

Deterioration of higher education

Today everything including education is commercialized. A good number of educational institutes in India are running only for collection of capitation fee without providing adequate infrastructure and facilities. For an average aided college in the country having a minimum of fifty teachers and others on their staff, the Government has to spend nearly a crore of rupees towards their annual salary; non-grant salary is extra. What are the expectations of UGC or the Government from these institutions? Whatever the expectation may be, no proper assessment system has prevailed in our country. (NAAC has given little hope.) There are many aided colleges in our country creating generations of students without any hope

or future. To upgrade the quality of teaching community, the UGC implemented NET or SET examination. But those who are already in service and majority of the fresh postgraduates are not able to get through the tests, for many years. Other teachers luckily became permanent, due to their appointment date being prior to the stipulated date of UGC, CSIR, NET tests. Many teachers enjoy Government salary, but take interest only in auxiliary businesses like farming, money lending, etc. If this is the condition, what is the fate of the students whom they are teaching?

There should be a system of internal assessment of teachers from time to time. Those who fail in this assessment should be punished adequately. The huge amount

of money spent on refresher courses and orientation courses is a waste. For most of the participants, these courses are a period of relaxation free from family bondage. If this situation is favoured and nourished, the fate of higher education will deteriorate further within a short span of time.

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Style: Simple is elegant

While endorsing the Editor's suggestion¹ to impart instruction on clear communication in scientific (or *any*) writing, may I quote George Orwell's admonition 'Language becomes ugly and inaccurate because our thoughts are foolish, but the slovenliness of the language makes it easier for us to have foolish thoughts'. Added is the fact that 'UK and USA are two countries divided by a common language', *à la* Shaw and Churchill. Now there are more countries, including India. In recent years I have been conducting courses in communication skills and in written and spoken English language skills for working scientists, engineers and software people, and wish to share the experience. The need for that instruction goes well beyond scientists; even graduates in English need it.

In general, Anglo-Saxons are much better versed in the art of communication than are Asians. This cultural difference is seen easily by comparing the interviewers Larry King of CNN and Tim Sebastian of BBC on the one hand, and Indian interviewers of any channel (in any language of the VIII Schedule!) on the other. The root of poor speaking and writing is poor communication skills. Respect for language always follows res-

pect for the *other* person, be that a listener or reader. Does one want to communicate, or just hear one's own voice and show off one's erudition?

Language has beauty of its own and that beauty is defined by grammar. Grammar is a basic human activity for making complete sense of verbalized sound and written word. Knowing grammar well enables control over language as the primary medium of communication. Language learning and teaching are not to be practised solely by unconscious, implicit and indirect means. Creating a heightened awareness of how language works in terms of power and influence in society enables young people to become more aware of the forces of control and exploitation in society and, therefore, to some extent at least, empowers them to cope with such forces². That requires grammar. The difficult question then is *How much grammatical ornamentation is good for the soul?* The last sentence of the Editorial has already answered it partly.

The title of Karl Pearson's *A Grammar of Science* written, maybe, seven or eight decades ago, already strives to connect the beauty of science to that of grammar, and this is not surprising. Scientists remember Newton laws, laws of thermo-

dynamics, Maxwell equations and the Schrödinger equation more by context and understanding than by rote learning. The same can be, and in my experience *is*, true of the laws of grammar. It is a mistake to make users remember them by heart without understanding what is behind them and using them without context.

Surprisingly, often it is we scientists who forget that accuracy is the key to communication by language, and we are so fussy about the accuracy of our science. To illustrate the problem, the Editorial has taken the examples of hyphens and split infinitives, so I shall take something else, as important, viz. the use of the articles *a*, *an*, *the*. Software companies, among the places I teach communication and language skills in, usually have a visiting American IT scientist or two in residence. Invariably the visitors report that mistakes, confusion and misunderstanding occur because of their Indian colleagues (a) using *a* or *an* with plural or abstract nouns, and (b) not using any article for singular nouns at all rather than using the wrong one.

Native speakers and writers do not have to 'learn' when to use which article; that comes naturally through childhood.

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Increasing numbers of non-native speakers and writers find it next to impossible to remember when to use which. The reason, of course, is faulty teaching of grammar. I use the following simple method. Before deciding, one asks three questions: (i) Is the noun singular? (ii) Is it countable as 'one, two, three, ...'? (iii) Is it definite? The answer to any of these questions is either 'Yes' or 'No'. There are then several combinations of the answers, like 'Yes, Yes, Yes', 'Yes, No, Yes', etc. A straightforward table is drawn to indicate when to use which article. The basis of the solution to the articles-problem is thus number, countability and definiteness of nouns. This is understood, hence remembered, especially when practised contextually. It is not necessary to

keep hundreds of examples at the back of the mind. Did not *GmM/r*² replace all those cycles and epicycles of pre-Newton astronomers?

Returning to the split infinitives: The taboo on them, now well entrenched justifiably, came from the 17th and 18th century 'English' English grammarians. Latin, like Sanskrit, does not use 'to' to indicate an infinitive (that is, the unconjugated verb), but English developed differently. So they decreed that 'to' must remain with the verb.

These are but a few examples of the laws of grammar which impart to the writing (and speaking) an elegance otherwise unattainable. Indeed such presentation of grammar to learners is very effective. My generation was brought up on

British writing almost entirely. The major Indian writer we read was Gandhiji whose English writing remains today the simplest and most elegant. I ask my trainees to read him and learn automatically.

1. Balaram, P., *Curr. Sci.*, 2004, **86**, 239–240.
2. Website of an International Conference on the teaching of the English language.

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Phytochemical variability

Sangwan *et al.*¹ point out the wide variation in the constituents found in ten different commercially available preparations marketed as Ashwagandha. Of the 10 samples tried, only two are monoherbal extracts (presumably of Ashwagandha alone) while the rest are polyherbal mixtures.

We have been working in our laboratory with a standardized monoherbal extract provided to us by Kottakkal Arya Vaidyasala, Kerala, to assess the antioxidant, cytoprotective and cataractostatic ability of Ashwagandha². In light of the report by Sangwan *et al.*¹, we undertook a comparison of the antioxidant properties of three other commercially available products with 'standardized' extract (called A). Equal concentrations of the four products were taken and their antioxidant abilities compared under identical conditions, using the ABTS assay method³. Figure 1 compares their abilities at a representative concentration (4 mg/ml). Product B displays the best antioxidant ability and would therefore seem to be the best of use; however, it is a polyherbal mixture¹. Of the others,

which are all claimed to be monoherbal, product H displays the best antioxidant property. These differences are perhaps due to the phytochemical variability referred to above¹, and lend support to the suggestion that such variations might

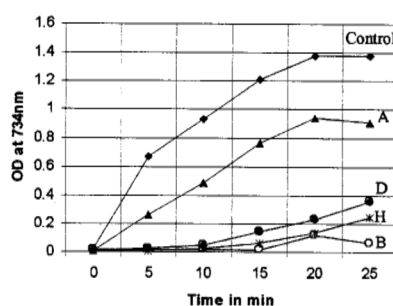


Figure 1. Comparison of the antioxidant abilities of four samples of Ashwagandha, monitored by the ABTS assay. Ashwagandha samples were 4 mg/ml in water; 1 mM H₂O₂ in water, 0.15 mM ABTS and 2.5 μ M metmyoglobin in pH 7.5, 50 mM phosphate buffer. The change in absorbance of ABTS at 734 nm was monitored over time, as per ref. 3.

arise from locale-dependent physiological and ecological variations in plantations, harvest and post-harvest operations, and the processing and manufacturing methods. Thus the need for uniformity and standardization guidelines in regulatory frameworks that are in vogue or contemplated in natural health products.

1. Sangwan, R. S. *et al.*, *Curr. Sci.*, 2004, **86**, 461–465.
2. Thiagarajan, G., Venu, T. and Balasubramanian, D., *Curr. Sci.*, 2003, **85**, 1065–1071.
3. Miller, N. J., Rice-Evans, C., Davies, M. J., Gopinathan, V. and Milner, A., *Clin. Sci.*, 1993, **84**, 407–412.

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