

Recognition is an Effective Step to Make a Scientific Insight in Students

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ABSTRACT

As far as, recognition which is a significant factor to make a scientific insight in students, it is ignored with teachers and principals and because of the existence of the relationship between recognition and scientific insight, the first step to create the scientific insight in students is to create recognition.

To achieve this goal, schools have to equipped students with the updated information and skills.

In this article we are up to consider the necessity of the scientific insight, define recognition and its different types, the relationship between the scientific insight and the different types of recognition and explain the practical point of view in teaching scientific insights.

Different types of recognition are as follow:

- Religious recognition
- Intuitive recognition
- Art recognition
- Intellectual recognition
- Philosophic recognition
- Scientific recognition

Ministry of Education should consider some points of recognition in training. The main points are:

- To make General knowledge, the student's habit.
- To familiarize students with religious knowledge based on critical thinking.
- To get students to imagine
- To pay attention to art lessons and writing compose
- To create Exhibition of Art

Culture, politics, society and economy are the factors which make scientific insights and those who involved in the society decision making should pay special attention to them, so if society is not ready to accept people with scientific insights, they suffer from despair in it.

Therefore, there should be special attention to recognition and underlying factors in creating insight in order to train thoughtful and creative students who have scientific insight.

KEYWORDS: Recognition, scientific insights, practical points on training, risk factors, creating scientific insight.

Introduction and the necessity of scientific insight

Today, while deepening and expansion of science, scientific thinking and scientific insights in students are natural necessity and unavoidable more than before, but administrators, principals and even families give less serious attention to them. As a result, most actions and the result of the school activities, in the society, are nothing but certificate-oriented, transferring and saving a large volume of information in learners, a problem which postpone and may stop the process of the realization of scientific and cultural independence in the society. Training students with science, scientific thinking and scientific insights causes them not to be passive and silent in facing the variety of society events and the world's issues, but to have the spirit of investigating, the power of logical reasoning and understanding to deal with unpredictable matters in their life with the adequate knowledge.

Today, schools can not only rely on are the classical (old) science and writings to make their way of training, their educational objectives, but they have to equipped the children and the young people in the society with the updated knowledge and skills.

For the student to have a good and desirable behavior in an environment that is rapidly changing he should have an opportunity to do something more than collecting and storing information; he should have an opportunity to change. Promoting scientific insights should be one of our educational objectives. We

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should notice that promoting scientific insights within the students is not something new and difficult, but it almost exists in children's characteristics.

The increasing spread of scientific findings from developed countries and the growing distance that we have in many fields such as science and so on in our country, will extremely increase the necessity of considering science, thinking and scientific insights in the society and especially in schools.

If fundamentally we want to have more effective activities in the field of growth and comprehensive development in the country, If we want students and other individuals in the society convert from having surface-oriented point of view and the passive state to comprehensive and rational thought, If we want to move towards scientific independence and self-reliance instead of following up, if we want to have the material and the spiritual progress in the world, certainly one of the ways to access to these objectives is to consider issues of science, increase scientific knowledge of society and more importantly, increase the quality of scientific insight and understanding in students through correcting insights and methods of learning.

What is recognition?

Recognition is the result of thinking, and thinking is a process which human does, and the subject is reality. Thinking is an activity that is always associated with human activities.

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In philosophy, recognition is called to a branch of philosophical theory which attempts to define knowledge, characterize its source and limitation in this sense it is also called the theory of knowledge or wisdom, the theory of knowledge means; considering the nature, its possibilities and its restrictions. In other words, the theory of recognition defines whether we can recognize something; how we can gain the recognition; if there is any limitation; and other questions of this type.

In this branch of philosophy, the topics such as perception, memory, reasoning, evidence, belief and certainty and uncertainty are discussed. (8)

Characteristics of the General knowledge

Titus points out three properties of the General knowledge:

1. General knowledge is based on customs and traditions, so it tends to be habit and the desire of imitation.
2. Many of the assumptions of general knowledge have not been tested. General knowledge clear and obvious things.
3. Because it is often shallow and superficial, so to be rational and justified, it tends towards ambiguity (11).

Indeed, according to the mentioned specifications about general knowledge, we can never fully neglect public knowledge; we can say this public knowledge makes scientists improved. They do the scientific research themselves. In fact, science is the result of the public knowledge. (11)

Religious Recognition

Among the most enduring human recognition or knowledge, is religious recognition. The rise of religions, human beings inspired by religious teachings have tried to respond to the issues of existence of this point of view. Religious recognition is gained thorough intuition or revelation of knowledge or rational argument and so on. The main issue to this knowledge is dedicated to the Divine Providence. Because of its special relevance, despite the scientific researches which are based on the experience and perception, this recognition is based on intuition, revelation, tradition and the rational arguments. There are different opinions regarding the limitation of religious recognition, and its difference consideration about human knowledge. As the philosophy of science, and in general, theory of knowledge goes on; the nature and restriction of different recognition are being discussed, as well as religious recognition is also discussed. For example, some people believe that subject and religious method are separate from other recognitions and somehow it is on the contrary with them. Others believe that, instead of classifying and identifying the recognition, there is a relationship between, knowledge, religion and other recognition. (6, 13)

However, what is mentioned in this paper, is the fact that religious recognition as one of the oldest type of recognition has always been considered and it is necessary to determine the properties of this recognition in the point of subject, methods as well as results and identify its relationship with other human recognition.

Intuitive recognition

This knowledge is a state of mind which he discovers within himself at the moment of insight. Insight or intuition is a sudden leap of thought or a logic conclusion of something that has been hidden in our unconscious for a long time.

Suddenly we find the solution to a problem that involves our sub-conscious mind for days, months or even years. (9)

More intuitive recognition is based on experience, imagination, or private. The conventional wisdom is not true based on empirical methods, but I know there will be the foundation. Through the depth of the topic or topics that no one has any knowledge about it or repetition and showing the way is not possible for us. However, the knowledge clarifies many unknowns to us. Many of the truths of art are based on intuition, and the same analogy, many of the great achievements of science and philosophy and religion are derived from intuition. This understanding can be got without intermediaries, and unlike conventional reasoning and logical argument, it means that it is a direct perception. In this understanding it appears that we are not aware of legal reasons due to the result, although we are able to recognize the legitimate reasons and generalize them.

Art Recognition

Art recognition is a knowledge based on feeling. The artist, like others, wants to know the facts. This recognition is not based on reason or experience, and scientific experiments, but the foundations are feeling and emotion. Creating art is not a process like scientific works, but is dependent on the facts and the scientific method. (3)

As mentioned in the science, if we want to drive the fact through the reasonable recognition and on the other words, the emphasis on understanding aspect of recognition to find the scientific recognition and dealing with the quantity we find. If we hesitate in the first step to recognition which means the real sense of recognition, and emphasis on cognitive and emotional aspect of the emphasis, it brings us to the recognition of art. As scientists relying on general abstract concepts, he is about to absorb the external reality of the states of the organism. And in the language of quantities, he says, relying on the intellectual graphic detail, abstract internal reality from external reality and in the language of quality, he reports. Thus, in art the internal reality organism is more considered than the external reality, and on the reverse, in scientific work, the external reality is more emphasized than the internal reality.

However, artists such as scientists seek to understand recognition according to reality; they continue to capture the reality.

Not only Scientific recognition but also art recognition requires experience and experience the artist are the result of his philosophical background. The art can be defined as: a true recognition through experience, rely on a philosophy with the emphasis on quality. Art, like science, according to human life requirements continues to change and at any time will provide a new recognition. This new recognition itself requires new operational requirements and leads social changes. Artist and scientist, both change the reality. Scientist gains the internal reality from the external reality. Artist recognizes external reality from internal reality. Both are truth explorers: science seeks the scientific truth, while other looks for the truth of art or beauty. The man knows the environment with its changes, and then he will change, when he changed, he welcomes the environment with new theoretical then brings new changes and he recognizes new things, then he will change again. Scientists try to discover the quality of the new changes that occur due to human action. And artists try to identify the hopes and dreams or new facilities which bring about new changes in human being. Scientists know the actual facts - what it is - and make people be ready to deal with the future events. Artists know the potential reality - what should be - and determine and predict the men today's activities and the ways to achieve and meet human facilities and expectations. Unlike other creatures, human being changes the reality thorough the practical life and with changing the reality, know it. And with identifying the rules, find the way to overcome it and escape from the destiny, so the human action which cause recognition, is a mean to freedom. Human scientific work dominates him on external forces, and his artistic works unify him with internal necessity, and therefore it will prevail. In this case, the science is a mean of human freedom in the world of perceptions, and art is the human freedom song in the world of emotions. In the art world, the subject of character recognition (human) has the active system of consistency. And in the active world, it organize and regulates the identify subject (external reality).

Science in the universe gives the perceptual system to the character of the subject (man) and in the world of conceptual, imposes the perceptual system on the subject (external reality). Conformity or coexistence of science shows that the working subject is the identified subject. And working subject is the identified subject. This conformity or the coexistence of science and art give birth to philosophy.

Rational Recognition

This recognition is also one of the old recognition. This recognition means the knowledge that is the result of reasoning and argument. Conversely, empirical recognition which is the result of experience and senses this recognition is logical and reasoning and it is internal. Mathematical, logical reasoning, and philosophical and religious are examples of this recognition. This recognition, however, is internal and reasoning, it is affected by the environment. The next step is to identify sensory recognition or sensory perception. If we assume that man has two fundamental perception, sense perception and rational understanding, this knowledge is of the second category.

Philosophical recognition

Philosophical recognition is important in human life. Because in one hand, it leads human action and on the other hand it leads the science and art. According to his philosophy, a man selects his way of life and takes his work deals. And both artists and scientists see and explain the universe according to their identification of philosophy, so philosophical recognition is such a way that determines person's life, in addition, it will help artists and scientists to seek unknowns and will fill information gaps. In fact, consider the general questions which comes in philosophy, it tries to make a relationship between different kinds of recognition and human knowledge. The philosophical recognition is comprehensive so it includes both the internal and external reality. In other word, it implies scientific and art recognition. Quantitative and qualitative aspects of reality that are separated from one another in art and science, find get unity in philosophy. Although, philosophy drives from art and scientific recognition, it leads them to go forward. As science and the arts come forward, they achieve new discoveries. The new expansion will be required and new philosophies are provided, and as new philosophies come, it brings arts and sciences into new unknown areas which cause new discoveries. So, as much as the private philosophy of the scientist or the artist is more realistic, his scientific or artistic recognition will be deeper and more fertile. However this type of recognition the same as scientific recognition, is systematic. The method, content and purpose are different from experimental science.

Scientific Recognition (Experimental Science)

Everyone faces the environment with his senses. And with the scattered perceptions that are absorbed from the environment, passes the first step in recognition, and to some extent identify the universe. This kind of recognition which is an obligatory to for the science is simple and shallow and has a strong emotional aspect. But during the second stage of recognition, people can make their perceptions meaningful, deepen and expand their recognition of the concept, and make it closer to the reality. Such a recognition which is close to reality is called "science". The aim of science, like other human activities, is to overcome the reality and facilitate human's life. Science means recognition the reality rules, make man be able to predict and arrange life and overcome the reality. As far as recognizing the reality is only possible through experience which is to interfere through the reality; so all biological and social sciences, mathematics and physics are based on the exact experience. In this case, we can say that science recognizes the reality through experience.

There is no doubt that the experience needs explanation, so thinking or philosophy of the scientists involved in experiences that lays them. Therefore, you should say that science recognizes the reality through the experience rely on a philosophy. We know that human recognition has two integral aspects: cognitive and emotional. Cognitive aspect gives information about the environment, and the emotional aspect shows internal status of an organism. Scientific recognition involves both aspects: it is not mere perception, but it has emotional aspect as well. However, because of the scientific recognition which is based on abstract concepts, it is not the same as sensory recognition and not emotionally strong. Scientist tries to know and estimate the universe, separate from the internal qualities of organisms. In other words, science emphasizes the quantitative aspects of reality. Therefore, the definition of science can be: Recognizing the reality based on a philosophy with the emphasis on quantity. Perceptual and emotional aspects have some relationship, and this is not the same in all sciences. As the perceptual aspect of mathematical science is more than other sciences, but there is no other science which is absolutely excluded and independent from states of the organism. Even the mathematical sciences, which are "the most conceptual"; or the most abstract sciences are human activities and of course depend on the internal life or emotions. Like any other knowledge, science changes over time to fit human needs and with the increase

experience of the generations it gains more extent and accuracy. So science is a kind of recognition that is partial and variably changeable. But scientific recognizing in practice gets along with the reality. So even it is relative, it is true, valid and absolute. In other words, the degree to which science is applied in reality is absolute. The science and practice have come hand in hand. Changing practical requirements of life lead people to new recognitions, and the new recognitions cause changes in practical requirements.

The relationship between scientific insights and recognitions

Scientific insight is the result of the relationship and division between recognitions and scientific recognition. Someone who has the scientific insight can find logical answers to most of his questions, with the knowledge of the objective, method and extension of each kind of recognition and the way they are related. Here we point out some of these relationships:

Philosophy asks science its questions and science will solve some of the philosophers' mistakes. For example, flat and inhabited the earth had long been accepted by philosophers and thinkers. Scientific findings correct these wrong ideas. Today, philosophers still ask questions for scientists and scientists discuss them. Religion makes questions for science, Science tries to find answers to these questions and corrects some of the mistakes for the religious people. For example, Cardinal Usher believed the creation date to 4004 BC, (7) while the history of science says it is millions of years earlier than that time. Also there is a relationship between art recognition and other recognitions. According to the art which is the emotional aspects of human being and it cannot have the hundred per cent logic perception, but in every sense of perception emotion exists as well. Many philosophical and religious issues are discussed with science or artistic insight. Today artists are benefiting from the scientific and religious findings in their art and explain the facts by these wider means. Expansion of the art is the result of the scientific, philosophical and religious findings. So we can conclude, who has a scientific insight, can make relationship between recognitions. While he gains the awareness and understanding of the nature and essence of each of these recognitions, he can find the real relationship in the universe. This argument seems to have a scientific basis. So someone is called to have a scientific insight that can find out these relationships and understand the common ground and differences between them.

Practical points in training different kinds of recognition

Practical points in training general knowledge

Education needs to make General knowledge be student's habit to recognize the right of wrong with the mean of deep thinking and thinking habits. Students in the educational process based on general knowledge, don't consider the present situation normal, so they continue searching to find appropriate solutions through determining the relationship between the phenomenon's. In this process, how they move toward scientific knowledge, scientific insights are provided in them.

General Knowledge _____ Scientific Insight

The practical points in gaining religious recognition

This recognition is the oldest human recognition in the history, and thinkers with the worldviews have different approaches toward it; so education is necessary to make students familiar with the recognition that is rooted in theology and the Bible, not to be superficial and vulgar, but with the foundation of logic and critical thinking.

Practical points in gaining intuitive recognition

Considering this recognition is gained in different areas of artistic, intellectual, scientific, philosophical and religious; teachers need to value this aspect of recognition, as well as to force students to imagine and return to their inside, take a moment to think, and then express these findings written and oral. Perhaps at this moment they achieve something that was missing in their normal world.

Practical points in gaining art recognition

With regard to this point that art has its own logic and specific methodology and giving attention to it brings the intellectual and logical order so it is among the features of scientific insight; teachers should consider the followings:

Not to ignore subjects such as art, composition, the scholastic research, discussion and freedom of thought and action.

Teachers should allow students to develop their artistic expressions, through enhancing the embrace of nature, by allowing them to be on their own, paying attention to the created work, visiting art exhibitions, providing a field for discussions about art that affect their art growth and development.

Practical points in gaining rational Recognition

Because human knowledge is one of the most important tools of reason and logic, and development and growth of this aspect of knowledge can lead to rational and logical thinking, it is necessary to make it possible for students to have their own reason, this aspect is very important to strengthen their knowledge.

Teachers should provide some fields for students to have individual activities, to be able to express themselves and deal with others' ideas and try to solve the problems and find solutions with the tools and variety ways of knowledge.

Additionally, teachers should train students to accept the truth by the means of logical reasoning rather than blindly acceptance; to gain rational and logical growth.

Logical and critical thinking is so important that some of thinkers called it as the true method of education. (12)

Practical points in gaining philosophical recognition

There is no escape from metaphysics. We, humans, think metaphysically and judge metaphysically. We cannot find a human who doesn't raise a general or metaphysical question. Philosophy is a kind of intellectual activity. Philosophical knowledge is important in the case which causes to grow creativity. Teachers shouldn't ignore students' general questions that may in future become the fundamental questions and base the foundations of the new ideas in them.

Practical points in gaining scientific recognition

Scientific recognition has its own specific domain and it is domain of natural creatures or quantities. Science has its own special language and in comparison with general knowledge, it is more accurate and deeper. Therefore, teachers should equipped students with this recognition to speak, citing scientific findings and avoid burbling and mystery.

Risk factors to create scientific insights

Rational insight and wise action, feeling of security of mind, group work with research spirit, creativity and innovation, humility and patience are all related in the process of finding the truth; so try to promote the culture of rationalism, the institutionalization the culture of discussion in order to strengthen the cultural consensus, and expand the public wisdom should be the priority of research and educational system of the country.

The purpose of the research system in the country is the set of organized objectives, decision making, policy planning, and programming, organizing the administrative centers, directing and supervising the researches of institutions and assumed scientific research.

Scientific system in the country should adopt scientific policies which mean a set of policies and general decisions in order to promote the culture of research and scientific knowledge and development of methods and effective factors in production, operation, exchange and dissemination of knowledge. Such efforts can be done at the macro level to have useful and positive feedback in the smaller institutions, including schools. Cultural officials should make their effort to overcome structural and functional failure of the educational system and develop scientific and research centers and provide the necessary facilities for the researchers and research institutions to access information and statistics on banks and networks and with promoting research culture, improve the process of scientific insight.

Society and scientific insights:

Expansion of civil institutions and social trust, strengthening public society, public morality and solidarity, cohesion and collective identity are effective in developing wisdom-orienting and scientific rationalism. Scientific associations have an effective role in creating research area and producing and developing science and scientific behavior. (1).

Growth and development of civil institutions, especially scientific societies and scientific development are correlated. The growth of social capital and cultural capital are also linked.

Political and scientific insights

Freedom, security, the rule of law and democracy means the existence of civil competition, political participation; people enjoyment of the same mechanism in the government's performance and interference in the determination of his civil are effective in the prosperity of science and scientific culture. A thriving culture of research and creation of thought is closely linked with the political developments in Iran's history. Whenever and wherever there is political freedom and political security, thinking and scientific thought has grown. (14)

The development of political factors and scientific development in the country has established a direct positive relationship; thus the more the amount of civil liberties - political freedom - supportive legislation, and the linkage between academic and administrative department, and interaction between scientific and

administrative institutions, deserve democracy and benefiting from scientific results in decision making, a thriving culture of research and science sub-system will be more.

Economy and scientific insights:

Expansion of research culture and the development of sub-system scientific system have relationship with the level of economic development and its indicators such as energy consumption per capita and the industry's value added.

Societies with higher levels of economic production per capita have more than 10 times the per capita production than developing and traditional countries. The number of researchers and research funding is higher for one hundred thousand populations. (5)

In developed countries which have a dual economy, the rate of demand is very high and it gives a great help to spread of culture of research, produce and issue ideas and valid and valuable scientific data. In Iran, despite the fact that about 80% of researchers work in universities and research centers; but they access only 20% of credit research; and major research funding are allocated to the executive institutes. With considering the weak relationship between industry and university; researchers' access to research funds is not easy and an organic interaction hasn't been created between the executive departments and scientific planning; and negative effects of this separation has been plagued all sectors of society. Therefore, efforts to stabilize the economy with the scientific basis and creation of organic interaction between complementary sectors of society, allocating more research funds to scientific and research centers will be effective in the thriving culture of research and promote qualitative and quantitative research performance of institutions. So that in order to create scientific insights in students, it is necessary to make changes in elements of education, as well as providing the external factors, namely the social and cultural context.

Conclusion

To be equipped with scientific insights we need to know different kinds of recognition, their methods and objectives. Although Recognitions appears to be separate on the aspects of subjects and methods; but because they are seeking the relationship existing among the world's realities, they have the same basis. Each of these recognitions has its features which need to be recognized.

Today's world is the world of science. It is necessary to inform the teachers and students and the entire educational society of these realities in order to make efforts toward the scientific and research processes. This process has some arrangements which need to be provided by the education.

To be equipped with the scientific insight, it needs to have appropriate cultural and social demands. So in addition to transforming the education system, external factors affecting them should be changed; and social, political, economical and cultural factors come together to create scientific insights at the macro level, in society and in the micro level, in families and schools.

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