1975)[8], in his book Human in the Modern World, defined it as: the activity in which man obtains a great deal of knowledge of the realities of nature and how to control them. Most attempts to define the concept of science and its definition of the fact that Science is part of knowledge, including facts, principles, laws, theories, fixed, coordinated and categorized information, reliable methods and methods of knowing and discovering the truth in a conclusive and certain way.

3. 1. Functions and objectives of science

1. 3. 1. Discovery and interpretation

The first purpose and function of science is the discovery of general and comprehensive scientific laws of similar, consistent and coordinated phenomena and events by observing and monitoring various events and phenomena and conducting scientific experiments to reach general and comprehensive laws that explain these phenomena, facts and events.

1. 3. 1. Prediction

Scientific prediction and forecasting how the work and evolution of natural and natural events and events, organized by the laws discovered scientific [9], so can predict and

[3]Rashwan, Hussein (1982), Science and Scientific Research, Alexandria: Modern University Office, p. 4.
[4]Ghanim, Mohamed Abdel-Nabi Mr. (coordination). Al-Munajjid in the language, I 26, Beirut: Dar al-Mashreq al-Arabi, p. 527.
[5]Al-'Omar, Abdullah (1983), Phenomenon of Modern Science, Kuwait: The World of Knowledge, p. 276.
[6]Webster, Noah (2015). Webster's 1828 American Dictionary of the English Language, Waking lion press, West Valley City, UT USA.
[7]| Al-Maghrabi, Kamel (2002), Webster's New Dictionary of the Twentieth Century, in English, quoting the Book of Methods of Scientific Research, 1, Amman: Dar Al-Thaqafa for Publishing and Distribution, p. 15.
[8] Huxley, Julian (2006). Man in the Modern World, *Kowloon, Hong Kong:* Hesperides Press.
[9]'Aaqil, Fakhir (1979). The Foundations of Scientific Research in Behavioral Sciences, II, Beirut, Dar El-Elm for millions, pp. 14-15.

scientific prediction of the date of eclipses and eclipses, and the future of the weather, and the future of political and social fluctuations of the public, and other situations and things can be expected and scientific prediction In order to take necessary precautions and procedures.

2. 3. 1. Settings and control

After the purpose and function of discovery and prediction function, comes the function of scientific control of these phenomena and control, directing the desired guidance, and exploiting the results and effects to serve the interest of humanity.

When the world intervenes to control and control events, such as controlling the course of rivers, sea water, and gravity, as well as controlling diseases, the function of control may be theoretical when science is limited to explaining and explaining how to adjust, direct and adapt phenomena. , Human behavior, control and direction towards good, and control and use of outer space in practice.

4. 3. 1. Characteristics of scientific knowledge

Knowledge can be defined as information that makes sense of any relevant, actionable information that depends, in part, on past experiences[10], and Turban[11] defines it as a set of key capabilities, ideas, laws and procedures on which to build Working methods and decisions.

It can be said that knowledge is information that has been interpreted and given meaning so that it is useful for solving a problem or making a decision. It is worth mentioning that the process of processing and interpreting this information is through the knowledge base owned by each person, and can be conceived as a base containing facts, experiences, beliefs, attitudes and relationships, which connect these elements with each other, the ability of a person to act and solve problems is part of his own Knowledge first.

For example, two people may have the same information and live the same problem, but they differ in their ability to use this information to solve the problem or make a successful decision because there are differences in the ability of individuals to add value and interpretation of information; Another, the difference between information and knowledge lies in interpretation and the ability of the mind to give meaningful meaning.

It can be said that the distinction between data, information and knowledge is relative, varies according to the person, and the person's experience, facts, beliefs and trends, a particular order may appear to a data person and to another person known and to a third person know, and this is supported by Hitt [12] saying that it depends On the basis of knowledge owned by each person, and formed through experiences and learning that are renewed and are constantly updated learning and accumulation of experience, the more knowledge of the human being has increased its ability to acquire new knowledge, because it becomes more able to organize data and interpretation of information and treatment and conversion to knowledge.

The characteristics of scientific knowledge are:

A. Cumulative

Knowledge is rooted in the beginning of human civilizations. Our knowledge is based on many knowledge contributed by different human civilizations, because knowledge is built

[10]Leonard, Dorothy and Swap, Walter (September 2004). "Deep Smarts". *Harvard Business Review*, 82(9), p.43.

[11]Turban, E. and others (2005). Information technology for management in the digital economy, 5th ed. New York: John Wiley & Sons, p.45.

[12] Hitt, M. R. and others (2001). Strategic management: Competitiveness & Globalization" 4th ed. Washington: South-Western College Publisher, p.44.

hierarchically from the bottom up, as a result of the accumulation and evolution of scientific knowledge and scientific accumulation. Similarly, many theories and scientific knowledge in various fields have been dispensed with and replaced by theories, concepts and knowledge in the field of social sciences characterized by change and relativism.

B. Organization

Scientific knowledge is an organized knowledge that is subject to rules and regulations. We can not reach them without following these principles and adhere to them. Scientific development requires the researcher to specialize in a specific scientific field. This is due to the scientific and cognitive development and the increasing specialization of scientific research methodology and the diversity of fields. The researcher has access to his subjects and understanding of its components and techniques.

C. Causality

The reason is that it is the sum of factors or conditions and all kinds of conditions that have been achieved as a result. We can say that there is a causal relationship between two variables: the cause and the result[13].

D. Precision

The science is subject to the principles and concepts recognized by the specialists, which include terms and meanings and concepts are very precise and specific, and these terms must be used accurately and determine the scientific meaning, because it is the language practiced by specialists in a branch of scientific knowledge[14], and requires precision based on accurate standards, Topics we study.

E. Certainty

The scientific knowledge does not impose itself unless it is certain, that is, the owner is sure of them in practice, so he can prove them with evidence and evidence and facts and objects of objective and do not bear doubt, and this is known scientific certainty, the results we reach must be derived from the premises and reliable data of authenticity.

F. Objectivity

The researcher should be impartial in his research, be self-neutral, and convey facts and data as they are in fact, and not hide the facts that do not correspond to his point of view and prejudices.

G. Circular (Popularization)

The generalization of the results of scientific research is intended to generalize the results of the sample subject of research on the vocabulary of the society from which it was taken, and to come out with general rules to be used in the interpretation of other similar phenomena. The generalization in the natural sciences is easy but difficult in the social and human sciences; The basic characteristics of natural phenomena, but this is different for the social sciences and humanity, different human beings and phenomena differ in their personalities and emotions and the extent of their responses to various influences, making it difficult to obtain honest results can be generalized.

2. Scientific research

Scientific research[15] or research or "development experience" is an organized method of

[13]Melhem, Hassan (1993), Scientific Thinking and Methodology, Algeria: Dahlab Press, pp. 60-61.
[14]Melhem, Hassan (1993), Scientific Thinking and Methodology, p. 73.
[15]See Shalabi, Ahmed (1976). How to write a research or a thesis: A systematic study of writing research and preparing master and doctoral dissertations, Cairo: The Egyptian Renaissance Library; Badawi, Abdel Rahman (1977). Research Methods, Lectures in Research Methods and Libraries, Kuwait: Publications Agency; Mahrous, Ashraf Hussein (2008). Research Hall: Applied Study, Menoufia University: Faculty of

collecting reliable information, notes and analysis of the objective of this information, following specific scientific methods and methodologies, with a view to ensure the validity or modification or add new, and then reach some Laws and theories and predicting the occurrence of such phenomena and controlling their causes, a means by which to solve a specific problem[16], or discover new facts through accurate information, and scientific research is the only way to know about the world.

Scientific research depends on the scientific method, and the scientific method depends on organized methods placed in the observation and recording information and description of events and the formation of hypotheses, which are organized steps aimed at discovering and translating facts. This results in an understanding of events, trends and theories and works on the existence of applied science through laws and theories.

A search term can be defined as a specific set of information, always linked to science and different methods of science, and is used to establish or confirm facts, to emphasize - once again - the results of previous work, to solve existing or new problems, To develop a new theory[17].

It may also be a research project to expand previous projects in the same field. To test the validity of tools, procedures, or experiments, research may rely on replicating elements of previous projects or replicating the entire project.

As the subject of scientific research is based primarily on the demand for knowledge, exploration and access to it, it also deals with science as a whole, and is based on methods and methods in its exploration of the facts of knowledge, and scientific researchers when doing so aims to make new additions or modifications in the fields of science, Will therefore be interpreted as development and progress[18].

In the current circumstances, science has become one of the areas of human activity that develops as quickly as possible. The impact of science on human life stems from three sources. The first is the use of its benefits, the benefits of blogging, which brought nations and individuals closer together and eliminated geographical barriers and political boundaries.

The second source is the scientific method in the research, on which all discoveries and suggestions were based. This is the method that seeks the truth in the field of experimentation and observation, and does not merely derive it from self-reflection or from the words of philosophers. Create theories to explain what he does not know[19].

And scientific research always seeks to provide the community with knowledge and knowledge, and contribute positively in providing solutions to problems, and see this is clear in scientific research and its various centers, whether it is independent and the task of research is its main task, or is in the service or specialization of the centers of scientific research In which they deal with important issues and problems and the resulting treatment. If researchers working in these centers and other researchers in other scientific institutions, such as universities, are harmed by negative factors, this will inevitably have an adverse effect on their scientific production.

Arts.

[16] Oecd (2002). Frascati Manual: proposed standard practice for surveys on research and experimental development, 6th edition.

[17] Montasser, Abdelhakim (1980). The history of science and the role of Arab scientists in its progress, Cairo: Dar Al Ma'arif; Hassan, Ahmed Abdel Moneim (1996). (1), Damascus: Mo'men Quraish Bookshop (1), the Scientific Library, the Origins of Scientific Research, 1, the Scientific Methodology and Methods of Writing Research and Scientific Letters, 2; Kassem, Heshmat (1993). Library and Research, Cairo: Ghareeb library.

[18] Enaya, Ghazi Hussein (1984). Research Methods, Alexandria: University Youth Foundation, p. 152.

[19] Abdo, Samir (1982). Scientific Awareness, Beirut: New Horizon House, p. 89.

In the Arab countries, we must seek the interest of scientific research at all levels to be a vital and active part of this world, not only in its geography, economy, policy and international community, but in its views, philosophy and wisdom[20].

Scientific research is a cornerstone of human knowledge in all its fields, through which man seeks to search for the unknown and discover it to harness its results in the service or destruction of mankind that is a double-edged sword. Developed countries have given special attention to scientific research and researchers, Development and progress, because it is one of the standards of civilized advancement of those countries.

Countries are less aware of the importance of scientific research depending on their social development, the wealth of their resources and the awareness of governors, the availability of minimum research requirements and so on, but they are much less fortunate than the developed countries in this field.

The gap is still very wide between developed and developing countries in various aspects, one of which is scientific research. It is not enough for developing countries to invest and apply the results of developed countries' research, because in this case they will always be dependent on science and knowledge and should contribute adequately to conduct research on them, provided that the availability of research materials from researchers and laboratories and the creation of the scientific atmosphere, which enables the researcher to leave for research and to do it to the fullest[21].

Haji Khalifa says in his book revealed suspicions (Kashf al-Zunoun)[22]: then that the composition of seven sections does not constitute a wise world, but:

- Either something that has not been invented before.
- Or something incomplete completes it.
- Or something closed explained.
- Or something long shortened without prejudice to some of its meanings.
- Or something sparse collected.
- Or a mixed thing arranged.
- Or something in which his work was misjudged.

These purposes can be added to:

- Training in research.
- Achieving heritage.
- Applied studies and research (application of theories on facts).

1. 2. The emergence of scientific research

The emergence of scientific research is as old as human feet on earth[23], since God created Adam, and descended the earth,and man works his mind and intellect and looking for the best ways to practice life on the surface of the earth, and then to achieve the function of intelligence that God created man for it[24]. Allaah says (interpretation of the meaning):

[20]Khidr, Abdel Fattah (1981). The Crisis of Scientific Research in the Arab World, Riyadh: Institute of Public Administration, p. 57.

[21]Ar'abi, 'Aziz al – Al'alawi (1981). Scientific research: codification and publication, Baghdad: Baghdad Publishing House, p. 6.

[22]Khalifa, Haji Khalifa or Haj Khalifa T 1067 AH / 1656 (1941). Revealing suspicions about the names of books and arts, Baghdad: Al-Muthanna Library.

[23]Newton, Isaac (1999). The Principia: Mathematical Principles of Natural Philosophy, 3rd edition (1726). Newly translated by I. Bernard Cohen and Anne Whitman. Berkeley: University of California Press.

[24]Peirce, Charles Sanders (1908). A Neglected Argument for the Reality of God. 7. Wikisource.*Nola, Robert (2001). After Popper, Kuhn and Feyerabend. Recent Issues in Theories of Scientific Method. Springer Science & Business Media. Gauch, Hugh G. (2003).* Scientific Method in Practice *(Reprint ed.). Cambridge University Press. Garland, Jr., Theodore (20 March 2015).* "The Scientific Method as an Ongoing Process".

"And when your Lord said to the angels, I will create a caliph in the land." Surah al-Baqarah: 30 since that day, man has been constantly trying to know and understand the universe in which he lives.

For centuries mankind has acquired knowledge directly through the use of the basic senses of man, and of course has not practiced any scientific approach in reaching the facts or trying to understand some of the phenomena that occur around the human[25], scientific research has developed through the ages very slowly and took several It is difficult to trace the history of scientific research in detail, and it is possible to mention some of the landmarks in the field of scientific research and its activities. The thinking of the ancient Egyptians was an applied scientific trend, where they excelled in planning, engineering, medicine, astronomy and agriculture[26].

Ancient Egyptians also established a scientific civilization in pharmacy and chemistry. The historian Gaben said that the Egyptians were a mine from which the oldest used the drugs and their descriptions mentioned in the works of the Pedicus Dioscorides (40-90m), Plinius (23-79 AD), and it was clear that they were taken from the ancient Egyptians[27].

As for the ancient Greeks, they were interested in scientific research, since they relied on abstract contemplation and abstraction. Aristotle laid down the rules of the standard and explanatory approach to scientific thinking. He was also keen to extrapolate. The contemplative character was predominant in his thinking. (600 BC), Democritus (400 BC), Theophrastus (300 BC), and Strabon (300 BC), and the most famous of them were Pythagoras (600 BC) Strabo (20 BC), and Claudius Ptolemy (about 100-170 AD).

The scientific thinking of the Romans also flourished, and the Romans are inheritors of Greek knowledge, and concentrated their contribution to scientific practice more than follow them, and were more law makers and engineers than thinkers.

In the middle Ages, the Islamic civilization and Renaissance period flourished in Europe, extending from about the 8th century to the 16th century. The Muslims in this period benefited from the ancient sciences of ancient Egyptians, Greeks, Romans and Greece. The Islamic civilization is the link between ancient civilizations, Such as the civilizations of the Egyptians, the Greeks, the Romans, Greece and those who followed them in the modern Renaissance. They not only transferred a civilization from them, but added to it a science and art characterized by scientific origin. The Islamic thought transcended the conceptual boundaries of Aristotle's logic. The standard approach and went out on its borders to the observation and experience considered as a source of scientific research.

The Arabs have followed in their scientific productivity innovative methods of research, relying on the extrapolation and observation and scientific training and the use of measuring tools, to access the scientific results, many Muslim scientists in scientific research, such as Hassan ibn al-Haytham, Jaber ibn Hayyan, al-Khwarizmi, al-Biruni, Ibn Sina, and others,

The emergence of Arab scholars in this field has seen many pioneers of the European Renaissance, such as George Sarton (1840-1956), who said that the Arabs were the greatest teachers of the medieval world, even if the treasures of Greek wisdom were not passed on to us Civilization for a few centuries, the Arabs have contributed to their

U C Riverside. Archived *from the original on 19 August 2016.*

[25] Babbie, Earl (1989). The Practice of Social Research. 5th ed., Belmont CA: Wadsworth. Karl R. Popper 2003. Conjectures and Refutations: The Growth of Scientific Knowledge, Routledge.

[26] Badr, Ahmed (1996). the Origins of Scientific Research and its Methods, I 9, Cairo: Academic Library, p. 74.

[27] Montasser, Abdelhakim (1980). The history of science and the role of Arab scientists in its progress, p. 25.

scientific production in the progress of civilization, and contributed to the synthesis method of extrapolation, and took observation and experience as a basis for scientific research[28].

The Islamic thought has contributed to the consolidation of human civilization, bringing it together and right, putting it on its right track, and transferring it from randomness and confusion to the correct scientific curricula, which are based on bases, rules and principles. The Islamic thought also laid down the rules and methods of educational attainment of various theoretical and applied human sciences, And the formality in the research, writing and survey, and from those rules and foundations developed by Muslim scientists: the rules of the scientific research method that relies on the criticism of sources, and the defamation and amendment, and the rules of classification of novels and monuments.

The pioneers ofthe European Renaissance, such as Roger Bacon (1214), Leonardo da Vinci (1452) and other Arab sciences, relied on them to build the foundations of modern European civilization.

It is safe to say that there is nothing of the human knowledge except for the Muslims in the research or development or addition or briefing and knowledge, and Muslims used in their scientific research both old logic and modern logic, did not think, as thought by medieval thinkers of the Europeans that Aristotle had put The final theory of the rules of conclusion, but they turned to an important method of thinking is what is now called Induction, and they know the mathematical approach that depends on the axioms and axioms, and for them the transfer of Bacon (Roger Bacon) method of science because it is taught to Muslim scholars[29].

When the Muslims carried the torch of intellectual civilization of humanity; put it in its proper place; this marked the beginning of the scientific era based on the proper approach to research; Arab Islamic thought exceeded the traditional boundaries of Greek thinking, and added Arab Muslim scientists to human thought scientific research method based on observation and experimentation, As well as mental meditation, as they were interested in quantitative identification and used scientific tools in the measurement. In the middle Ages, Arab-Islamic thought blew up, in a major historical shift, the wellsprings of knowledge, while Europe was engulfed in the darkness of ignorance.

Then the West transferred the Islamic heritage, adding new additions to it until the picture was completed, and the features of the proper scientific method emerged, within a general framework encompassing various research methods and methods in various sciences, applied and human.

Muslims have represented methodology in their research and studies in various aspects of knowledge, and the methodology they have devised for themselves is very much in line with the objective research methods of our time. Some Orientalists have written such works in which they praise the great skill of Muslim scholars in research and writing[30].

Comparative studies have shown that the modern scientific method and logical thinking may be available to Muslim scholars in their studies, research and discoveries in the field of astronomy, medicine, chemistry, pharmacy and other branches of applied science.

Thus, over the past thousand years, the Arabs have made great strides in all fields of science. Baghdad, Damascus, Cairo and Cordoba became centers of cultural radiation, while in Europe, Europe was living its dark age.

[28]Badr, Ahmed (1996). The Origins of Scientific Research and its Methods, p. 77.
[29]Kassem, Mahmoud (1966). Modern Logic and Research Methods, Cairo: The Anglo-Egyptian Library, p. 22.
[30]Rosenthal, Frater (1983). Methods of Muslim Scholars in Research, Libya: The Arab Book House.

The Arabs benefited from the sciences of the Greeks, the Romans and the civilization of Asia. They made tremendous progress in mathematics, mechanics, medicine, chemistry and applied sciences, in addition to theoretical research and technology, and between the eighteenth and thirteenth centuries the most important scientific inventions were discovered.

The Islamic world has presented scientists and scientific discoveries in large numbers. It has also made many wonderful artistic and architectural creations, large libraries, large hospitals, various techniques, universities, industries, world maps and navigation methods, using celestial bodies and many other contributions. The centers of Islamic civilization in Spain before the end of the middle Ages, when the Crusades inflicted destruction and devastation on the Islamic world.

The first to use this approach to the research methods were psychologists and sociology in the nineteenth century, it is mentioned that Ernest Weber [31], one of the founders of experimental psychology (1795-1878), studied the sense and touch, and discovered that areas of sense differ in He was the first to try to measure specific patterns of human behavior in the 1940s, paving the way for others to follow him in the same way. It can be said that these first attempts led to The establishment of a good knowledge, led at the beginning of the twentieth century to mark the outline of the lamellar Scientific research in the humanities.

At the early stage of this type of research, most methods of measurement were restricted to limited patterns of behavior due to the limited methods and analysis of analysis. Most of these efforts were limited to the use of descriptive statistical methods, which are known to be weak in determining reliable research results.

It was not long after that, until statisticians devised new and accurate methods of analysis, later known as deductive statistics, and opened the door wide for researchers to study more details, and was able to provide more accurate results than before, and possible with this method of statistical It is important for researchers to know the accurate and valuable information in their research, regardless of the size of the study community, through the results obtained. The success of psychosocial studies in the use of scientific research method to serve them has a significant impact in directing most of the human studies to take this approach[32].

2. 2. Concepts of scientific research

Scientific research, as stated in the Frascati Manual[33], is an organized method of collecting

[31]Weber, Ernst Heinrich, Jan (1967), Leipzig physiologist, Journal of the American Medical Association, 199 (4). pp.272–273.

[32]Al-Hayzan, Mohammed Abdul Aziz (2010). Media research based on its methods, Riyadh.

[33]The Frascati Manual is a document that sets out the methodology for collecting statistics for research and development, prepared and published by the Organization for Economic Co-operation and Development (OECD).

The manual provides definitions for basic research, applied research and research and development, as well as researchers, technicians and assistants. It also organizes science fields into main and subsidiary sections. The Frascati Manual classifies research into three categories: basic research is empirical or theoretical work, which is primarily to obtain new knowledge about observable phenomena and facts, and is not directed at any particular use. Applied research is the original investigation of new knowledge directed primarily at a specific purpose or objective, and experimental development is an organized effort based on the knowledge available from research or practical experience, usually oriented towards the creation of new or developed materials, products, devices or processes Or new systems or services.

The Frascati Manual was written in 2002, and included a new section classifying science fields, after several reviews, and published in February 2007 is a final classification of science consisting of the following high-level clusters: natural sciences, engineering technology, medical and health sciences, agricultural sciences,

information, taking observations and analyzing the subject matter of this information by following specific scientific methods and methods, in order to ascertain their validity or modification or adding new ones, and then to reach some laws and theories and predict the occurrence of such phenomena And control their causes.

Scientific research is an organized idea process carried out by a person to investigate the facts or problem (s) of the research by following an organized scientific method in order to arrive at appropriate solutions to the problem, Similar (search results)[34].

Scientific research is defined as a group of organized efforts, carried out by man using the scientific method and the rules of the scientific method in his quest to increase his control over his environment, and to discover their phenomena and determine the relations between these phenomena[35].

Research is defined as a disciplined and empiric order. These are the most important characteristics of scientific research, and a critical investigation of hypotheses related to a natural phenomenon. These characteristics differ. The hypothesis does not necessarily suffice. Other hypotheses can be discovered and it can be designed to collect descriptive information about a particular phenomenon, and many authors have defined the research as an accurate survey aimed at discovering verifiable facts and general rules in the future[36].

Empircism is the acquisition of knowledge through observation, in the recognition of objects and phenomena and experimentation by the senses, and this technique is old since the introduction of civilization, and in contemporary literature known as the Empirical method in the research (Empirical method), which is not limited to the recognition of objects and phenomena and understanding of Through thought, clinging, intuition, or authority. Rather, it is necessary to test them with the five senses, which constitute the preamble, which are expressed in empirical concepts, values or values, subject to experience, direct observation of touch, or direct physical perception[37].

3. 2. Objectives of scientific research

Each scientific research of any kind, academic or professional, has its own objectives, different according to the nature of the problem presented and according to the nature of the chosen subject. The objectives of scientific research can be summarized in general as follows:

- To reach the best solution to the problem in a systematic manner.
- Good depth and good examination of the problem at hand, and determine the relations between the various variables.
- Reach the desired results from solving this problem, and try to generalize these results on similar phenomena.
- Dependence on the description to reach new innovations and innovations, as the specific description of the characteristics and characteristics of the phenomenon studied is the collection, classification and ranking of data on the phenomenon.
- Linking the reasons with the results and the inputs to the outputs, so that the discovery of

social sciences, and humanities. Frascati Manual (2012), Proposed Standard Practice Manual for Research and Pilot Development Surveys, 6.

[34]Sadiq, Mohamed (2014), Scientific Research between the Arab Orient and the Western World, 1, Cairo: Egyptian Book House, p. 32.

[35]Thoukan, 'Obaidat et al. (2001). Scientific Research, Concept, Tools and Methods, I 7, Amman: Dar Al Fikr for Printing, Publishing and Distribution, p. 42.

[36]'Ami, Mohammed Baba (2002). An Approach to Understanding Scientific Research, 1, Damascus: Mu'min Quraish Library, p. 50.

[37] Bambinotti, Giorgi (2008). Language Sciences, Contemporary Greek Dictionary, and Research in Vocabulary, Athens - Greece: University of Athens.

the phenomena and the reasons that led to the occurrence depends on interpretation, analysis and comparison and the linkage between the various elements, to find out the reasons, and to ask several questions.

- After reaching the desired results by solving the problem posed, the scientific research aims then to try to predict what will be a certain event in the future.
- Control the factors that control the phenomena that lead to the occurrence or prevention. Control and control or control of the phenomena studied is the ultimate goal of scientific research, which will increase the researcher's ability to control, adjust and adapt the phenomena and determine the relations between the objects.
- The aim of scientific research is to achieve the progress, development and continuous growth of institutions and societies and to maintain this development.

4. 2. Types of scientific research

Scientific research varies according to different considerations, including the following:

1. 4. 2. Search scope in general and in particular

- The research should be public in the sense that the study is intended to reach general knowledge that is not limited to art, religion, place, time, society, and so on.
- The subject matter of the research should be specific in the sense that the study is intended to reach knowledge about art, religion, place, time, community, etc., and the results of the research are limited to the study conducted in it and not to others.

2. 4. 2. Nature of research

Scientific research is theoretical or applied:

Theoretical scientific research: This research is intended to reach the general truth and knowledge without being subjected to practical application, and often this type of research in the humanities: such as religious, linguistic, social, philosophical and other.

Applied scientific research: This research is intended to reach the results through consideration and study of the applied side of the subject of research, whether this application to a specific person, or people of art, or doctrine, or community and so on.

The research should combine the theoretical and practical aspects of evaluating, correcting and guiding the work. The research is meant to be the practical application of the results that it has reached.

3. 4. 2. Triggering the search setting

The search for this consideration varies depending on the types of triggers to be set up:

- The personal desire of the researcher to achieve one of the objectives that the researcher addresses in order to achieve some of them as a new addition or vague clarification or mixed arrangement. Etc.
- Request a scientific institution to him as a university or a scientific center or a specialized magazine or the request of some parties to him to be presented at a scientific symposium or scientific conference.
- Training of those who carry out this research on the preparation of research in preparation for the cost of research broader and deeper.
- It is assigned to the student during his studies at the university and is called class or university research, and is intended to train the student on how to prepare research in preparation for the preparation of research in a correct manner.
- Obtaining an academic degree, namely:

• Graduate research or university research: It is a requirement for the first degree.
• A master's thesis, called a thesis or thesis.
• Doctoral research, called thesis or thesis.
• Upgrade Search.

5. 2. Characteristics and characteristics of scientific research

- The research consists of a question or a problem. The questions are not answered so many and the problems that need many solutions also, and the more we look around, the more we notice things that make us wonder and ask questions about them.

The hypotheses, questions and research problem guide research, hypotheses and smart guesses guide our thinking to the source of information that will help us solve the research problem.

- The search requires a specific and clear plan[38].
- The research emphasizes the importance of developing generalizations, theories and principles that will help predict future events.
- The research builds on observable experience and empirical evidence.
- The research requires careful observation and description, and researchers use quantitative and qualitative measurement messages.
- Scientific research includes the collection of data and information from primary and secondary sources.
- Research requires experience, and that the researcher be objective and logical.
- Its procedures are often characterized as being carefully designed, and are always used for careful analysis.
- The research includes searching for answers to unresolved problems, and aims to push the sentences back to the limits of their basic character.
- Research is characterized by diligent activity free of urgency and rarely intended to raise admiration.
- Research sometimes requires courage, and history tells us about several important discoveries that have been made despite the opposition of political and religious authorities[39].

As for the advantages of scientific research, there are a number of advantages, which can be deduced from the previous definitions of scientific research, and these characteristics must be available in order to achieve scientific research goals.

The most important of which:

1. 5. 2. Research scientific research structured and controlled

That is, scientific research is a systematic, disciplined, precise and planned mental activity that must be based on the appropriate method and methodology, and that the various information and data should be presented in a systematic and sound manner.

2. 5. 2. Scientific research

It means the existence of specific objectives for each scientific research sought by the researcher to achieve them by trying to solve the problem posed.

3. 5. 2. Scientific research

So that the distance from the subjective, with the desire and ability to examine evidence impartially and impartially, and the distance from personal excellence and self-research, and the establishment of data on the facts and not on feelings and personal self-esteem, the more objectivity in understanding the data and benefit from the more our ability to describe research on It is scientific.

4. 5. 2. Scientific Research

Because it always involves renewal and additions to knowledge through continuous and

[38] Al-Daman, Munther (2009), Foundations of Scientific Research, 1, Amman: Dar Al Masirah for Publishing and Distribution, p. 17.
[39] Ibrahim, Abu Zeid & others (2011). Educational Research Skills, Amman: Dar Al Fikr, p. 40.

continuous replacement of old knowledge with new and modern knowledge.

5. 5. 2. The validity of the results achieved for implementation and application and the feasibility of these results for dissemination

Using the results of the research reached in other organizations or circulating on similar phenomena, and the more relevant the results of the research, the more valuable and useful.
And. Clarity and depth of ideas and accuracy
And that these ideas are in place and have a function in research.

6. 5. 2. The novelty of the subject, even relative

And the lack of repetition of the ideas of others, and should be characterized by scientific research linked to a specific reality or a case study realistic scientific research increases the value of the true results.

7. 5. 2. Flexibility

Which means matching research with different problems, and must be relatively flexible, especially in economic sciences.

8. 5. 2. Scientific research, theoretical and applied

It uses theories to establish and formulate hypotheses which are explicit statement subject to experimentation and selection[40].

9. 5. 2. It is based on experiments and tests on hypotheses

Scientific research believes and is combined with experiences.

6. 2. The difficulties of scientific research

There are many difficulties facing the process of scientific research in various sciences, which vary from one specialty to another, and perhaps the most important of these difficulties are the financial difficulties, or financial resources of the researcher.
As long as the researcher is able to carry out the research in a sound scientific manner with the availability of financial resources, the research is appropriate, in-depth and correct because it depends on access to information and data, whatever the costs. Here we point out that countries that strive to develop scientific research should pay attention to the financial and material conditions of the researcher, in addition to the various scientific researches he performs, in addition to constantly improving these conditions, so as not to be preoccupied with other things.
Among the difficulties of scientific research, especially in developing countries, is the lack of information on a permanent basis, although it is not often credible. This makes the process of scientific research difficult, and if the research is completed, the results are often inaccurate and inappropriate. In this regard, States and communities must attach great importance to the provision of research information by establishing more research and consultation centers and providing public statistical offices and offices in various disciplines.
We also find that the researcher is not given the necessary value as a researcher, especially in developing countries, there is no principle of respect for researchers who are the cornerstone of the development and growth, progress and stability of these countries.

1. 6. 2. Difficulties, obstacles and problems

- Complexities and phenomena of phenomena: It is recognized that the phenomenon of humanity and social unstable and stable as long as related to human[41], the fact that the

[40]Ungel, Arkan (1984). The Concept of Scientific Research, translated by Mohammed Najib, Journal of Public Administration, Saudi Arabia: Institute of Public Administration, 40, p. 148.
[41]Piaget, Jean (1976), Human Sciences in the Science System of UNESCO, Main Trends of Research in Social Sciences, Journal of Legal and Economic Sciences, I, Damascus, p. 88.

latter conditions vary from one case to another and from time to time as well as the place where he lives, so it makes sense to be complicated these phenomena as long as unstable on And their similarity will make it difficult to determine the situation from these phenomena and to judge them, which often results in very negative and unreliable results in the classification and control of phenomena, especially as they are affected by complex human behavior. As human and social phenomena change relatively rapidly, relative stability reduces the chance of repeating the experiment in very similar circumstances.

So, It can be said that the complexity of human and social phenomena is due to man in his own right. He is the center of science and social studies. He is the most complex organism as an individual or as a member of the group. Human behavior is influenced by several mood and psychological factors to the extent of confounding the social researcher[42]. Such as historical material, which is more complex than information and knowledge in other areas of life. Thus, it is difficult to develop hypotheses and test these hypotheses, because the cause-effect relationship in determining historical events is not simple.

- The loss of homogeneity in social phenomena: Although we can issue some generalizations about social life and human behavior, the phenomena have their individual and non-recurring personality, and we can not deviate in the abstraction of common factors in a number of social events, to formulate a circular or general law, But that does not mean the difference in all areas.

- Social biases and prejudices: It is difficult to study social and human phenomena objective study away from personal passions and emotions, social phenomena are more sensitive than nature, because they care about the human being as an active member of a group and since man is a purposeful creature working to reach certain goals, Which helps him to modify his behavior, the material of social sciences and humanity is greatly influenced by the will and decisions of the human.

- The lack of accuracy of terms and concepts in social sciences: We note the difference in the use of concepts in social sciences and concepts in the natural sciences, where social concepts are characterized by flexibility and ambiguity, and lack of clarity and versatility[43], while the concepts in natural sciences are more accurate and consistent.

The difficulty of reaching the generalization of the results: The human and social sciences of all kinds and the number of branches like natural sciences, the scientific method or the scientific method in the research is not based on natural and applied sciences, as some think, but can be applied in different social and human sciences, Lies in the accuracy of the results, especially as it is due to the nature of the problems facing the researcher in the humanities and social sciences.

This is evidenced by the difficulty of reaching clear and consistent laws because of the constantly changing social phenomenon. The theories reached in the field of humanities and social sciences remain relative [44], and are not characterized by the accuracy and scientific rigor that characterize the natural sciences. This is because the natural sciences deal with:

• Rigid materials can be studied and analyzed without bias, and this is unlike the human and social phenomena are not fixed.

[42]Al-Chalabi, Ahmed Ibrahim (1998). Teaching Social Studies between Theory and Practice, Cairo: Egyptian Center for the Book, p. 123.

[43]Nazal, Shukri Hamed (2003). Curricula of Social Studies and Foundations of Teaching, Al Ain - United Arab Emirates: University Writers' House, 1, p. 140.

[44]Ibrahim and Ahmed, Abdul Latif Fouad and Saad Morsi (1979). Social Materials and Successful Teaching, Cairo: The Egyptian Renaissance Library, 1, p. 15.

• Laboratory testing and replication.
• Use maximum settings and settings.
• Achieving accurate and confirmed results that reach the level of the law.
• In the field of human and social sciences, the topics of research are human and activities in all areas, which raises problems and difficulties in the field of research, including[45]:
• Human being is a very complex organism, and the researcher can not be fully objected when studying his activities.
• It is very difficult to study laboratory, because it will change its attitudes and reactions as soon as it feels under observation in artificial conditions.
• The highest standards of social research can not be achieved, and laws can not be reached.
• In addition, there are other differences distinguish between the phenomenon of natural and human phenomenon and social enough to mention some[46]:
• It is easy to identify and determine the cause of the illness or the causes behind the emergence of natural phenomena, while it is difficult to identify and limit all the causes of the phenomenon of humanity, the student may know some reasons, but without being able to identify all the reasons, because they are multiple and overlapping and intertwined.
The natural phenomenon is characterized by the absence of a personal, cultural or heritage component. It has no personality, no culture, no heritage, and is abstract from time and space, such as abstraction of consciousness, will and memory. In contrast, these personal, cultural and heritage components are essential in building the structure of the human phenomenon , In addition to the multiplicity of these cultures, and the multiplicity of human figures, with the presence of awareness, free will, feeling and memory in the human phenomenon.
The most prominent example of this is: historical research, where it is difficult to reach results suitable for generalization, in order to link the historical phenomenon with time and spatial conditions that are difficult to repeat with the same degree of accuracy.
- The difficulty of subjecting human and social phenomena to the test: If the natural and experimental sciences are engaged in the study of natural phenomena as subjects or objects that can be subject to all procedures of observation, measurement and experimentation, the study of human and social sciences as fields of research and study in all human and social phenomena, Something that accepts the application of the same procedures that have proved its methodological importance at the level of natural sciences, and hence raises the following problem: Can you actually study the human (what is conscious and free) as you study natural things ?.
The inability to use the laboratory method in the human and social sciences results mainly from the difficulty of putting social phenomena under controlled conditions, as in the natural sciences. The social researcher must study and observe the phenomenon under consideration in the wider world and wait for it to occur because it can not create the circumstances of their acquisition, and the control of those circumstances in a completely identical, then in this sense, can not put human phenomena and social experience, because of the following reasons[47]:

[45]Masiri, Abdul Wahab (2002) Physical philosophy and the dismantling of the human, Damascus: Dar al-Fikr, I, pp. 15-16.
[46]Al-Zou'bi, Mohamed Ahmed (1997). The problems of scientific research on social phenomena and social phenomena in developing countries, especially Arab studies, a socio-economic intellectual journal, Beirut: Dar al-Tali'ah, 2/1, p. 93.
[47]Al-Hadithi, Jaber (1985). Crisis of Human Sciences, Arab Thought, Journal of Arab Development for

- The difficulty of experimental control and isolating the interrelated variables of social and human phenomenon.
- The experiential situation is affected by observation and observation by the researcher, which sometimes leads to a change in the behavior of the individuals and communities studied and research, and the difficulty of observation sometimes.
- Social and human phenomena change relatively rapidly, and this reduces the chance of repeating the experiment in very similar circumstances.
- The abstract nature of some social and human concepts and the lack of agreement on specific definitions, and subject some social and humanitarian problems to ethical standards.
- The difficulty of measuring accurately the social and humanitarian phenomena[48] of the lack of accurate measuring instruments sometimes. Such as historical material that is not subject to experimentation, and thus it is difficult to prove the hypotheses and achieve them experimentally, historical sources are subject to error, and must be adopted observations and statements of others, because the researcher is unable to direct contact with historical material.

2. 6. 2. The scope of these difficulties on scientific research

The difficulties - in general and the scientific objectivity in particular - facing the scientific researcher in the field of human and social sciences, can affect scientific research and scientific objectivity through the following:

The scientific research is characterized by several characteristics that distinguish it from other studies. In order for a particular study to be considered as an academic scientific research, it is necessary to reach meaningful and generalizable results. This characteristic is found in the natural sciences, While in the field of human and social studies, there is little evidence of history, it is not possible to reach meaningful and generalizable results[49], since the science of history is based on historical knowledge, which is partial knowledge by its very nature, Because of sources of knowledge Historical and damaged and counterfeited.

Deobold Van Dalen[50] described what Gottschalk[51] said about historical knowledge by saying: Those who have seen the past remember only part of it, recorded only part of what they remembered and lost part of what they recorded. The researchers discovered a part of what they understood and understood part of the correct recording, and transferred part of what they understood, so that historical knowledge remains partial knowledge. On the one hand, it is difficult to reach results that can be generalized in historical scientific research, in order to link the historical phenomenon with time and spatial conditions that are difficult to replicate with the same precision.

- The lack of objectivity by giving the character of personal tendency and personal tendencies to social and human research, and the self is manifested through the following[52]:

• The researcher in the humanities and social sciences is influenced by the subject he is

Human Sciences, Beirut: Institute for Arab Development, 38/37, p. 16.

[48]Al-Najdi, Ahmed Abdel Rahman et al. (2002). Social studies and confronting environmental issues, Cairo: Cairo House, p. 75.

[49]Ibrahim and Ahmed, Abdul Latif Fouad and Saad Morsi (1979). Social materials and their successful teaching, p. 22.

[50]Dalin, Deobold (1990). Research Methods in Education and Psychology, Translation by Mohamed Nabil Nofal and Others, Cairo: The Anglo-Egyptian Library.

[51] Gottschalk, Petter 1999. Use of IT for knowledge management in Law Firms, the journal of information, law and technology, JILT, 3.

[52]Nazal, Shukri Hamed (2003). Curricula of Social Studies and Foundations of Teaching, p. 152.

studying because he is a part of it and it is difficult for him to study it impartially, impartially and objectively.

• The researcher may affect human and social sciences in the human phenomenon, change their nature and understand them in a special way, which makes the results differ from one researcher to another, and makes the possibility of generalization impossible.

• The subject interferes with the human sciences with the self, and it is difficult to separate them, and this is contrary to the natural sciences in which the self can be separated from the subject.

The researcher focuses on the human and social sciences around himself, that is, he presents his vision of the human phenomenon studied, starting with the same feelings, ideas and beliefs associated with his commitment to philosophical positions, ideological or ideological doctrines, which makes the researcher fall his own perceptions of the phenomenon and makes the achievement of objectivity It is a very difficult question.

• The self-involvement in the subject makes them believe in a kind of intuitive knowledge of the subject, and this is contrary to scientific methods and techniques that would achieve the objectivity envisaged.

- The provision of improvised and random judgments: The researcher in the human and social sciences as a result of the absence of a lot of evidence and clear evidence to solve a particular problem, whether political or economic or social or historical or psychological, makes him rush to issue arbitrary and improvised judgments, and this affects the end On scientific objectivity, which in turn affect scientific research and credibility.

3. 6. 2. How to overcome difficulties and obstacles

The obstacles and obstacles facing the scientific researcher in the field of human and social sciences can be overcome as follows:

- Obstacles in the field of history: The mark of Ibn Khaldun[53] was able to make history a note of his methodology and laws, the history in his view is not just a narrative of the news, but analysis and explanation of it, he says: As for the news of the facts must be true and correct consideration of conformity, so It must be considered, and it has become more important than the amendment and submitted to it.

- The science of history requires the following laws:

- The law of causation: No incident occurs only natural reasons have led to the occurrence, and the natural causes of the situation related to the state of political, economic and cultural, and here Ibn Khaldun link between the movement of history and the human condition, he says: History is news about the humanitarian meeting which is Urbanism and what is exposed to its nature, such as brutality, femininity and fanaticism.

- The law of impossibility and impossibility: What was reasonable news we entered the circle of possible, and what was unreasonable, we introduced the circle of impossibility, and from this principle can distinguish between the correct news and false news in a demonstrative manner.

- The law of similarity: The historical events are similar in their causes and consequences, civilizations grow on certain nerves, and when you reach the top of the pyramid resort to luxury and begins to decline and decline to begin another civilization to grow in the same process, history is subject to the principle of determinism.

The law of evolution: Human civilization is constantly evolving, and the conditions of people in change and diversity, and despite the law of similarity, the change of symptoms

[53] Ibn Khaldun (2005). Introduction Ibn Khaldun, I 1, Beirut: Dar Al-Jeel Publishing, Printing and Distribution, p. 72.

and manifestations, such as changing personalities and means does not change the ills and laws, the facts do not repeat itself but in different ways.
- The scientific study of history goes through the following stages[54]:
- Assembly stage: The incident must be addressed through the effects and documents are of two types:
- Involuntary sources that have remained unintentionally such as buildings, money, weapons, decorations and intellectual and literary heritage.
- Voluntary sources, which is intended to be a witness to them like the novel and history books.
- The stage of criticism and verification is done at two levels:
- External criticism: the external examination of the source in order to know whether this document dates back to that time or not? If it is a document, the type of paper, ink or line should be checked. If it is a weapon, coins or medals, the type of metal and the nature of the chemical should be examined in order to ascertain the effects.
- internal criticism: an internal examination of the source, in order to know whether the contents of this document is consistent with the mentality attributed to him, whether it is consistent with what was narrated in other references, as well as knowledge of the writer's psychology and attitudes towards this incident, prompting the scrutiny and exaggeration or To distortion of events and accurate reading, so that he can identify unintentional and spontaneous errors.
- Reconstruction of the incident: to write between the parts and arranged in chronological order and the causality, so that each stage of the introduction to the subsequent, and the result of the previous stages, and in this way is to study history away from self-judgments.

Conclusion

- The scientific research has three pillars that are not based on them, and each of them represents an important matter in its appearance in the appearance that should be the subject, method and form.
- Knowledge can be defined as meaningful information ie relevant, actionable information that depends, in part, on past experience, a set of key capacities, ideas, laws, and procedures on which to base work methods and decisions.
- It can be said that knowledge is information that has been interpreted and given meaning so that it becomes useful for solving a problem or making a decision. It is worth mentioning that the process of processing and interpreting this information is through the knowledge base owned by each person, and can be conceived as a base containing facts, experiences, beliefs, attitudes and relationships, which connect these elements with each other, the ability of a person to act and solve problems is part of his own Knowledge first.
- Scientific research is an organized method in collecting reliable information, making observations and analyzing the objective of this information, by following specific scientific methods and methods, in order to ascertain its validity or modification or adding new ones, and then reach some laws and theories and predict the occurrence of such phenomena and control the causes,
- Scientific research is a way to solve a specific problem, to discover new facts through accurate information, and scientific research is the only way to know about the world.

[54]Buhoush and Thunibat, Ammar and Mohamed Mahmoud (2001), Methods of Scientific Research and Methods of Preparation of Research, Algeria: Bureau of University Publications, 3, p. 17.

- Scientific research depends on the scientific method. The scientific method is based on organized methods of observing, recording information, describing events and forming hypotheses. These are organized steps aimed at finding and translating facts. This results in an understanding of events, trends and theories and works on applied science through laws and theories.
- The perception of countries varies according to the importance of scientific research according to their social development, the amount of their wealth and the awareness of their rulers, the availability of minimum research requirements and so on, but they are much less fortunate than the developed countries in this field.
- The gap is still very wide between developed and developing countries in various ways, one of which is scientific research. It is not enough for developing countries to invest and apply the results of developed countries' research, because in this case they will always be dependent on science and knowledge.
- To conduct research on them, provided that the availability of research materials from researchers and laboratories and the creation of the scientific atmosphere, which enables the researcher to leave for research and to do it to the fullest.

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