Review of: "Achieving Sustainability in Smart Cities Mission in India through Universities' Innovation in India"

Sourabh Jain[1]

1 Brescia College

Potential competing interests: No potential competing interests to declare.

The paper explores an interesting and relevant area of research in the context of sustainable development – how universities can play a role in training engineers for designing and maintaining sustainable smart cities. The overall paper is well organized and well written. I do some major comments that could help the author improve the quality of the manuscript.

1. One theoretical or philosophical comment is regarding the definition itself - what doe a smart city look like? As far as I know, we don't have benchmarks for designing a smart city, let alone a sustainable smart city. While everyone talks about integrating IoT/ICTs with anything and claim it to be part of smart city, the embedded assumption in literature in general the author's definition is that context-specific incremental changes will gradually turn a city into sustainable smart city. All rankings of 'most' smart cities in the world are often subjective/relative, and often misleading. Unless we know where we are going, it is much harder to find the right paths. Any path that involves doing something 'right' with incremental changes may seem the right. It is unclear whether those incremental and piecemeal improvements in cities will really take us to a goal of sustainable smart city if we don't really have concrete/measurable aspects of knowledge of what a sustainable smart city looks like.

In this context, I have some reservations about how engineering education/research can provide right innovative solutions if, for a given context, we fail to properly define in absolute and concrete terms what a sustainable smart city looks like.

Nevertheless, I would suggest that the author provide a stronger theorical support and contribution for the work, for example, by describing something along the lines of - how or what types of engineering innovations and solutions are essential for smart cities and how engineering education can fix it.

2. The content leading up to the research gap, the research gap and the objectives of the study are incongruent. I don't understand how all objectives except Objective 3 are linked and even relevant for the study. Why did suddenly the author indicate sustainability/innovation at the state level and slum areas in the smart city when the reader expects all details on relationship between engineering colleges and (sustainable) smart cities? I don't see any connection of these objectives with the role of engineering colleges in promoting smart cities in India.

Table 1 lists SDG indicators for Sustainable Cities and Communities but the author used them at a state level. Why would you do that? I don't see any convincing explanation beyond a statement that economic sustainability is prioritized over other dimensions.

I would suggest that the author refine the content and the scope of the paper and focus on well-defined objective(s) to avoid any ambiguity, for example, by focusing only on Objective.

3. Irrespective of Comment 2, while the methodology for Objective 1/2 is reasonable, I don't see a strong methodological support Objective 3/4 and unsure whether the analysis is related to linking engineering education with smart cities. I disagree that offering courses/programmes specially under the umbrella of 'smart cities' or 'urban development' is essential for encouraging engineering innovations for smart cities, or that one can truly gauge the contribution of engineering colleges to smart cities and innovation by looking at the number of conferences/seminars. For example, all engineering colleges offer traditional engineering programs (computer, electrical, electronics, civil), which provide a strong foundation for supporting the technical and infrastructural aspects of smart cities.

This synergizes with my suggestions in Comment 1 above. I would suggest that the author look at what types of engineering solutions/innovation is necessary and where Indian colleges are lacking.