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**Basic Research and Applied Research A Powerful Combination****Paper Type ▶ Opinion**

Title ▶ Basic Research and Applied Research A Powerful Combination

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**Abstract:**

Nowadays, more emphasis is being placed on doing research in universities, not only here in Thailand but in countries around the world. Indeed, many universities already regard themselves as being so-called "research universities", the implication being that they wish to distinguish themselves from other "teaching universities" which are supposedly doing less research. One of the main reasons for this seems to be the growing belief that institutional prestige is measured more in terms of research excellence than teaching excellence. This belief is being fuelled by the increasing pressure on universities to generate proportionately more of their own funding through, for example, external research grants. This, in turn, is creating a situation whereby, unless a university is research-active, it will struggle to develop at the same pace as those that are.

However, like teaching, research requires funding. Since a university's primary function is to teach, even though it may regard itself as a research university, the main priority as far as funding is concerned is to support the teaching-related activities. Consequently, internal funding for research tends to be somewhat limited. As a result, staff members wishing to do serious research are expected to find their own research grants from external sources such as national research councils and the private sector. Applying for and, hopefully, obtaining research grants can be a double-edged sword. On the one hand, it is obviously good to get the financial support which enables the research to go forward. However, on the other hand, the research proposal often has to be written with the donor agency's priority areas in mind. Nowadays, donor agencies are also under pressure from their peers to be seen to be supporting research which produces something "useful" to the wider community. Similarly, if the donor is an industrial company, then understandably the research must be beneficial in some way to the company's business interests.

Thus, "useful" is becoming equated with "applied" in the sense that the research needs to be directed towards producing some tangible end-product which, if possible, can be commercialized.

While this approach is well-intentioned, there is a danger here that we may lose sight of the importance of basic research. Basic research and applied research are complementary; they go hand in hand. Basic research provides the necessary background knowledge and understanding which drives the applied research towards new product development. This is what has happened in many highly developed countries where basic research is still given the importance and support it deserves. Sadly, in the less highly developed countries, including Thailand, basic research is having a hard time finding funding because of the short-sighted view that it may or may not lead to anything "useful". Even when some basic research is included in an otherwise applied proposal, it is often of very limited scope due to the time pressure to meet the more applied objectives. The question therefore arises: is the basic researcher in Thailand becoming an endangered species?

Looking ahead to the future, my hope is that both basic and applied research will be given equal encouragement by all concerned. The two are inseparable. Favouring one at the expense of the other will be counterproductive in the long run. As a researcher myself, I get equal satisfaction from the new knowledge that basic research brings and from the new products that applied research brings. But perhaps the most exciting aspect of all is the synergism that the two together generate. Basic research and applied research form a powerful combination. Let us not limit what the latter can achieve by devaluing the former.

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