

# **Paradigm Change, An Urgent Issue to the Studies of Information Discipline**

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## **1. The Definition of the Paradigm for a Scientific Discipline**

The paradigm for a scientific discipline is defined as the integrity of scientific view and methodology for that discipline in which the scientific view defines **what** the essence of the discipline is while the methodology related defines **how** to determine the scientific approach to the studies of the discipline. Thus, the paradigm for a scientific discipline delimitsthe norm that the studies for that discipline should follow.

As result, the studies of the category of a scientific discipline should employ its own paradigm. Therefore, the studies of a physical discipline should employ the paradigm for physical discipline whereas the studies of an information discipline should employ the paradigm for the information discipline.

## **2. The Role The Paradigm Plays in Scientific Studies**

The paradigm as defined above plays the role that leads the studies of the related scientific discipline. As a matter of fact, whether the studies of the discipline would be successful or failure in practice will depends on if the paradigm employed for the discipline is correct or not. So, if the paradigm for the information discipline has been employed, the studies of the information discipline would make successes no matter how difficult the information discipline is. Otherwise, the studies of the information discipline will encounter a series of misunderstanding and setbacks.

## **3. The Real Situation Concerning The Paradigm in Information Discipline**

It is a very surprising discovery through the investigation in depth that the paradigm employed for the study of information discipline has ever been the one for a physical discipline, see Table 1, not the one for an information discipline, see Table 2 below.

Table 1 Major Features for the Paradigm of Physical Discipline

<b>Scientific View</b>	<p><b><u>Object for study:</u></b> <i>Physical system with no subjective factor</i></p> <p><b><u>Focus of study:</u> <i>The structure of physical system</i></b></p> <p><b><u>Property of the object:</u> <i>Deterministic in nature</i></b></p>
<b>Methodology</b>	<p><b><u>General approach:</u> <i>Divide and conquer</i></b></p> <p><b><u>Means for description/analysis:</u> <i>Purely formal methods</i></b></p> <p><b><u>Means for decision-making:</u> <i>Form matching</i></b></p>

Table 2 Major Features for the Paradigm of Information Discipline

<b>Scientific View</b>	<p><b><u>Object for study:</u> <i>Info process within subject-object interaction</i></b></p> <p><b><u>Focus of study:</u> <i>To achieve the goal of double win (subject-object)</i></b></p> <p><b><u>Property of the object:</u> <i>Non-deterministic in nature</i></b></p>
<b>Methodology</b>	<p><b><u>General approach:</u> <i>Methodology of Information Ecology</i></b></p> <p><b><u>Means for description/analysis:</u> <i>Form-utility-meaning trinity</i></b></p> <p><b><u>Means for decision-making:</u> <i>Understanding-based</i></b></p>

The use of the paradigm for the physical discipline to the study of the information discipline is surely the roots for all problems related to the study of the information discipline. The major problems existed in the studies of the information discipline include, at least, the followings: (1) diversity without unity in theory, separation among the studies of information in various sectors, separation between the studies of information and the studies of intelligence, all due to the physical methodology of “divide and conquer”; (2) merely formal analysis for the studies of information, knowledge, and intelligence without considering the high importance of subject factors, also due to the physical methodology of “purely formal analysis”.

#### 4. Conclusion

It is an appeal presented in the paper that the paradigm practically executed so far in the studies of the information discipline worldwide should be shifted as soon as possible.