



**It is required to avoid bias  
and prejudice and proceed  
in a constructive way in  
teaching and research**

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**Abstract:** This article (a sort of advice to the young Scholars) is based on the Presidential Address delivered by the Author during the Inaugural Session of the International Conference on Multidisciplinary Research organized by the Kanyakumari Academy of Arts and Sciences (KAAS) jointly with Sree Ayyappa College for Women at Nagercoil on February 28, 2024. The advice, in short, is: Carry out teaching and research in a constructive way without any bias and prejudice.

**Keywords:** Teaching and research, bias and prejudice, scientific knowledge, spiritual knowledge.

It is firmly believed that we the humans have been created in this world through our parents by God (with eight senses or attributes – ‘*Ennkunaththaan*’ as per the *Thirukkural*).

*Kolil poriyil kunamilave ennkunaththaan*

*Thaalai vanangaath thalai.*

*[Couplet 9 in Chapter 1; Original in Tamil by  
Thiruvalluvar]*

*Before His foot, ‘the Eight-fold Excellence’ with  
unbent head,*

*Who stands, like palsied sense, is to all living functions  
dead.*

*[Dr. G. U. Pope’s translated  
version of the above in English]*

We the humans (with six senses or attributes) take a long time after birth to get up and move independently than the other living beings (with two to five senses or attributes). So, we understand that we are unique in having the sixth sense (with analytical and creative capabilities, and can evolve in possessing knowledge and other higher attitudes), and we are expected to have a coordinated social life with true love and affection extended to others.

People of this world can be characterized not only by multi-lingual, multi-cultural, and multi-religious diversity, geographical differences and regional disparities but also by inequalities of wealth, income and opportunity, and access to resources. Education with Research can be considered as a powerful route to reduce regional, and social disparities and enabling choice, and freedom to the individual to lead a productive life and participate in the human development.

The fundamental requirement for everybody in this world is: convenient, comfortable and pollution-free shelter, convenient and comfortable dress; sufficient amount of nutritious food along with pure drinking water; and peaceful and healthy living. In order to make any Country (at least) self-sufficient in these, a better education along with quality research is necessary. Home-grown and cost-effective solutions have to be found to solve the problems of that country especially in villages. It should be noted that the major population in our world is in villages.

It can be stated that:

*The real development of any Country  
Lies in how far is developed the Country  
In education, wealth, health and culture.*

From this it can be understood that if India (for example) is to become developed, we should attain development may not be in corporate wealth (as this is a pseudo development and it creates more inequality of wealth, income and opportunity, and access to resources in the Country) but should attain self-sufficiency in education, wealth, health and culture (as this is the real development of the Country as a whole, including every citizen of this Country).

There arise some questions. What is the real meaning of knowledge? Why knowledge is related to only the human beings and not to other living beings? Can we divide the

knowledge as God-given (Spiritual knowledge / Meignanam) and Man-made (Scientific knowledge / Vignanam)? What knowledge should we consider as spiritual? What knowledge should we consider as Scientific? Under what division should we consider any knowledge obtained from dreams? Can this be considered as spiritual?

We gain scientific knowledge normally by observations, listening to people and media, reading and understanding available literature, personal analysis and thoughts, experimentation, etc. What we have been doing is to gain scientific knowledge. This knowledge is expected to improve or evolve in the future. This can be illustrated with the scientifically attained knowledge (in the past) on the nature of light, atomic structure, etc.

The spiritual knowledge (including that through proper dreams) is universal and is not expected to improve or evolve in the future. We know that the Siddha medicines (known through spirituality and not tested as in the case of allopathic medicines) are considered to be perfect and without any side effect. Also, we know that scientifically prepared herbal medicines require testing.

For a suitable life, we need, not only the spiritual knowledge but also lot of improvement in the existing scientific knowledge. This is very much possible by using our God-given sixth sense; the concept of education and research is that.

The well accepted modern learning process is:

*Concentrate, Understand and Practice (CUP model).*

*And as per the 2000 year old Thirukkural:*

*Karka kasatarak karpavai katrapin*

*Nirka adharkuth thaha*

*[Couplet 391 in Chapter 40; Original in Tamil by  
Thiruvalluvar]*

*So learn that you may full and faultless learning gain,  
Then in obedience meet to lessons learnt remain.*

*[Dr. G. U. Pope's translated version of the above in  
English]*

Both are the same and are in the right direction.

At present, we observe several flaws in the kind and quality of research work carried out to gain knowledge; particularly, research leading to social development is mostly with bias and prejudice. It can be stated that:

*Bias and prejudice may not lead to  
Proper judgements in judicial courts  
Proper conclusions in research works  
Proper outcomes in social doings*

Investigating a case and preparing the judgement in a Judiciary Court is more or less like a research work carried out and drawing conclusions; and a similar way is normally adopted in social doings. In all these three cases, there should not be any bias and prejudice.

The play of bias and prejudice may lead to pre-fixing the Judgement and then carrying out the Investigation to comply with the pre-fixed Judgement. For example, in sociological research, bias and prejudice may lead to pre-fixing the Conclusions (this is not like making a hypothesis) and then collecting evidences in favor of the pre-fixed Conclusions and rejecting the other evidences even if they are more important and valid ones. So, this type of research is totally useless and also misleading; because this is not the actual truth finding process.

Moreover, we ensure that the research work is to find new and true knowledge useful for the social development and not to find pseudo knowledge for destroying the social cooperation and human coordination. So, there should not be any bias and

prejudice while planning, designing and carrying out the research work and our search for truth should be for a good purpose in our real world; because the pseudo knowledge gained with bias and prejudice, when passed over to our young and future generation, may lead their life miserable.

Gaining knowledge and utilizing the existing knowledge are considered to be important aspects. We should pay more attention to this. A nuclear reaction produces a tremendous amount of energy. When this is properly controlled, as in a nuclear power plant, it is constructive and is useful to the mankind. When it is uncontrolled, as in a nuclear bomb, it is destructive and is harmful to the mankind. From this we can understand that the knowledge gained should be useful to the mankind in a constructive way. So, the research and teaching work we do should be in a way (without any bias and prejudice) to help the mankind in a constructive way. That is, let us avoid bias and prejudice in teaching and research, and proceed in a constructive way.

## **Dr. Mahadevan CK**

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Mahadevan (CSIR Emeritus Scientist in Bharathidasan University, Tamil Nadu) has obtained Ph.D., D.Sc., etc. degrees in Physics, and has been in teaching and research for about 42 years; published 14 books/chapters, and 412 articles in international/national journals/proceedings among others. He is featured in “World Ranking of Top 2% Scientists” continuously in 2021, 2022, and 2023 databases; and won several coveted awards for book authorship, teaching, and scientific research from Tamil Nadu state Government, UGC, IACG, KAAS, SAA, etc.

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