

## Science and English

Apropos the editorial<sup>1</sup>, the gravity of the issue deserves larger attention of the academics than a mere casual criticism. Unfortunately, it is believed by many in 'high places' that to be good in science does not necessarily require a good English background. In fact, facility of expression and precision of language are essential for a good scientist to evolve. Ninety per cent of the social sciences and sixty per cent of natural sciences are only expressions with logic and reason, descriptions of facts and figures and interpretations of numerical and quantitative results, which need exact terminology. Theorems, principles, hypotheses and conclusions of Ph D theses or research publications are all developed with concretization of language and crystallization of thought. The universality of science is achieved through the simple aspect of precision and pristine nature, facilitated by the English language due to historical reasons.

Look at the sentence: 'Vernier Calipers is a device designed by Paul Vernier to measure accurately to the fraction of a scale division, the thicknesses, diameters and lengths of objects of minimal size which are imperceptible for a normal graduated scale'. There is no easier or better version for the same.

Students of science, even of post-doctoral level, are unable to appreciate, let alone practise, the importance of correct English. Rich language base is a fertile ground for creativity to sprout. Power of expression permeates critical analysis. Needless to say that science is rooted in creativity and critical observation.

The tragedy that is haunting the academic and research institutions is still the faith of the planners and politicians of educational affairs that support for 'regional language' medium in degree and post graduate levels as part of patriotism. It is this movement for 'regional language' as a panacea for unem-

ployment, backwardness and poor standards of youth that prompted reduction of English teaching content and lack of emphasis on correct speech and expression among students, who are tomorrow's scientists and scholars. Relevant English expression is the heart and soul of the scientific writing and not a decoration of the latter, as misconceived by some. Hence the limited standards in English-writing at higher institutes of learning. Children of backward classes, backward castes and rural background who move up by sheer hard work and higher IQ, to research levels do so in spite of their dimly poor English expression.

1. Balam, P., *Curr. Sci.*, 2005, **88**, 205–206.

CHANDU SUBBA RAO

Department of Geophysics,  
Andhra University,  
Visakhapatnam 530 003, India  
e-mail: ahivisakha@hotmail.com

## Scientific writing, English and related matters

The Editorial in *Current Science*<sup>1</sup> has hit the nail on the head. How many Indian Ph D students and their supervisors will apply it to the problem of theses – and papers-writing? I should like to share with readers my own experience as a Ph D student in England 45 years ago.

When in October 1959 I took the draft of the first chapter of my Ph D thesis to my supervisor in Bristol for him to peruse it, he said 'Pārasnis, it is *your* thesis. I shall look at it when the University Registrar sends it to me after you have submitted it'. He added, 'Of course, come to me as usual to discuss your work, or whatever, any time, but we do not look at theses before they are submitted to the University'. This was Professor Sir Charles Frank (1911–1998). Incidentally, in 1979–80 he was Raman Visiting Professor in Indian Academy of Sciences.

Cannot we Indian professors and scientists emulate this attitude? Perhaps there is something deeper why we do not. It is that promotion, status, invited talks, committee membership, fame, . . . , all are related to the *number* of Ph D theses supervised, *number* of publications, and such things. No Ph D thesis supervised by oneself must ever have been rejected! With us,

thus, what rules is 'quantity over quality'.

British universities – probably European and American too – have a clear instruction for the preparation of Ph D theses. A thesis would be rejected if the language, grammar and composition are poor. In the unlikely event that our universities took this seriously, what Balam<sup>1</sup> has said would be even more real: supervisors would have to work even harder!

A related matter is this. Then Frank asked me, 'Whom do you want to be your external examiners?'. I was stunned but replied. Many years later he told me that this was one way for a supervisor to ascertain if a student had continually kept up with literature and had sound judgment on the relative importance, as the student saw, of the active senior workers in the field. In India the appointment of thesis referees in mostly *hush-hush*. Yet hardly any thesis submitted to an Indian institution is rejected.

As to European journals having increasingly allowed papers in English, apparently it was not too easy for the protagonists. Jacques Friedel told me in 1978 that he, then recently Editor of *Journal de Physique*, had to work very hard against the chauvinist

French Academy of Sciences. On the other hand, Heisenberg's *Zeitschrift für Naturforschung* had papers in English right from its inception post-war.

The question why today the standard of English is extremely poor in India is really unrelated to the three-language formula. I belong to the generation that had three languages throughout the four years of middle school, as the newly formed (1936) Congress Governments all over India, certainly in Bombay Presidency wherein I was, had made Hindi compulsory. Learning Hindi did not jeopardize our learning English and the mother tongue well. I have found that people who speak and write poorly in English also write so in their mother tongue. One needs to respect and be proud of *language* rather than a *language*. What else distinguishes us from other species?

1. Balam, P., *Curr. Sci.*, 2005, **88**, 205–206.

A. S. PĀRASNIS

F-17, Chaitravan Residency,  
127/2, Aundh,  
Pune 411 007, India  
e-mail: arawindp@hotmail.com