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# Professional Competence Model for Architectural Engineers

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## Letter

Modern design practise, in which an architect collaborates with engineers in a large group, is inefficient. It would result in more efficient structures if collaboration between the professions of architecture and engineering was improved. Professionals with training and/or expertise in both fields can help increase collaboration. The notion of architectural engineering (AE) first appeared in the late 1800s, and the field has grown steadily since then. In the construction context, there were a number of designers who had been educated in both professions and who effectively practised on the boundary between A. and E. The research's goal is to create a competence model (CM) for AE professionals and to scientifically back up the undergraduate subject content [1].

Previous study on the issue, methodology and/or theoretical framework, research findings, and discussion and interpretation of findings should all be included in the primary body that were regarded one until the mid-eighteenth century, split off when engineering schools were established.

The relationship between the professions has developed since then, from full separation in the nineteenth century to today's intensive collaboration. There are three types of profession-to-profession interaction: Separate activities, cross-pollination between the two disciplines, and close partnership. In general, an architect functions as an orchestra director and composer during the construction process [2].

When there is a sense of urgency or war, engineering takes precedence, and when there is peace, plenty, luxury, and affluence architecture takes centre stage. Architects' knowledge is insufficient for structural calculations, necessitating the assistance of engineers [3].

Every year in college, structural classes do not prepare an architect to design the construction of even a small building. If architects operate without engineers, they may produce inaccurate and unsafe outcomes. The engineer, on the other hand, makes a significant contribution to the modern construction in terms of both finances and technology. The technical aspect of construction is becoming more sophisticated as buildings get more complex [4].

As buildings become more complex, multi-discipline engineers have been increasingly responsible for the technical aspects of the design. Even if engineers constructed architecture that was "utilitarian and/or unattractive," people would still live in structures that were long-lasting, safe, and healthy. Construction professionals, who differed only in title and performed the same services over the previous 200 years, ultimately began to perform distinct services in the same project. Engineers and architects' contributions to projects ranged from "no architectural assistance at all" to "architect as artist" with the engineer acting as a helpmate or servant.

Both professions share a lot of commonalities, as well as a number of common courses in their educational programmes. The structure of the building is the major focus in some designs. The structure of the building is often the main aesthetical accent in some designs, which is referred to as structural art. There are architects with strong structural engineering skills and engineers with strong architectural understanding [5].

Professionals who graduated from one, both, or integrated programmes (Dieste, Nervi, Candela, Isler, Fuller, Le Ricolais, Otto, and others (the authors have identified over 40 prominent professionals in this category) have acted or are still acting as both architect and engineer, ignoring professional demarcations and blurring professional borders. The disciplines truly mix into one another during the collaboration and quest for a successful design. In today's construction projects, both professionals are required. Client functional requirements, regulatory implications, technology advancements, and the utilisation of new materials, innovations in methods and techniques, computerization of design and construction, etc., all foster a more intense dialogue and collaboration, and bring the two professions closer together.

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## Conflicts of Interest

The author has no known conflicts of interested associated with this paper.

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