

Third, and a crucial one too, is the size of the available market. By knowing the size of the potential market, one can actually recommend the size of industry to be set up. It would be uneconomical to run such a complex below full capacity due to lack of markets. Moreover, once the blast furnace is on, it can be kept running for some years without closing down for maintenance and the such.

A very reliable market for the iron could be locally obtained by setting up other engineering industries which would use the iron for the production of other iron goods to satisfy the home market. Another question arising is as to whether a single developing country can do this all along. Bearing in mind that most of these countries do not have enough manpower, technicians, engineers and the capital for the initial 'go', one asks himself where could that come from. The solution might be a socialist planning, getting the right people by educating your own cadres, not necessarily within the country if facilities are not available, and utilize them for the revolution. Should more cooperation be achieved between the countries themselves, development activities could be planned at a continental or regional level, ensuring better natural resources facilities and a bigger market for the products. Pritiation of positive action towards regional or continental unification is imperative if dynamic economic development is to be attained. It does not have to start between a nation and a nation. It can very well start between people of some professions like doctors, lawyers, or Engineers. How would you feel in the presence of "The Association of All African Engineers?"

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NEW DIRECTIONS IN ENGINEERING COMMUNICATIONS

By: H. Berenice McKague*

Very few engineers, if pressed to think about the professional contribution made by their training in language and writing, would underestimate its importance. A number of engineers have told me it was the single most important aspect of their professional preparation. In the cases I am thinking of, the reference was to 'English' specifically. This is coincidental, surely, for they were English-speaking people working in a totally English-speaking environment. I am almost certain the German engineer working in a totally German-speaking environment would place the same emphasis on his German-language preparation, and so on ad infinitum.

The rationale for this language emphasis seems to be that it is imperative for an engineer to issue clear, precise, and thorough communications which cannot be misinterpreted - resulting in costly errors.

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To use an extreme example, the North American, German or English engineer knows that he cannot afford (nor can his company or his country afford) to build a bridge that is fifty per cent correct and fifty per cent the result of unfortunate error.

Is it not ironic then, that in preparing Tanzanian engineers we proceed as though we can forget completely the whole communications process and let it take care of itself, or we give English a passing glance - which amounts to a lip-service recognition and let it go at that. It never seems to occur to us that a programme to develop and improve communications is absolutely imperative, even though we see ourselves, our students, our administrators, and the country daily victimized by misinterpreted information and communication gaps in general.

Ngoja!

Are we not standing this moment at a decisive crossroad? Tanzania is one of the more fortunate developing countries, in that she has a lingua franca spoken by all her citizens. The political trend in Tanzania clearly indicates that Swahili must play an increasingly important role in all avenues of life, including business and technology.

The switch to Swahili written correspondence in all government offices has urged the development of a Swahili shorthand system (now in published form); its ultimate incorporation into daily office routine will save countless office hours of man-power (at management level) now spent on originating written drafts.

The Swahili scientific dictionary is well underway at the institute of Swahili Research but its successful development demands the whole-hearted participation of specialists in the various fields of concern, i.e., technology and science experts who are also wholly conversant with Swahili.

Tanzanian democracy places the average man - the peasant and worker at the focus of its development plans. Only communication with this man at the village level will insure the success of Tanzanian blueprints for an industrial revolution. A European-centred technology (reasoned and communicated wholly in English) must be non-functional with respect to Tanzanian guidelines for the future, and accordingly must be on its way out.

Perhaps then, guiding the young engineer to think in English when he approaches his studies is only one step in a major communications challenge demanded by his educational goals. If he is led back to the practical application of his learning in a totally Swahili-language environment, must he not also be integrating his newly acquired understandings, at each step of the way, with the 'world view' that is understood and shared by the Swahili-speaking community?

If we merely force his development in English communication, might we be guilty not only of treating the circumstances too simplistically, but also of depriving the student of the possibility of achieving a large part of the purpose his government-sponsored education was intended to effect for national development?

Perhaps it is now time, or even past the time, when we should show our concern for developing, in co-operation with the linguists, a full-scale communications programme that will be totally indifferent to whether English or Swahili is given preference aside from its relevance to a given communications challenge.

The implication is of course a bilingual-interdisciplinary programme which will truly place the stress on effective engineering communications with respect to: psychological considerations, political aspirations of the nation, efficient business forms - which may differ considerably in unrelated languages, other relevant cultural factors, and problems of general linguistic transfer, not to mention the finer points of 'style'.

Considering that the good engineer can and should reach the epitome among effective communicators, can we afford to stop so far short of the sublime - and to pretend it doesn't matter?

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