Review of: "Generating Smart Goals of Engineering Education Institutes in the Fast-Developing Countries"

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This paper feels like two papers in one. One paper reviews the use of SMART goals for engineering education institutes. This results in Table 2, which presents a series of goals from institutional, faculty and student perspectives. The Table could be improved by grouping these under headings, e.g., What, How, and Who. See my spreadsheet here as one interpretation: https://www.dropbox.com/scl/fi/r4oq0xr82ip4pc71x5n97/Table-2.xlsx?rlkey=3a786narf59mq9644s8t1opk1&dl=0

Table 2 would also benefit from at least one goal under the heading of Why? This would normally be the Purpose of the institution. What kinds of graduates does it wish to produce? What role does it play in its local region? What industries does it wish to support?

The second part of the paper is a small research study to examine how some engineering programs are adapting to the challenges of the age. I believe this would be better split out as a separate paper with a customised literature review.

The problem I have with this study is that I don't understand how the questions were answered. For example, the first question is: "Whether your institute has introduced multidisciplinary programs?" with answers required on a scale from Excellent to Poor. I would have expected a scale from "all programs" to "no programs". Should the question have been "What proportion of your programs are multidisciplinary?" Do all programs need to be multidisciplinary? What do the data mean?

This approach makes no sense to me. Perhaps this is a mistranslation for the paper, but this makes me wonder about all the empirical data that has been collected in section 3.2 of the paper.

The rest of the paper then resumes the discussion of the challenges of implementing strategic goals, which is helpful. Two factors that really need more elaboration are industry experience and research expectations.

First, many academics lack any industry experience, so they struggle to bring real problems into the classroom. So, they teach from textbooks, as they learned themselves. Secondly, there are increasing expectations for research outputs, which distract academics away from their teaching responsibilities. If these two factors can be brought together, through industry-based research, which would align with national policy, then they are mutually beneficial; that is, academics gain some understanding of real industry problems, through their research, which they can then translate into their classrooms.

The paper also needs revision of the English in places, e.g., see:

https://www.dropbox.com/scl/fi/4dlk3y8dkprbd7pu8mxdq/Generating-Smart-Goals-of-Engineering-Education-Institutes-in-the-Fast-Developing-Countries-Article-Preprint-v1-by-Thanikachalam-Vedhathiri-Qeios.pdf?rlkey=myq1dtan9a55o0mjjvww77yds&dl=0